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**Subject:** Philip O'Reilly - M42 Jct6 - Critique of Highways England Document - 6.3 Environmental Statement - Appendix 12.4 - Reconfiguration of Warwickshire Gaelic Athletic Association  
**Date:** 24 June 2019 22:08:25  
**Attachments:** [Mr Philip O'Reilly - M42 Jct6 - Critique of Highways England Document - 6.3 Environmental Statement - Appendix 12.4 - Reconfiguration of Warwickshire Gaelic Athletic Association.pdf](#)

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Dear Sir / Madam,

Please find attached analysis of Highways England Document: Appendix 12.4 of the Environmental Statement (TR010027-000241-TR010027\_M42J6\_6 3\_Environmental\_Statement\_Appendices\_Appendix\_12.4).

In response to a question I raised in my Relevant Representation regarding the impact the Warwickshire Gaelic Athletic Association reconfiguration will have on my property, Highways England referred to Appendix 12.4 in their Deadline 1 submission: "Comments on the Relevant Representations".

This document was supposed to consider the noise impacts on the nearest noise sensitive receptors for each of the five proposed WGAA options HE submitted with their DCO application. Unfortunately, the document contains a number of errors, omissions and incorrect assumptions and as a result cannot be considered representative of the predicted impact of any of the reconfiguration options on my property.

Kind regards,  
Philip

**Critique of Highways England Document:**

**6.3 Environmental Statement - Appendix 12.4 -  
Reconfiguration of Warwickshire Gaelic Athletic Association**

Whilst I acknowledge that I do not have the technical expertise to fully comment on the technical data HE have included in their application, and do not profess to having any understanding of sound modelling methodology, there appear to be a number of issues regarding their data, calculations and methodology which I believe require proper scrutiny by the Planning Inspectorate and I have set these out below:

## **EXISTING NOISE CLIMATE**

With regard to the WGAA reconfiguration, Volume 6 - Appendix 12.4 of the Environmental Statement compares the five options submitted with the DCO application against noise monitoring results taken at two locations - to the front and to the rear of Four Winds - but does not provide an accurate representation of the facts.

It is noted that BS 4142:2014 (Method for Rating and Assessing Industrial and Commercial Sound) advises to *'Exercise caution when making measurements in poor weather conditions such as wind speeds greater than 5 m/s . . . Weather conditions can affect sound levels by influencing sound propagation or generating sound which can be pertinent to the assessment'*

Section 12.4.1 advises that the existing noise climate data is recorded in Tables 1-4 to 1-6 (pages 4 to 6).

Section 12.4.2 confirms that weather conditions affected some results and wind speeds exceeded the recommended 5 m/s but average wind speeds did not exceed *'3 m/s for any daytime or night-time period'*.

HE have failed to include any meteorological data to support their statement, despite met office data confirming average wind speeds did in fact exceed the 5 m/s threshold on the following dates:

Friday 16th March 2018 (omitted from HE data in part)  
Saturday 17th March 2018 (omitted from HE data)  
Sunday 18th March 2018 (omitted from HE data)  
Monday 19th March 2018  
Thursday 22nd March 2018  
Monday 26th March 2018

Furthermore, gusts of wind exceeded the 5 m/s threshold for prolonged periods on every day of the survey, with the exception of the following dates:

Saturday 24th March 2018  
Sunday 25th March 2018

It is therefore difficult to see how the noise level data recorded in Tables 1-4 to 1-6 can be considered as representative of the existing noise climate and used as a basis for the impact assessment of the pitches, hurling wall, car park and club house.

## **IMPACT ASSESSMENTS**

It should be noted that the assessments carried out by HE are based on the following incorrect assumptions:

(Incorrect) Assumption 1: Noise is from a single event.

The effect of this assumption is that it makes no allowance for multiple events or noisier events:

- The sports pitches, hurling wall, car park and club house will frequently be used simultaneously, increasing the intensity of noise.
- As adjacent pitches will be used simultaneously, noise levels will be mutually reinforced as players and coaches shout more loudly to make themselves heard above the noise from the adjacent pitch.
- A typical session on a hurling wall can result in a total of 9000 noise events (explanation provided below)

(Incorrect) Assumption 2: Noise can be effectively contained with acoustic fencing.

