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NOISE IMPACT ASSESSMENT

DISCHARGE OF PLANNING CONDITION 10

LAWRENCE BATLEY RECREATIONAL COMPLEX

NEW HEY ROAD, HUDDERSFIELD, HD3 3XF

REPORT REFERENCE NO. J004611-7341-CW-01

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This report has been prepared based upon a scope of works and associated resources agreed between the client and Philip Dunbavin Acoustics Ltd (PDA). This report has been prepared with all reasonable skill, care and diligence and has been based upon the interpretation of data collected. This has been accepted in good faith as being accurate and valid at the time of the collection. This report has been based solely on the specific design assumptions and criteria stated herein.

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1.0 SUMMARY

At the request of BPG Contractors Ltd, an assessment has been made of the likely noise impact due to the proposed upgrades and re-configuration of external sports pitches at YMCA Lawrence Batley Recreational Complex off New Hey Road in Huddersfield, HD3 3XF.

The existing YMCA complex at the site and comprises 11 no. external sports pitches, club house with a function room, gym and external car parking. It is understood that the proposal is to upgrade 3 of the existing grass pitches (pitch 3, 3A and G) and install synthetic 3G turf in their place however, the layout will remain the same. In addition, pitches 2, 4 D and E will be merged to form a single full size rugby pitch.

In order to determine the existing ambient noise climate in the vicinity of the site a noise survey was undertaken. Measurements were undertaken over an entire weekend period between 14:00 Friday 22nd and 10:30 Monday 25th September 2023. The measurement period was chosen to be representative of the typical noise climate whilst the outdoor pitches will be operational. It is understood that the sports pitches within the existing site were operating at near full capacity during the Sunday morning and afternoon period with some light use on the Saturday afternoon.

The worst case noise level due to activity on the existing pitches was found to be 54 dB L_{Aeq} measured at the boundary of the site. We note that there are no significant changes to the layout of the proposed site and therefore, it is a reasonable assumption that noise levels at the boundary are unlikely to vary significantly from what has been measured at the existing site. However, in addition to the measurements undertaken at the site a further modelling exercise has been undertaken.

The results of our assessment indicate that the noise level due to the proposed sports pitches is likely to be ≤ 54 dB L_{Aeq} within the gardens of the nearest noise sensitive dwellings. If comparison is made to the noise levels from the existing site it can be seen that in some instances an increase of between 1 – 2 dB can be seen however, for the majority of the site no increase is observed. In accordance with the Sports England Guidance reference is made to the IEMA Guidelines for Environmental Noise Impact Assessment with provides a comparative method to determine noise impact. The IEMA guidelines suggest that a change in noise level of < 3dB is indicative of 'negligible' impact.

The existing sports facility has been a long standing use at the site with activity on the external pitches having a contribution to the existing ambient noise climate. In addition, whilst the hours of operation are restricted by Planning Condition 11, it is understood that these hours are no different to what is currently in place at the existing site. Therefore the character of noise emissions from the proposed site will not be significantly different in character to that of the existing ambient noise climate.

The National Planning Policy Framework (NPPF) requires that planning policies and decisions should mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development and avoid noise giving rise to significant adverse impacts on health and the quality of life. Based upon the above assessment it is concluded that the noise levels arising from the operations of the Proposed Development will not result in an adverse impact and will therefore comply with the requirements of the NPPF.

2.0 SITE DESCRIPTION

The development is located at the former YMCA Lawrence Batley Recreational Complex off New Hey Road in Huddersfield, HD3 3XF. The YMCA complex has been a long standing use at the site and comprises 11 no. external sports pitches, club house with a function room and a gym and external car parking. The existing site layout can be seen in the figure below:

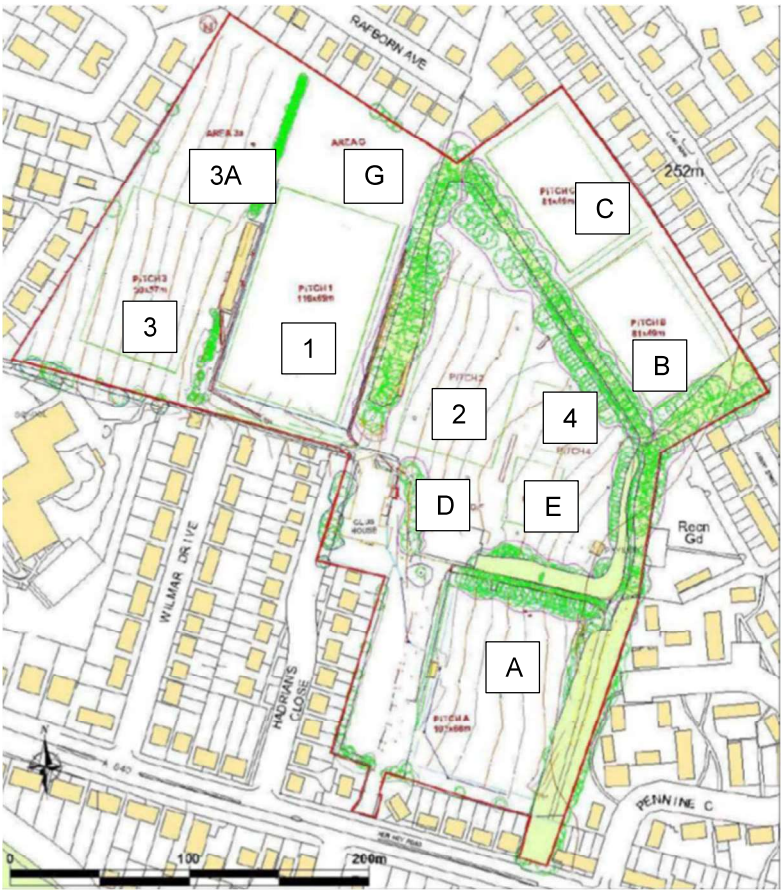


Figure 1: Existing Site Layout (pitches labelled for reference)

It is understood that the proposal is to upgrade 3 of the existing grass pitches (pitch 3, 3A and G) and install synthetic 3G turf in their place however, the layout will remain the same. In addition, pitches 2, 4 D and E will be merged to form a single full size rugby pitch. There will be no change to pitches A, B, C and 1.

