

INTERNAL MEMO



**To:** Development Management  
**From:** Mark Sherwood Team  
Leader Environmental Protection and Housing  
**Ext:** 2169  
**CC**  
**Date:** 1 March 2017  
**Subject:** Runways Farm - 4/03082/16/ROC Civica SR505975

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Notice is hereby given that the Environmental Health Department:

- a)  does not wish to restrict the grant of permission
- b)  recommends that permission be refused for reasons set out below. However in the event that the application is given approval, the conditions overleaf should be applied.
- c)  advises that any permission which the Planning Authority may give shall include the conditions set out below.

**Advice**

Despite reductions in exceedances of the noise thresholds set in the temporary planning permission, residents continue to complain that activities on the site are detrimental to the amenity of the area.

The frequency of these complaints supports the view that the current Management Plan for Runways Farm is inadequate.

In the event that permission is given to continue current activities, it is recommended that the Management Plan for the site is significantly revised to help address these concerns:

- The Management Plan must be updated to cover current and planned activities as well as improvements e.g. re-location of drifting to the main runway. It should include regular consideration of best practicable means to control noise, for example improvements to monitoring technology, tyre technology -, use of low noise paints to set out the routes for various activities.
- Quarterly reviews of the Management Plan with the council regarding exceedances of noise thresholds, complaints received and mitigation measures taken as a result.
- Improve the effectiveness of the track wetting where drifting takes place – with a requirement to share details of the use of the system and volumes of water used.
- The static noise test for exhaust monitoring be changed to that laid down by the Motor Sports Association, i.e. readings to be taken at ¾ of maximum revs.
- Consideration to the use of an anemometer on site to better correlate complaints to wind direction.
- A proper, costed, consideration to providing of real-time noise data with a similar, costed, consideration of providing an additional noise monitoring point.
- Quarterly external field calibration checks of the noise monitors

Advice is given having regard to:

**Appeal Decision date: 14 January 2015**

**Appeal Ref: APP/A1910/C/14/2213612**

**Land at Runways Farm, Upper Bourne End Lane, Hemel Hempstead HP1 2RR**

And

**Letter from Geraldeve reference RJLD/CKE/J7803 dated 7 February 2016 (sic) received 7 February 2017**

**With regard to the planning appeal decision**, I draw attention to the inspector's comments in his decision report, namely:-

*“26. The perceived loudness in the residential area was not great for either the demonstration in the morning or in the afternoon. In the morning I could hear the tyre squeal, but very little engine noise. In all cases, if there was another, closer source of noise, it masked the noise from the appeal site. In the morning a helicopter went over and this completely dominated the noise environment and in the afternoon, if a car passed my location by the road the noise from the site was completely masked.*

*27. What is apparent to me is that it is not just the loudness of the noise that makes it annoying to residents, but the characteristics and repetitive nature. In the afternoon I was aware of the accelerating car with what seemed to me to*

*be a 'distant' fairly high pitched noise, followed by an equally distinguishable distant 'hollow' reverberating noise from the exhaust as the car was throttled back. This was sometimes accompanied by the squealing of tyres. While not necessarily recording as a loud noise, it attracted attention. In my view the noise report, while not doubting its veracity, does not seem to place enough weight on these important noise characteristics and the effect they have on listeners. This is important as it is these which are noticeable and if repeated could become annoying even at the low sound levels that I perceived on my visit, as also demonstrated by the residents' complaints. The same effect was not experienced by the revving, accelerating and decelerating police cars, which seemed to be much more effectively silenced.*

*28. I conclude on the main issue that there is currently a noise nuisance, caused by squealing tyres and to some extent engines revving, that results in unacceptable harm to the living conditions of nearby residents.*

*30. Subsequent to airfield operations ceasing, use of the site in the past has been associated with many motor related purposes, including go-karts, motorcycles and car auto-tests.*

*40. In my view it is not the principle of motor use, but the way that the use occurs which is causing the concern. If it is not possible for the activities at the site to be conducted with acceptable noise characteristic in relation to engine revving and tyre squeal, these should not be allowed to continue. The appellant indicates that the tyre squeal can be acceptably controlled by wetting the track before 'drifting' of cars around the corners takes place. There was a video demonstration and demonstration on site to indicate the difference. The noise emanating from the skidding cars on the wetted track was substantially reduced and unlikely to be heard in residential areas.*

*47. I have concluded that in principle some form of motor uses have been, currently are and, in my view, could continue to be suitable at the site. However, the way the current uses are operating is causing unacceptable disturbance, and unless these can be controlled by the conditions proposed, I consider the use should cease. I consider that in this situation it is appropriate to have a 'trial run' and an appropriate timescale would be 2 years."*

Diary sheets continue to be submitted by local residents who are affected by engine noise and particularly tyre squeal or shriek (excel file Log of Complaints).