An acoustic fence positioned between the WGAA and my property will provide only limited mitigation. Acoustic 'skip' is a known issue with acoustic fencing whereby sound escapes over and around fences, and noise will

remain a problem for the first-floor bedroom windows of my property, as they are in direct line from the source of the noise.

(Incorrect) Assumption 3: What matters is the average intensity of noise.

- Noise which occurs in sharp peaks is more intrusive than steady noise: one loud sneeze in the middle of the night will wake up one's partner, even if average background noise is low. The noise of the hard hurling ball being hit by a hurl (wooden stick) and rebounding off the hurling wall, one player using choice language to call to another, a referee's whistle, etc., are more intrusive than a relatively constant background noise.
- HE have based their assessment on a selective reading of The World Health Organisation's (WHO) guidelines set out in "Guidelines for Community Noise", which they have cited to in their report.

In doing so, their assessment does not consider qualitative aspects of the noise nor its ability to cause annoyance, despite the WHO guidance stating:

*'The capacity of a noise to induce annoyance depends upon its physical characteristics, including the sound pressure level, spectral characteristics and variations of these properties with time'* (WHO, p. xiii)

Their assessment does not make adjustments for noise levels during the evening, despite the WHO guidance stating:

*'Sound levels during the evening and night should be 5-10 dB lower than during the day'* (WHO, p. xiii)

Their assessment makes no quantitative or qualitative assessment of intermittent noise in relation to my property, e. g. referees' whistles, players calling to each other, etc., despite the WHO guidance stating:

*'For intermittent noise ... it is necessary to take into account both the maximum sound pressure level and the number of noise events'* (WHO, p. xiii)

### **Sports Pitches**

Section 12.2.8 states: *'As it has not been possible to undertake noise measurements when the existing sports pitches are in use, the source level of 58dB LAeq,1hr at 10m from the side-line halfway marking taken from Sports England's Design Guidance - Design Guidance Note Artificial Grass Pitch (AGP) Acoustics-Planning Implications, New Guidance for 2015 - has been used'*.

Can HE please explain why they have not taken actual noise level measurements from the existing WGAA site and used that in their calculations?

The source level of 58dB LAeq,1hr at 10m (as quoted in the Sports England Design Guidance and used by HE in their impact assessment) is derived from noise levels measured during nine different sports sessions on three separate Artificial Grass Pitches. These sessions involved adults and children and the activities were limited to hockey, 11 a-side football, rugby training, and multiple small pitch games. The guidance does not confirm whether any of the activities were recreational or competitive or if they were attended by spectators. None of these activities are played by 15 players on each side as is the case with Gaelic football and hurling. The noise from these activities could not, therefore, be considered as representative of the noise from a competitive game of Gaelic football or hurling as would typically be the case at the WGAA site.

It appears from the HE data that the source level of 58dB LAeq,1hr at 10m does not include the noise from spectators, or the particularly shrill noise of a whistle. Can HE confirm whether or not they have made any allowance for these in their calculations?

Noise from the pitches will not be limited to the noise from 1 pitch for a period of 1 hour, it will be extended across considerable periods of time and on a daily basis at weekends when I am most likely to be outdoors and most likely to be affected by the noise.

The noise will be unpredictable and therefore can be considered more intrusive than a steady and predictable level of noise.

The proposal to move two pitches closer to my property will change its acoustic character and cause changes in behaviour such as having to close windows, not sitting in the garden, or speaking more loudly. This perceived change in the quality of life and quiet enjoyment of my property constitutes an observed adverse effect.

Section 12.5.1 states: *'It should be noted that the change in noise levels due to the change in the road layout have not been considered in the predicted noise levels'*.

If the assessment is supposed to predict the impact of the noise levels of the completed scheme then why has the change in the road layout not been considered?

Sections 12.5.2 and 12.5.3 indicate a moderate adverse impact from Options 3 and 4, and a slight adverse impact from Options 1, 2 and 5.