In terms of operating hours at the existing YMCA site, we are informed that external pitches are not used outside of the following hours:

- Monday – Friday: 07:30 – 21:00 hours
- Saturdays: 09:00 – 20:00 hours
- Sunday: 09:00 - 18:00 hours

It is understood that the operating hours for the proposed external sports pitches have not changed and are in fact restricted by Planning Condition 11 which states:

> *"No activity shall take place at the hereby approved outdoor sports pitches outside the following hours;*
>
> *Monday to Friday - 0730hrs to 2100hrs*
> *Saturdays - 0900hrs to 2000rs*

Sundays – 0900hrs to 1800hrs
Bank Holidays – Closed"

The proposed site layout can be seen in the Figure below, it should be noted that with the exception of the new rugby pitch in place of pitches 2, 4, D and E there are no changes to the layout of the site when compared with the existing use.

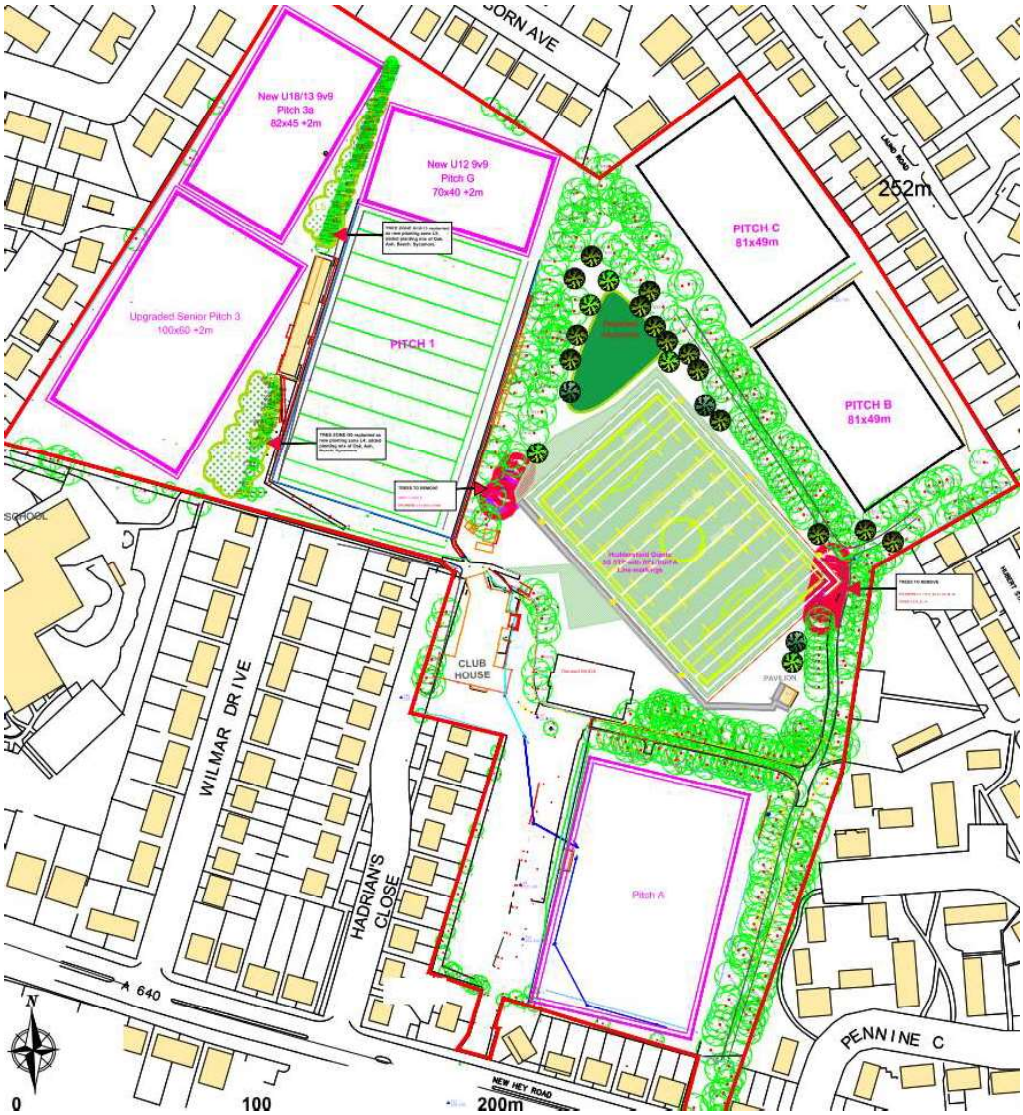


Figure 2: Proposed Site Layout

The site is situated in a residential area with the closest dwellings located considered to be those surrounding the site on Laund Road, Hadrian's Close, Wilmar Drive, Rafborn Avenue, Hubert Street, Shannon Drive and Moorlands Crescent. In addition, it is noted that the M62 motorway is located approximately 230m to the north east of the site and the A640 New Hey Road immediately to the south of the site.

3.0 ASSESSMENT CRITERIA

3.1 Planning Condition 10 (application no. 2021/62/93645/W)

We note that the Kirklees Council have permitted the development subject to conditions. Condition 10 relates to noise stating that:

> *"Prior to the 'New 3G' and 'Upgraded Senior Pitch 3' (ref. HUDD GIANTS PITCHES _MP4_31-1-22) being brought into use, a noise assessment report by a suitably competent person shall be submitted to and approved in writing by the Local Planning Authority. The report shall include –*
>
> *a) an assessment of all of the noise emissions from the proposed development*
>
> *b) details of existing background and predicted future noise levels at the boundary of the nearest noise sensitive premises*
>
> *c) a written scheme of how the occupants of the above-mentioned noise sensitive premises will be protected from noise from the proposed development including details of all necessary noise attenuation*
>
> *The development shall not be brought into use until all works comprised within the measures specified in the approved report have been carried out in full and such works shall be thereafter retained."*

Kirklees Environmental Health department have confirmed that in order to address this condition:

> "*a new noise survey should be undertaken by a noise specialist which provides an updated assessment of the acoustic environment across the site when it is in and out of use."*
>
> *"We therefore need an up-to-date Noise Impact Assessment addressing the points within the condition as stated, with particular emphasis on the sporting activities as per the Sport England Planning Guidance documents."*

There is currently no nationally agreed UK standard for the assessment of noise from sport and leisure facilities however we would propose the following criteria as they are considered the most relevant for use in this assessment.