The frequency of complaints supports the view that the current Management Plan for Runways Farm is inadequate. Advice is given at the end of this memo recommending amendments to the Management Plan.

### **Weather conditions**

The frequency and severity of complaints may also be influenced by the wind direction and weather conditions.

*For environmental noise, the weather plays an important role; the greater the separation distance, the greater the influence of the weather conditions; so, from day to day, a motorway some half a mile away can sound very loud, or can be completely inaudible. This very large variation in daily noise levels means that it is not unusual for residents not to notice the effects of a Noise Control programme; for example if "before noise control" noise levels varied from say 40 to 60 dBA, and "after" from 32 to 52 dBA, many residents would not notice any change; perhaps after time a proportion would appreciate that in general noise levels had fallen, but probably many residents would still not have noticed the change.*

*There is a well used model for predicting weather effects - "The Propagation of Noise from Petroleum and Petrochemical Complexes to Neighbouring Communities"; this is report No.4/81 published by the Oil companies international group for CONservation of Clean Air and Water - Europe; this is simply known as the CONCAWE model and is used for many noise sources. The full report can be ordered from [www.concawe.be](http://www.concawe.be).*

#### *Wind Strength and Direction*

*The most well known weather effect is wind strength and direction; naturally winds blowing from the noise source towards the noise sensitive location will increase levels, and the stronger the wind the greater the effect, until the wind itself becomes the dominant noise source or is so turbulent that it disperses the "problem" noise. Standards such as BS.4142 and "Calculation of Road Traffic Noise" place limits on acceptable wind strength and, in some instances, on the wind speed in a particular direction - vector wind speed.*

Reference: [http://www.noisenet.org/Noise\\_Enviro\\_Weather\\_WindSpeed.htm](http://www.noisenet.org/Noise_Enviro_Weather_WindSpeed.htm)

Attempts have been made to correlate noise complaints received with wind direction using historical weather data as there was no requirement imposed in the planning consent or capability to collect weather data at the site.

Data taken from the meteoblue website has been correlated with complaints (Excel file: Log of Complaints 2015-16). However given the nature of the data available reliable conclusions cannot be drawn for the following reasons:

- The weather archive shows simulation data, not measured data, for the selected area.
- The monthly data used there are daily aggregations for minimum, maximum and average values.

Anecdotal evidence from complainants nevertheless appears to correlate their concerns of noise with wind direction.

The only way to provide accurate weather data for the site would be to set up a weather station on the airfield as there are no commercial weather stations nearby.

## **Drifting**

The current Noise Management Plan, v6 8 June 2015, contains the following:

### *Clause J*

*j) When “drifting” is taking place, the surface of the circuit must be maintained in a wet condition, using water hoses as often as necessary. The hoses are laid around the southern and eastern sections of the circuit. The hoses have holes at regular intervals which allow water to escape along the whole of the area where drifting takes place. The water must be switched on prior to the event starting, to allow the surface to be fully wet by the time drifting starts. If it is or has been raining, this may not be necessary. Inspection of the circuit before the event starts is necessary to determine whether the surface is already wet. Weather conditions during the day will determine whether the circuit will get wetter, stay sufficiently wet, or start to dry out. If the surface is starting to dry, the hoses must be turned on again at such intervals as is necessary to maintain a wet condition.*

*Further details can be found at Appendix 1.*

In point of fact drifting has been relocated onto the main runway in 2016 though the Management Plan has not been updated to reflect this fact. This failure to update the tracking wetting measures is a major deficiency in the Management Plan.

Complaints from those affected by tyre squeal have made reference to the lack of visible wetting of the runway area during drifting sessions. For example, 18 out of 22 noise complaints logged by neighbours in November 2016 were about or included reference to tyre squeal/shriek/screech.

From personal observation on 28 September 2016 it is not possible to determine whether the track is wet whilst drifting was in progress unless the observer is at the side of the track. A demonstration of track wetting on 10 January 2017 confirmed that the wetting is restricted to two small areas (see photos 1).



Photo 1 – wetting of the Runway

The adequacy of hoses laid at the edge of the runway as a means of wetting the drifting area must be questioned.

TV and other media coverage suggests that some facilities that provide for drifting use sprinkler systems to ensure that the track is wet. A sprinkler system may be expected to use significant amounts of water, adding to the operating costs of the facility.

A sprinkler system is likely to be more efficient at dispersing water across the track than hoses which appear only result in partial wetting of the track dependent on the slope of the surface.