Options 1,2 and 5 will result in the two main pitches, which are currently 300m from my property and behind an established hedgerow, moving 180m south to a position 120m from my property and separated by open land. The data HE have obtained through sound modelling suggests this will only have a slight adverse impact in noise levels, which is somewhat surprising.

Section 12.5.5 states: *'When comparing the predicted noise levels against the existing ambient baseline noise levels, the predicted sports pitch noise levels are lower than the baseline noise levels for the properties on Catherine De Barnes Lane and Shadowbrook Lane. The existing ambient noise levels at the rear of Four Winds are as expected, lower than the noise levels at the front of the property which is adjacent to Catherine De Barnes Lane. The predicted sports pitch noise levels are generally lower or similar to the existing ambient noise levels at the rear of Four Winds'*.

However, it is difficult to see where the data to support this statement has been included in the document. Monitoring Locations 7a and 7b (ML7a, ML7b) were installed at the front and rear of Four Winds. The tables 1-7 and 1-8 state a noise data level for Four Winds but do not differentiate between ML7a and ML7b. It has also been shown previously that the existing noise climate data submitted by HE is flawed and the true representative data is likely to be lower.

### **Hurling Wall**

Section 12.5.8 states: *'The use of the hurling wall is unlikely to have an adverse impact on the nearby NSRs. However, it is recommended further assessment of the noise impact of the hurling wall is undertaken once the final layout has been confirmed'*.

The noise from a hurling wall is as a result of a hard hurling ball being hit by a hurl and rebounding off a solid concrete wall. It is not a one-time event. Ulster GAA have produced a manual called "The Club Maith Tool-Kit" which they describe as 'a resource . . . designed to support you in the ongoing development of your Club'. The resource is available online and it is noted that on page 112, under the heading 'Hurling Walls', it states a typical night's session for one player using a hurling wall would involve up to 300 strikes of the ball. The document then advises on page 113 that the 'ideal hurling wall will be 40m long and 5m high, with a playing area of 40m running away from it: this will facilitate its use by a full panel of players'.

(The complete document can be found at <http://ulster.gaa.ie/club-maith/tool-kit/> or alternatively a copy of the relevant pages can be found in Appendix A)

In a typical session involving a full team of 15 players, each player would hit the ball 300 times, causing the ball to rebound off the wall 300 times. That makes a total of 9000 noise events in a typical session using a hurling wall. I can only assume that HE have not fully researched the implications of a hurling wall as this would suggest their statement that 'the use of the hurling wall is unlikely to have an adverse impact' appears to be somewhat of an understatement.

It is not difficult to conclude that the data HE have included in their impact assessment cannot be considered representative of the predicted impact of a new hurling wall on Four Winds.

### **Car Park**

The proposed car park is for 170+ cars but section 12.5.9 Table 1-10 states the predicted noise level for a single car door slamming. It does not include noise level data for multiple cars, vehicle movements, engines being revved, delivery/collection vehicles or patron noise.

The data submitted cannot, therefore, be considered representative of the predicted noise level impact of a proposed car park on the WGAA site.

### **Club House**

Section 12.5.12 states: *'no information is available regarding noise levels from the existing clubhouse and the proposed specification of the configuration is not known'*.

Section 12.5.14 states: *'A robust approach was used in the statistical analysis of the background sound levels, looking in turn at the mode, median and mean averages and the lowest 10th percentile of levels recorded between 23:00 and 01:00. This analysis produced a range of 37 – 42dB for the night time period at Location ML7b. Based on this a level of 40dB for the night time is considered to be representative'*.

The obvious concern with the positioning of a new clubhouse is the noise that results from it being used as a venue that holds functions with amplified music and loudspeakers. It can be assumed this will principally be on a Friday, Saturday and Sunday. On these specific days, noise levels at the rear of Four Winds (ML7b) were recorded (see Table 1-6 (rear), page 6) as 35.3dB, 36.6dB and 36.0dB resulting in a mean level of 36dB. Therefore, a representative figure for the night time is 36.0dB and not 40.0dB as HE have suggested. Also note, this calculation is based on the flawed existing noise climate data submitted by HE and the true representative figure is likely to be lower.