3.2 National Planning Policy Framework (NPPF)

National Planning Policy is guided by the National Planning Policy Framework (NPPF) updated in July 2021. With regard to Noise the Framework states the following;

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.*

  Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- *mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;*

- *identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.*

The terms '*significant adverse impact*' and '*adverse impact*' are defined in the explanatory notes of the 'Noise Policy Statement for England (NPSE) which states;

There are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the World Health Organisation. They are:

NOEL – No Observed Effect Level

This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

LOAEL – Lowest Observed Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected.

Extending these concepts for the purpose of this NPSE leads to the concept of a significant observed adverse effect level.

SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur.

The notes also offer an explanation of the term 'other adverse impacts' as follows;

… refers to the situation where the impact lies somewhere between LOAEL and SOAEL. It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development (paragraph 1.8). This does not mean that such adverse effects cannot occur.

It should be noted that no specific noise limits for LOAEL and SOAEL have yet been specifically defined; however guidance from other acoustic standards may be employed to determine suitable levels within the overall principal of the National Planning Policy Framework.

3.3 Planning Practice Guidance – Noise

The UK Planning Practice Guidance on noise offers further guidance on the typical levels which constitute the NOEL, LOAEL and SOAEL and is reproduced in the table below;

Table 1. Planning Practice Noise Level Guidance

Perception	*Examples of Outcomes*	*Increasing Effect Level*	*Action*
Not present	No Effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

3.4 WHO Guidelines for Community Noise

In 1999, the WHO (World Health Organisation) published Guidelines for Community Noise, stating the following noise levels are applicable to residential dwellings.

Table 2: *WHO Guidelines for Community Noise criteria*

Specific Environment	*Critical Health Effect(s)*	*L_{Aeq} dB*	*Time Base (hours) **
Dwelling, indoors	Speech intelligibility & moderate annoyance, daytime & evening	35	16
Inside bedrooms	Sleep disturbance, night time	30	8
Outdoor Living Area	Serious annoyance, daytime & evening	55	16
Outdoor Living Area	Moderate annoyance, daytime & evening	50	16

* Typically taken to be daytime/evening - 07:00 – 23:00 hours and night time 23:00 – 07:00 hours.

3.5 Sports England Guidance – Artificial Grass Pitch (AGP) Planning Implications

Sports England published a document in 2015 entitled "Artificial Grass Pitch Acoustics – Planning Implications". The document gives guidance on the acoustic implications associated with such facilities and offers advice on relevant noise criteria by which to assess the noise impact of external synthetic sport pitches.

In situations such as this where existing natural turf pitches are to be replaced with synthetic 3G turf the Sports England Guidance suggests that comparing the noise impact of the proposed pitches against the existing noise climate is likely to be the most appropriate method of assessment. Reference is made to the Institute of Acoustics (IOA) / Institute of Environmental Management and Assessment (IEMA) Working Party Consultation Draft 2002 stating that:

> *"A 'slight' impact is considered for an increase less than 3 decibels. This generally conforms with the withdrawn Planning Policy Guidance Document 24 statement that a change of 3 dB(A) is the minimum perceptible under normal conditions."*

Reference is also made to World Health Organisation Guidelines for Community Noise (*see section 3.4 above)* however, it is also acknowledged that exceedances of the WHO guidelines are not necessarily an indication of adverse noise impact noting that significant impacts may not occur until much higher levels of noise exposure are reached.

The Sports England Guidance ultimately concludes that it may be beneficial to use both the comparative and absolute assessment method.

3.6 Institute of Environmental Management and Assessment (IEMA) Guidelines for Environmental Noise Impact Assessment, Version 1.2 2014

We note that the IOA / IEMA Working Party Consultation Draft 2002 as referenced within the Sports England Guidance has since been replaced by the IEMA Guidelines for Environmental Noise Impact Assessment 2014 however, the general principles and guidance remains the same. The values given in Table 4 below are taken from the document that sets out a guide as to how changes in noise level may be assessed.

Table 3: *IEMA Impact from the Change in Sound Levels*

Long-term impact classification	*Sound Level Change dB(A)*
Negligible	> 0 dB and < 3 dB
Minor	> 3 dB and < 5 dB
Moderate	> 5 dB and < 10 dB
Major	> 10 dB

The above criteria reflect key benchmarks of human response to changes in noise level. For example, a 3dB change is generally taken to be the smallest change perceptible to the human ear and a 10dB change is heard as a doubling or halving of loudness.

4.0 SURVEY DETAILS & RESULTS

In order to determine the existing ambient noise climate in the vicinity of the site a noise survey was undertaken. Measurements were undertaken over an entire weekend period between 14:00 Friday 22nd and 10:30 Monday 25th September 2023. The measurement period was chosen to be representative of the typical noise climate whilst the outdoor pitches will be operational.

4.1 Measurement Positions

Measurements were taken at 2 locations within the vicinity of the nearest noise sensitive residences. It was ensured that both measurement positions were at least 3.5m away from any reflecting facades.

The measurements positions are detailed in Figure 3 overleaf.

Position 1 (Western Site Boundary) – Measurements were made using an NTi XL2 sound level meter, the microphone was 1.5m above ground level and a windshield was fitted throughout the survey. Measurements were taken at the western site boundary deemed to be representative of the ambient noise climate in the vicinity of dwellings on Rafborn Avenue, Moorlands Crescent, Shannon Drive and Wilmar Drive.

Position 2 (Eastern Site Boundary) – Measurements were made using an NTi XL2 sound level meter, the microphone was 1.5m above ground level and a windshield was fitted throughout the survey. Measurements were taken at the eastern site boundary deemed to be representative of the ambient noise climate in the vicinity of dwellings on Laund Road, Hubert Street, Pennine Crescent and Hadrian's Close.

Figure 3 – Measurement positions

Throughout the survey measurements were undertaken using 2no. NTi XL2 sound level meters. The meter is a precision grade Class 1 accurate sound level meter (as per BS EN 61672-1: 2002). The meter was calibrated directly before any measurement took place and immediately afterwards and no significant drift was observed.

A summary of the weather conditions during the survey period is given in Table 4 below.

Table 4: Summary of Weather Conditions

Measurement Date	Temperature	Windspeed	Precipitation
Friday 22nd September 2023	8 - 15°C	1-3 m/s	Dry
Saturday 23rd September 2023	8 - 16°C	1-3 m/s	Dry
Sunday 24th September 2023	11 - 20°C	1-5 m/s	Dry
Monday 25th September 2023	12 - 17°C	2-4 m/s	Dry

The weather conditions were deemed to be suitable for noise measurements, note that the weather data is taken from the nearest Weather Underground station IHUDDE77 located approximately 600m from the site on New Hey Road.