The operating company Drift Limits have suggested that in fact the main cause of the tyre squeal is the tyres slipping across the painted lines used to demarcate the areas of the track for drifting. Drift Limits are researching paints that may overcome this problem.

At the time of writing the applicants have not advised whether or not they have implemented this proposal.

### **Letter from Geraldeve**

This letter from consultants employed by the applicant addresses a number of specific issues raised by the council in a letter to the applicants on 15 December 2015 following a meeting with the ward councillor and constituents.

I refer to the sub-headings used in the letter.

### **Amount/position/quality of noise monitors**



Concern has been expressed by residents affected by noise from the site that the existing noise monitoring system was inadequate. Particularly that there were insufficient monitoring points. A report by Clarke Saunders Acoustic Consultants (commissioned by Bovingdon Action Group) recommends that at least 3 monitoring locations were required to reduce the under reading effect of driver moderation.

At present there are 2 monitors located at the following locations:

1. Circuit Track-side monitor;
2. Runway Track-side monitor.

Location of the monitors in relation to the residents reporting that they are affected by noise from the site is shown in Runways Farm Internal Noise Complaint Map.

The monitors are Invictus CR247 monitors, made by Cirrus Environmental, recommended by Tony Cawthorne, who was DBC's EHO in 2015 dealing with the noise issues. The monitors are fit for purpose though there is concern about the location of the equipment. They have been relocated to above ground boxes from the pits originally used for safety and security reasons. These pits had a tendency to flood which led to reliability problems. In an above ground location they may be more open to temperature fluctuations and attract attention that they would not have done when they were concealed under ground.

The microphones for the monitors and their connecting cables are very exposed being unprotected above ground. The monitor for the Runway area in particular has a microphone positioned in the adjacent arable field. This requires the farmer to move the microphone when ever any agriculture activity is carried out so that it is not destroyed. (see photos 2 & 3)



Photo 3 – Runway monitor



Photo 4 – Runway microphone

The applicants argue that Drift Limits has instructed independent noise experts (Sharp Redmore) to advise them on these matters.

*They say the science behind the noise monitoring is that an analogue noise contour map is created which allows for topography and wind direction. A monitor anywhere on the contour should give the same answer. For this reason additional monitors in different locations would add nothing to the noise data and be of no benefit. Whilst moving the monitor closer to a noise source will give higher readings, when these readings are applied to the contour they will still give the same result regardless. The positions of the noise monitors were carefully considered and agreed as appropriate by Tony Cawthorne ex BDC (sic) Environmental Health Officer.*

Geraldeve go on to justify the lack of noise monitoring adjacent to affected properties by saying:

*Based on measurements previously carried out it was noted that existing noise levels from road traffic were higher than the noise predicted from track activity. It is therefore not possible to measure track activity at the boundary of the residential properties with any level of confidence. As a result, and as discussed during previous consultations with the local authority, track side noise limits are considered the appropriate location in this case, rather than noise monitoring at the adjacent affected properties. The track-side limits have been based on computer modelling and subjective observations at the*



*adjacent residential properties, and they have previously been agreed with the local Environmental Health Department. The addition of noise monitors on adjoining properties would not add anything, and could give large amounts of spurious data. As an example of this, the latest Noise Violation Log for the circuit on 25 October 2016 shows a significant noise exceedance which resulted from a dog barking. There are many other similar examples.*

However, the applicants are relying on acoustic modeling using SoundPLAN software using monitoring data taken in April 2014. No attempt has been made to validate this modelling since then, despite changes in operating practices at Runways Farm. Given that the applicants knew that they had been given a temporary planning permission in order to determine whether they could adequately control noise problems it would have been sensible to review the sound modelling.

I have reviewed the noise complaints received compared to the exceedances of the noise limits set in the Management Plan. There are a lot of exceedances recorded that are unrelated to motor noise events (see excel spreadsheet Analysis of Noise Breaches Jun 2015 to Dec 2016).

Note I use the term “motor noise” to relate only to the activities organised by Drift Limits, the Metropolitan Police, Sirens, and other legitimate users of the area subject to this planning application. However, it is essential to note that the Metropolitan Police activities are subject to this planning application. Only after 60 days there are other exceedances – for example the sound of tractors and other agricultural machinery – that have caused exceedances that I have not classified as “motor noise”.

To distinguish between exceedances caused by motor noise and those caused by other activities, the recording taken by the noise monitors have to be listened to and the sounds heard interpreted. The site operators are responsible for doing this and retaining recordings in the event of uncertainty or a dispute.