HE have carried out an impact assessment but have failed to include any noise level data related to the proposed clubhouse. There is no noise level data included for external areas such as the play area, beer garden and smoking areas. There is no noise level data included for entertainment, including music, or for patrons, and as noise levels can only be effectively controlled by confining noise to internal areas, HE have failed to suggest the operational conditions WGAA will be subjected to in order to comply with legislation.

The submitted impact assessment cannot, therefore, be considered representative of the predicted impact of a new club house on Four Winds.

### **Mitigation**

No proposed mitigation to Four Winds to reduce the impact of the WGAA reconfiguration has been included in the HE document.

## **Appendix A:**

**Hurling Walls - Extract from Ulster GAA Design Manual (2015):**

**“The Club Maith Tool-Kit”**



CLUB  
**MAITH**



# TOOLKIT

Foireann Uirlisí Club Maith







WELCOME

# Welcome to the Club Maith Tool-Kit

FÁILTE GO FOIREANN UIRLISÍ CLUB MAITH

The Ulster Council values volunteers and recognises the absolutely central contribution that GAA Clubs led by volunteer officials make to the Association. This resource has been designed to support you in the ongoing development of your Club and the betterment of your community. Ulster GAA is here to support you!

Club Maith is a GAA Club development and volunteer support programme. It has several elements and resources:

## Club Maith Website

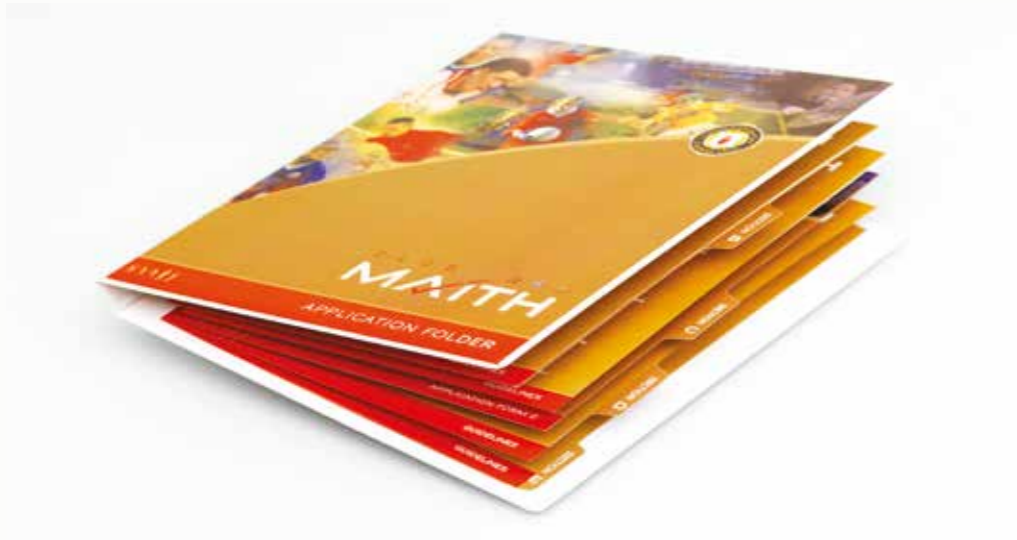
The development of the website is ongoing and at the moment includes sample policies, procedures, Club plans, advice notes and a message board for you to share information with other Club volunteers elsewhere. If you require more information or want to access sample policies and procedures, then register as a member of the Ulster GAA Club Maith website on [www.ulster.gaa.ie](http://www.ulster.gaa.ie)



## Club Maith Tool-Kit

The tool-kit is a resource manual which brings together a whole raft of relevant information for Club officials. It covers all aspects of Club activity.

Welcome to the Club Maith Tool-Kit



### Club Maith Accreditation

The Club Maith accreditation is a scheme which allows Clubs to bench-mark themselves against best practice. In doing so it encourages them to aim for excellence in the core areas of GAA Club activity, ie governance, duty of care, community outreach, culture and coaching and games. Clubs are then given a level of accreditation which acts as a quality mark for them.