4.2 Description of Noise Sources

The local noise climate in the vicinity of the nearest noise sensitive residences was dominated by road traffic at both locations most notably from the M62 motorway. Other intermittent noise sources included activity on the existing sports pitches and children from the Moorlands Primary School playground during breaktimes.

It is understood that the sports pitches within the existing site were operating at near full capacity during the Sunday morning and afternoon period with some light use on the Saturday afternoon. It should also be noted that there was no activity on the existing sports pitches during the Friday afternoon/evening and Monday morning periods and may therefore be deemed representative of the 'residual' noise climate without any contribution from the existing facility.

4.3 Measured Noise Results

A summary of the existing noise levels measured at the site boundary in the vicinity of the nearby noise sensitive dwellings is given in the Table below. Note that only the periods relevant to the proposed hours of operation are included in the Table.

Table 5: Summary of Ambient Noise Measurements

Position	Date	Time Period	Measured Noise Level dB L_{Aeq}
P1 – Western Boundary	Friday 22nd September 2023	14:15 – 21:00	52
	Saturday 23rd September 2023	09:00 – 20:00	47
	Sunday 24th September 2023	09:00 – 18:00	52
	Monday 25th September 2023	07:30 – 10:35	52
P2 – Eastern Boundary	Friday 22nd September 2023	14:00 – 21:00	53
	Saturday 23rd September 2023	09:00 – 20:00	49
	Sunday 24th September 2023	09:00 – 18:00	55
	Monday 25th September 2023	07:30 – 10:35	52

4.4 Discussion of Results

It can be seen above that the existing ambient noise climate at the boundary of the site during the proposed operating hours was found to be between 47 – 55 dB L_{Aeq}.

We note that with regards to determining the existing ambient noise climate, the goal is not simply to ascertain the lowest level, but rather to quantify what is typical during relevant time periods. It can be seen that the noise level drops off by around 4 - 5 dB on the Saturday however, this appears to be an anomaly as the measured noise level is ≥52 dB L_{Aeq} during all other periods. With reference to our most recent noise survey we would consider 52 dB L_{Aeq} to be representative of the typical existing noise climate.

It should be borne in mind that the measured levels comprise noise from all sources including road traffic and activity on the existing sport pitches. Following discussion with the client it was confirmed that there were no games on site during the Friday afternoon/evening or Monday morning periods during which a noise level of 52 – 53 dB L_{Aeq} was measured. Therefore this level may be considered representative of the ambient noise climate without any contribution from the existing sports pitches.

During the Saturday it is understood that 2 games took place kicking off at 14:00 and 15:00 with no activity on site after 17:30. During this period the measured noise level was found to be between 48 - 49 dB L_{Aeq}.

During the Sunday we are informed that there was a number of junior football and rugby tournaments taking place between 10:00 – 15:00 hours. It is understood that during this period there were between 80 – 100 people on site at any given time and the majority of existing pitches were in use. Noise levels of between 52 – 54 dB L_{Aeq} were measured during this period at the western and eastern boundaries respectively. We would consider these noise levels to be representative of the noise climate when the existing facility is in use. However, noting that the ambient noise climate on Monday morning and Friday afternoon/evening periods (52 – 53 dB L_{Aeq}) and that during these periods no matches were played, this would suggest that noise from the existing pitches does not have a significant contribution to the overall noise climate at the site boundary.

We note that there are no significant changes to the layout of the proposed site and therefore, it is a reasonable assumption that noise levels at the boundary are unlikely to vary significantly from what has been measured at the existing site. However, in order to verify this we have undertaken a modelling exercise to verify the likely noise emissions from both the existing and proposed site see Section 5.1 below.

5.0 NOISE IMPACT ASSESSMENT

In accordance with the Sports England Guidance, to determine the noise impact associated with the proposed development it is necessary to consider how the changes will affect the existing noise levels at the nearby dwellings. Therefore, we have modelled noise emissions from the existing site and the proposed site such that a comparison can be made.

The Sports England Guidance provides 'typical' noise levels for sporting activities undertaken on Artificial Grass Pitches such as those proposed at this development. The guidance indicates that noise measurements were taken during nine sessions on three separate pitches, the sessions included football, hockey and rugby. The study concluded that at a distance of 10m from the side-line half-way marking the typical free-field noise level for a sports pitch is 58 dB $L_{Aeq\ (1\ hour)}$.

Using octave band measurements taken from the PDA database which were measured at a similar facility and using the broadband noise level given in the Sports England Guidance as a reference a Spectrum was derived for use in this assessment. See Table 5 below:

Table 6: Typical Noise Levels (dB L_{Aeq}) at 10m – Artificial Grass Pitch

Octave Band Centre Frequency (Hz)								*dBA*
63	***125***	***250***	***500***	***1000***	***2000***	***4000***	***8000***	
36	45	44	50	54	51	49	33	58

5.1 Noise Modelling

Using the noise level data derived from the Sports England Guidance in Table 6 we have modelled noise emissions from the site using SoundPLAN noise modelling software. The software uses the method of ISO 9613 '*Acoustics – attenuation of sound during propagation outdoors – general method of calculation' and* takes into account geometric spreading, ground effects, air absorption, barrier attenuation and reflections from the surroundings to calculate the noise levels incident at various points.

We have modelled noise emissions from both the existing site and the proposed site with both models undertaken on the conservative assumption that all pitches will be operating simultaneously (including those which are existing). We note that this is likely to over estimate noise emissions given that generally the site will not operate at full capacity however, this is deemed representative of the likely 'worst-case' noise levels at the site due to the sport pitches. In It should be borne in mind that the purpose of this exercise is to determine what effect (if any) the proposed changes will have on the existing ambient noise climate and therefore, this approach was considered to be necessary such that a like for like

comparison can be made. Where the site is operating at a reduced capacity lower noise levels would be expected.

An overview of the noise models can be seen in the Figures below:

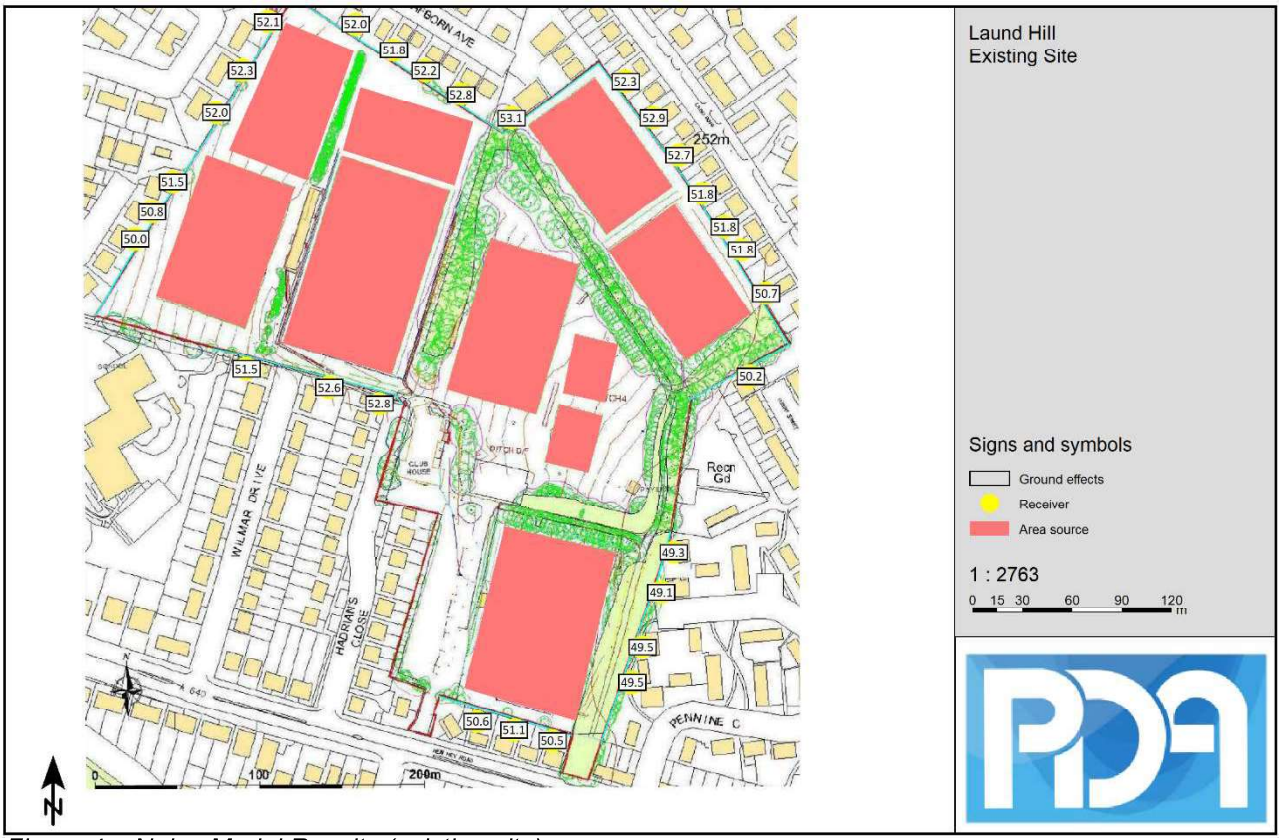


Figure 4 – Noise Model Results (existing site)

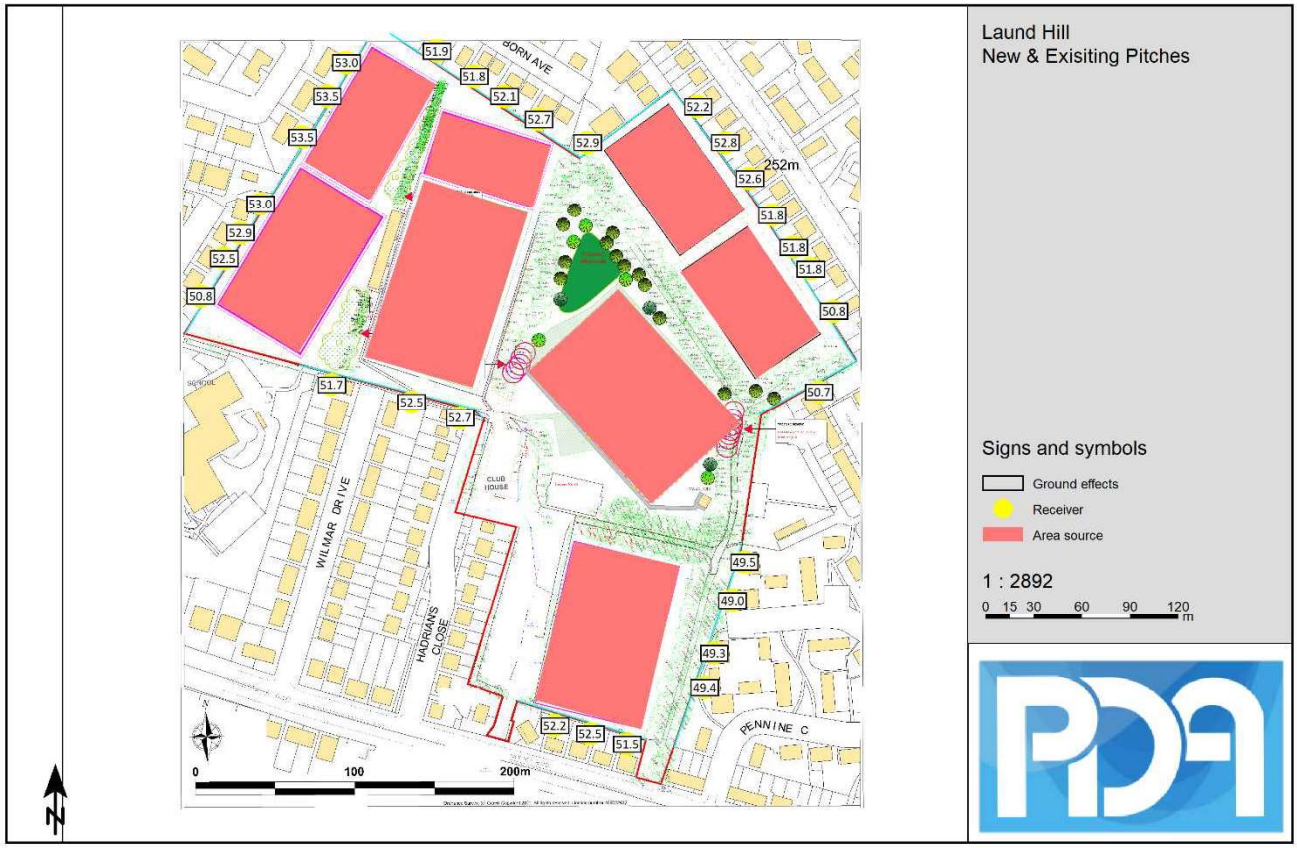


Figure 5 – Noise Model Results (proposed site)

The predicted noise levels from the existing and proposed site layout are summarised and compared in the Table below. Note that there may be more than one receiver position for each location however, for ease of reference the results have been condensed in the summary so that only the worst-case level is shown. All values have been rounded to the nearest dB.