Ulster GAA also has a dedicated team available to support our Club volunteers in their ongoing work at all levels of the Association. In addition to the Club Maith website we have established an email for Club queries, [queries@ulster.gaa.ie](mailto:queries@ulster.gaa.ie) where we hope to respond to your questions within 48 hours.

We hope this resource assists you further developing your Club and making your local community and the GAA better. Finally, the Club Maith resources aren't meant to provide a set instruction manual for Clubs, all of which has to be taken on board by all Clubs. It's deliberately designed as a support pack, which Clubs can pick and choose from. But we're confident every Club in Ulster can learn from some part of the Club Maith resource.



**Mairtin Mac Aibhne**  
President  
Ulster GAA



**Danny Murphy**  
Provincial Director  
Ulster GAA

To register for the Club Maith Accreditation Process:  
Email: [clubmaith@ulster.gaa.ie](mailto:clubmaith@ulster.gaa.ie)

For general Club queries:  
Email: [queries@ulster.gaa.ie](mailto:queries@ulster.gaa.ie)

Club Maith Website: <http://ulster.gaa.ie/club-maith>

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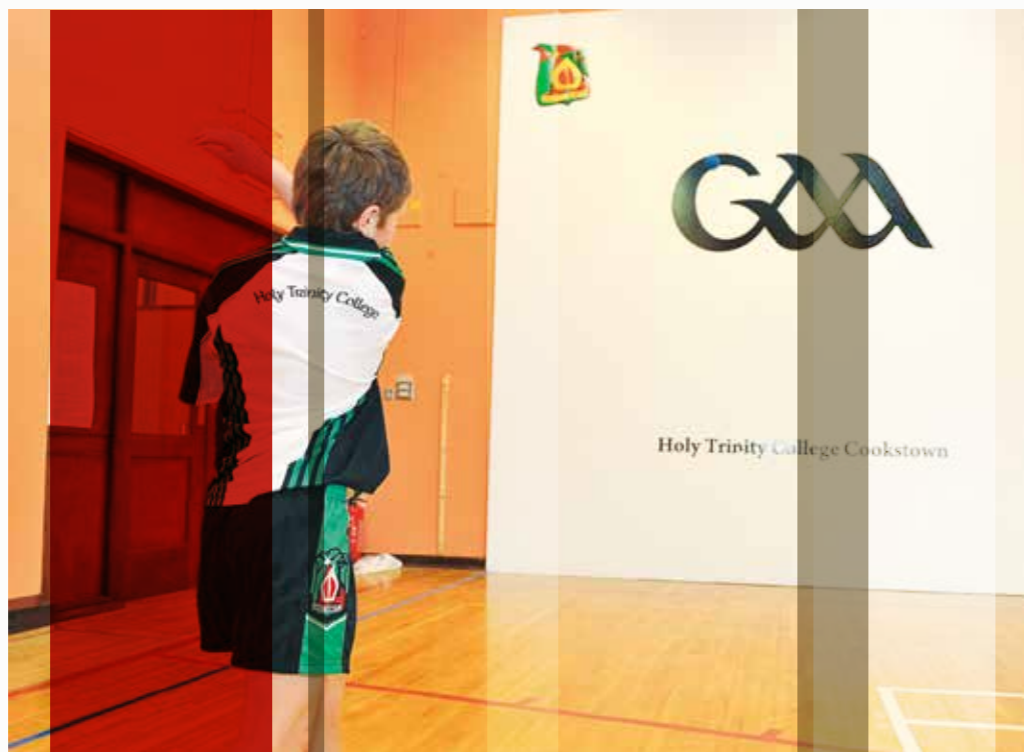
## Handball

A standard four-wall GAA handball court is 20 feet (6.1m) wide; 20 feet high (with the back wall at least 14 feet high); and 40 feet (12m) long.

Walls are usually a smooth-rendered block wall whilst floors tend to be a sprung hardwood. The walls should be painted white and the floor should be a non-slip sports surface. Access to the alley is through a door in the back wall – which may be made of glass to facilitate spectators. Top quality lighting is essential as is well-controlled heating and ventilation.