Table 6: Summary & Comparison of Predicted Noise Levels

Location	Noise Level Existing Site dB L_{Aeq}	Noise Level Proposed Site dB L_{Aeq}	Noise Level Change dB
Rafborn Avenue	53	53	0
Laund Road	53	53	0
Hubert Street	50	51	+1
Pennine Crescent	50	50	0
New Hey Road	52	53	+1
Hadrian's Close	53	53	0
Wilmar Drive	53	53	0
Shannon Drive	52	53	+1
Moorlands Crescent	52	54	+2

5.2 Assessment

The results of our noise model indicate that the noise level due to the proposed sports pitches is likely to be 50 – 54 dB L_{Aeq} within the gardens of the nearest noise sensitive dwellings. If comparison is made to the noise levels from the existing site it can be seen that in some instances an increase of between 1 – 2 dB can be seen however, for the majority of the site no increase is observed.

In accordance with the Sports England Guidance reference is made to the IEMA Guidelines for Environmental Noise Impact Assessment with provides a comparative method to determine noise impact. The IEMA guidelines suggest that a change in noise level of < 3dB is indicative of 'negligible' impact. We would therefore consider that a change in 2dB as indicated by the noise model above is indicative a of negligible impact at the residential receivers.

The Sports England Guidance indicates that in addition to a comparative assessment the absolute noise levels should also be considered and makes reference to the World Health Organisation (WHO) Guidelines for Community Noise. The WHO Guidelines advise that to protect the majority of people from being 'seriously annoyed' during the daytime and evening periods, the noise level within outdoor living spaces should not exceed 55 dB L_{Aeq}. The noise level due to the proposed development is predicted to be 50 - 54 dB and therefore, achieves the WHO guideline noise.

It should be noted that during our noise survey levels of between 52 – 54 dB L_{Aeq} were measured whilst the existing sports pitches at the site were in use on the Sunday between 10:00 – 15:00 hours. Noise levels due to the proposed site layout are predicted to be between 50 – 54 dB L_{Aeq} assuming all pitches are in operation simultaneously and is therefore unlikely to be significantly different in level to the pre-existing noise climate.

The proposal effectively involves the reconfiguration of 4 no. pitches in the centre of the site to form a single larger pitch and upgrading 3 no. existing natural turf pitches with synthetic 3G turf however, ultimately the use and layout across the majority of the site remains unchanged. The existing sports facility has been a long standing use at the site with activity on the external pitches having a contribution to the existing ambient noise climate. In addition, we note that the hours of operation are restricted by Planning Condition 11 however, it is understood that these hours are no different to what is currently in place at the existing site. Therefore the character of noise emissions from the proposed site will not be significantly different in character to that of the existing ambient noise climate.

Given that the noise emissions associated with the proposed development are unlikely to be significantly different in level or character to that of the existing ambient noise climate we would consider this to be a further indication that the proposed development is likely to have a low impact.

It should be borne in mind that our assessment is based on the conservative assumption that all pitches will be in operation simultaneously and therefore, may be considered representative of the worst-case noise emissions at the site. It is likely that for the majority of the time the site will operate at a reduced capacity and therefore, lower noise levels would be expected.

5.3 Discussion

The National Planning Policy Framework (NPPF) requires that planning policies and decisions should mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development and avoid noise giving rise to significant adverse impacts on health and the quality of life. Based upon the above assessment it is concluded that the noise levels arising from the operations of the Proposed Development will not result in an adverse impact and will therefore comply with the requirements of the NPPF.

The NPPF also references the Noise Policy Statement for England (NPSE). The aims of the NPSE are to avoid significant adverse impact on health and quality of life. Our assessment has indicated that noise levels associated with the development (both the proposed and existing pitches) will be below the WHO guideline levels within external amenity areas and therefore, adverse health effects are unlikely to occur.

5.4 Other Uses

It is noted that Environmental Health have provided comments to the Planning Committee in which reference is made to additional activities at the site including, bonfire night, marathons and concerts at the site and it is suggested that these should be considered as part of our assessment.

As highlighted within the Design Access Statement produced by Hemstock Design "*the site has been used in the past for a wide range of other leisure activities, including a trim-trail, bonfire night party, half-marathons, music concerts, etc*". On this basis, the additional uses which have historically taken place on the site do not form part of the application as there is no change of use and therefore, do not need to be considered as part of our noise impact assessment.

In any case these type of activities are not typically something we would assess in the context of a Planning Application as these activities do not form the primary use of the site, which is to be used as a sports facility. Given that such events are likely to infrequent and in the case of Bonfire Night once annually we would expect that these type of events will be considered on an individual basis through the use of a Temporary Events Notice if required.

6.0 CONCLUSIONS

At the request of BPG Contractors Ltd, an assessment has been made of the likely noise impact due to the proposed upgrades and re-configuration of external sports pitches at YMCA Lawrence Batley Recreational Complex off New Hey Road in Huddersfield, HD3 3XF.

In order to determine the existing ambient noise climate in the vicinity of the site a noise survey was undertaken. The local noise climate in the vicinity of the nearest noise sensitive residences was dominated by road traffic at both locations most notably from the M62 motorway. Other intermittent noise sources included activity on the existing sports pitches and children from the Moorlands Primary School playground during breaktimes.

The worst case noise level due to activity on the existing pitches was found to be 54 dB L_{Aeq} measured at the boundary of the site. We note that there are no significant changes to the layout of the proposed site and therefore, it is a reasonable assumption that noise levels at the boundary are unlikely to vary significantly from what has been measured at the existing site. However, in addition to the measurements at the site a further modelling exercise has been undertaken.

The results of our noise model indicate that the noise level due to the proposed sports pitches is likely to be ≤ 54 dB L_{Aeq} within the gardens of the nearest noise sensitive dwellings. If comparison is made to the noise levels from the existing site it can be seen that in some instances an increase of between 1 – 2 dB can be seen however, for the majority of the site no notable increase is observed.

In accordance with the Sports England Guidance reference is made to the IEMA Guidelines for Environmental Noise Impact Assessment with provides a comparative method to determine noise impact. The IEMA guidelines suggest that a change in noise level of < 3dB is indicative of 'negligible' impact.

The Sports England Guidance indicates that in addition to a comparative assessment the absolute noise levels should also be considered and makes reference to the World Health Organisation (WHO) Guidelines for Community Noise. The WHO Guidelines advise that to protect the majority of people from being 'seriously annoyed' during the daytime and evening periods, the noise level within outdoor living spaces should not exceed 55 dB L_{Aeq}. The noise level due to the proposed development is predicted to be 50 - 54 dB and therefore, achieves the WHO guideline noise.

During our noise survey levels of between 52 – 54 dB L_{Aeq} were measured whilst the existing sports pitches at the site were in use. Noise levels due to the proposed site are predicted to be between 50 – 54 dB L_{Aeq} (assuming all pitches are in operation simultaneously) and is therefore unlikely to be significantly different in level to the pre-existing noise climate.

The existing sports facility has been a long standing use at the site with activity on the external pitches having a contribution to the existing ambient noise climate. In addition, whilst the hours of operation are restricted by Planning Condition 11, it is understood that these hours are no different to what is currently in place at the existing site. Therefore the character of noise emissions from the proposed site will not be significantly different in character to that of the existing ambient noise climate.

The National Planning Policy Framework (NPPF) requires that planning policies and decisions should mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development and avoid noise giving rise to significant adverse impacts on health and the quality of life. Based upon the above assessment it is concluded that the noise levels arising from the operations of the Proposed Development will not result in an adverse impact and will therefore comply with the requirements of the NPPF.

The NPPF also references the Noise Policy Statement for England (NPSE). The aims of the NPSE are to avoid significant adverse impact on health and quality of life. Our assessment has indicated that noise levels associated with the development (both the proposed and existing pitches) will be below the WHO guideline levels within external amenity areas and therefore, adverse health effects are unlikely to occur.

APPENDIX A – DEFINITION OF ACOUSTIC TERMS

The decibel

This is the basic unit of noise, denoted dB.

A Weighting

This is a weighting process which simulates the human ear's different sensitivity at different frequencies. A weighting can be shown two typical ways, 50 dB(A) L_{eq} or 50 dB L_{Aeq}. Both mean the same thing. (See below for a definition of L_{eq}). The dB(A) level can be regarded as the overall level perceived by human beings.

L_{eq} and $L_{eq(s)}$

This is the equivalent continuous noise level which contains the same acoustic energy as the actual time-varying sound. In other words it is a kind of average noise level. It is denoted dB L_{eq} or, for A-weighted figures dB(A) L_{eq} or dB L_{Aeq}. It can also be expressed in terms of frequency analysis (see later). $L_{eq(s)}$ is the sample L_{eq} level.

L_n

This is the level exceeded for n% of the time. It is denoted dB L_n or, for A-weighted figures dB(A) L_n or dB L_{An}. It can be expressed in terms of frequency analysis (see later). L_{90} is the level exceeded for 90% of the time and is a measure of the lowest level typically reached. L_{10} is the level exceeded for 10% of the time and is the highest level typically reached. L_{50} is the level exceeded for 50% of the time and, mathematically, it is the median.

L_{max}

This is the maximum level reached during a measurement period. The "time constant", or the ability of the equipment to respond to impulses is usually expressed along with it, e.g. "Fast", "Slow", etc. It is denoted dB L_{max} or, for A-weighted figures dB(A) L_{max}, dB L_{Amax}, etc. It can also be expressed in terms of frequency analysis.