Dedicated handball alleys are expensive to build and tend to be useable for handball only and very little else. When considering building a handball alley, Clubs need to look at:

- The likely demand for and use of the facility.
- Whether a joint project with someone else/ somewhere else might be better.
- Whether a 'one wall' solution might be more appropriate.
- How the alley will relate to/link in with other Club facilities, especially changing and showers.



'One-wall' handball is an increasing feature of sports halls and even appropriate outdoor spaces. A wall area 20 feet wide by 15 feet high is required, with a floor area 20 feet wide and 34 feet long running away from it. A standard 'four court' sports hall could easily accommodate four 'one wall alleys'.

## Hurling Walls

These are now seen as an important means of allowing hurlers of all ages and all levels improve their skills, almost regardless of the time of year or weather conditions. Previous generations of hurlers used gable ends; building walls; and handball alleys for this purpose so the hurling wall just builds on traditional good practice.

It is estimated that a dominant player in a match will be on the ball 15 times: a night's session using a hurling wall will allow him/her to be on the ball up to 300 times. The benefits for handling; striking; and skills development are obvious.

The ideal hurling wall will:

*From being seen historically as a luxury, fit-for-purpose spectator accommodation is now seen as a necessary part of the GAA Club offer.*



- Be 40m long and 5m high, with a playing area of 40m running away from it: this will facilitate its use by a full panel of players.
- Be topped with a catch-net a further 2m high and angled back into the playing area.
- Have two 6m long 'wing walls' at either end of it, running at right angles from the main wall back in the direction of the playing area.
- Be made of seamless poured concrete or prefabricated concrete slabs (the surface of a rendered block wall will crack under sustained use and the mortar-joints in an uncovered block wall will cause the ball to behave inconsistently).
- Have a 3G playing surface 40m x 40m: grit is an alternative surface followed by tarmacadam and lastly, concrete (these latter two surfaces are dangerous in frost).
- Include floodlighting to at least 250/350: the wall/playing area should be floodlit from the sides.
- Incorporate good drainage.
- Be appropriately linked into changing facilities.
- Take account of prevailing winds.
- Include some dug-out provision.

Some walls have goals and/or other targets painted onto them.

Hurling walls are essentially an outdoor facility but sports buildings can also accommodate hurling walls ... provided the space is available; the walls are fit-for-purpose; and the floor surface is suitable.

## Spectator Accommodation

The spectator and/or non-playing Club member is the life-blood of any Club but all too often their needs have been low on the list of GAA infrastructure priorities. However as with many other things, from being seen historically as a luxury, fit-for-purpose

spectator accommodation is now seen as a necessary part of the GAA Club offer.

The most important fact for clubs to be aware of regarding spectators is the fundamentally obvious one: they come to watch the games. That basic fact should underpin all planning of spectator accommodation. Spectators should therefore be offered accommodation which:

- Offers good sightlines, ie a clear, unrestricted view of the whole playing area.
- Provides some measure of comfort; shelter; and/or cover.
- Is easily accessible.
- Relates meaningfully to the Club's other facilities (and especially to toilets).

A good rule-of-thumb is that spectators should be able to see all of the touchline closest to them ... so roof supports; scoreboards; dug-outs; walls; barriers; fencing; and (a common feature of most Club pitches) advertising hoardings should not get in the way.

The quality of sightlines is simply determined by the ability to see over the head of spectators in front. This is usually expressed as a 'C' value, which is the distance between the centre of the eye and the top of the head in front of the viewer. A 'C' value of 120mm gives a good sightline and one of 150mm an excellent one. New GAA stands should achieve a minimum 'C' value of 90mm for all seats.

Calculating 'C' values is a technical process that should be undertaken by professionals.

The 'C' value will determine the rake or slope of the stand and essentially the steeper the rake/slope, the better the sightlines. Health and safety now comes into play however: a

# CLUB MAITH



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The Ulster GAA Club Maith Tool-Kit is endorsed as a best practice guidance manual by the Ulster GAA Integration partners:



Ulster Ladies  
Gaelic Football  
Council



Ulster  
Camogie



Ulster  
Handball  
Council



Ulster  
Rounders  
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