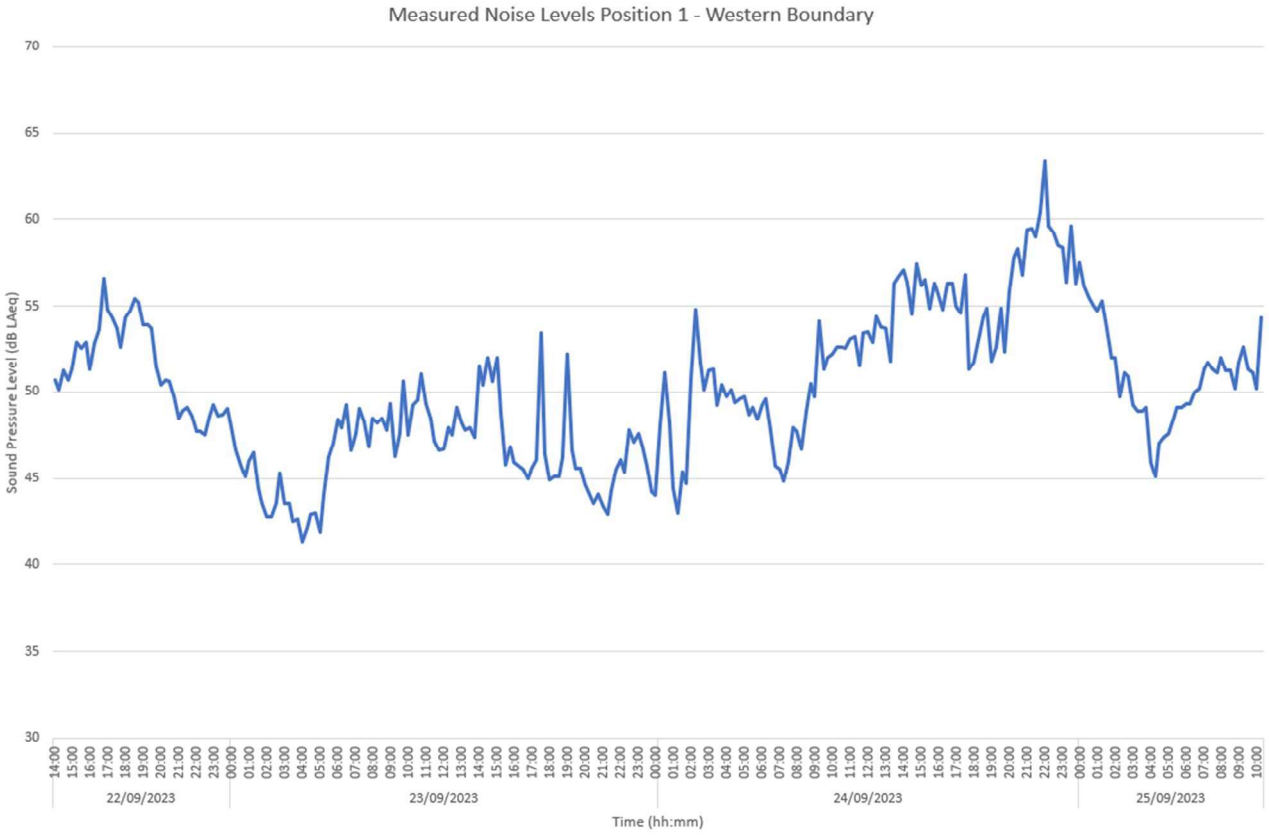
Frequency Analysis

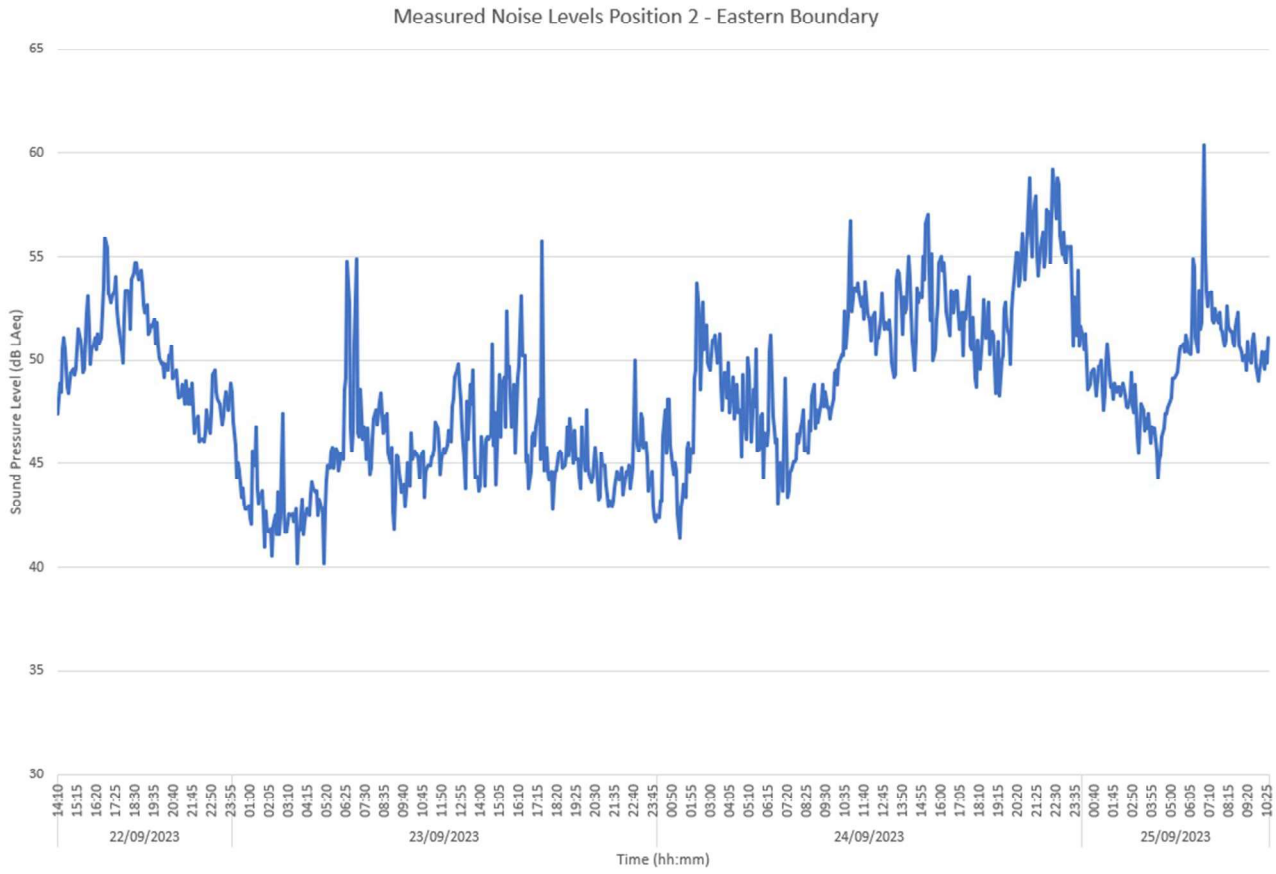
Whereas dB(A) gives a very useful overall figure, it has its limitations in that it cannot be used to model or predict the effect of noise control and mitigation as this nearly always has radically different performance at different frequencies.

Frequency analysis expresses an overall noise level at each frequency or band of frequencies in the audible range. Octave band analysis divides the audible range into 10 bands from 31.5 Hz to 16 kHz and the noise level in each band can be expressed in any form e.g. L_{eq}, L_{90}, L_{max} etc. One third octave band analysis uses 30 bands.

Narrow band analysis takes the process to resolutions of less than 1 Hz. This is useful for identifying the existence of tones (whines, hums, etc.) and in pin-pointing the sources.

APPENDIX B – MEASURED NOISE LEVELS




Measured Noise Levels Position 2 - Eastern Boundary
Sound Pressure Level (dB LAeq)
65
60
55
50
45
40
35
30
14:10
15:15
16:20
17:25
18:30
19:35
20:40
21:45
22:50
23:55
01:00
02:05
03:10
04:15
05:20
06:25
07:30
08:35
09:40
10:45
11:50
12:55
14:00
15:05
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17:15
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19:25
20:30
21:35
22:40
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05:10
06:15
07:20
08:25
09:30
10:35
11:40
12:45
13:50
14:55
16:00
17:05
18:10
19:15
20:20
21:25
22:30
23:35
00:40
01:45
02:50
03:55
05:00
06:05
07:10
08:15
09:20
10:25
22/09/2023
23/09/2023
24/09/2023
25/09/2023
Time (hh:mm)