In the case of the Circuit monitor 58% of exceedances were due to non-motor noise events and 62% of exceedances on the Runway monitor were similarly due to non-motor noise events. Further more, of the motor noise exceedances recorded only 19% were due to activities by Drift Limits on the Runway, whilst the proportion of exceedances by that company on the Circuit was 41% of the total recorded. The majority of the other motor activity was due to the Metropolitan Police, who operate under their own planning permission reference 4/02626/03/FUL.

Noise levels in the surrounding area were measured by Council officers again in February this year whilst the circuit and runway were in use. This monitoring confirmed that it is the characteristics of the noise from the motor activities that is the issue, rather than its loudness. Whilst motor noise from the circuit and runway could be heard it did not register above the other noises recorded on the Rion NA 28 model, Class 1 soundlevel meter (See appendix A).

In view of this disparity between the number of complaints made by residents and the incidents of exceedances recorded, the gains from the additional information have to be balanced against what could be a significant financial cost for installing additional noise monitors. The main issue is that the sounds that disturb residents are of short duration and are not louder than other sounds in the local environment (road traffic, aircraft, etc.). This makes setting a reliable threshold level that is unique to motor noise impossible.

### **Provision of real-time noise data**

To provide more transparency for the council and local residents the applicants were asked to consider publishing real time monitoring results on line. The existing monitoring system has the capability to be connected to a system to publish real-time data. If real time information were available to residents it would allow them to relate their experience of noise to activities on the track.

Geraldeve rejected this idea out of hand - *Real time data is very time consuming to handle due to false negatives and due to the fact that the majority of exceedances are not caused by motor activities or training. It is also very costly due to the software licencing required.*

No estimate of the cost has been provided though the applicants are of the opinion that such a requirement is unreasonable, citing “*The current system of recording noise levels and maintaining a log which is made available, either on demand or as part of the reporting system to the local authority, is sufficient to enable scrutiny of the results and to determine whether any contraventions have occurred.*” Without any costings being provided it is impossible to determine whether or not this is unreasonable.

This log and determining the sources of the noise are the responsibilities of the Runways Farm Partnership under the Management Plan. This information is not published.

Perhaps the council has to consider whether it has the resources to request and publish monitoring data on its website, as it does for air quality monitoring results.

### **Noise Thresholds**

These are set out in Section 8 of the Management Plan (approved by the Council on 15th June 2015 through the discharge of Condition 5 of planning permission APP/A1910/C/14/223612). The level of noise emitted by motor vehicle activities shall not exceed the following levels:

- a. Main runway – 72 dB LAeq1min and 88 dB LAmax at any time.
- b. Circuit – 69 dB LAeq1min and 86 dB LAmax at any time.

These thresholds were agreed with applicants in 2014 following investigations by Sharps Redmore and Tony Cawthorne, the council's lead officer for noise at the time. Noise monitoring results were modelled and the thresholds set so that it was calculated that motor noise from Runways Farm activities would be 5 dB below the background level.

The Metropolitan Police are not bound by these limits but are limited to 60 days per year.

The council recommended the 1 minute LAeq time period as it was anticipated that there would not be prolonged engine revving or tyre squeal. However this still results in a lot of exceedances by very loud events such as fire works, aircraft flying overhead and even bird song.

The applicants have suggested that as peak noise from track activity controlled by the LAmax that the 1 minute time period is increased to represent the actual time taken for the driving experiences. In the absence of any credible technical argument this suggestion has to be rejected. The complaints received are not about continuous noise but rather short periods of intrusive engine revving or tyre squeal. It is character of the noise rather than its loudness that the residents report as detrimental.

Whilst the existing noise thresholds are not perfect this is not an argument for relaxing them. It is worth noting that Clarke Saunders (the consultants retained by Bovingdon Action Group do not suggest alternative threshold values.

### **Exhaust noise standards**

The Management Plan (page 8, approved by the Council on 15th June 2015) sets out the exhaust standards, as follows;

*"k) All event vehicles must be maintained in good working order. They must also be tested for a static noise emission level. As a minimum standard, a calibrated, type II, hand held acoustic meter, at a distance of 1 metre from the exhaust, and at a 45 degree angle shall be used. The meter reading must be recorded for an engine speed of 2/3 of max. revs. The maximum reading for any vehicle that is to be used is 110dB."*

I suggest that this be changed to be consistent with the standard laid down by the MSA (Motor Sports Association). This would change the wording of the penultimate sentence, of the above, to read *"The meter reading must be recorded for an engine speed of ¾ of max. revs."*

This proposal was put to the applicant by Rick Downham, the EHO dealing with this application at the time in a meeting with Cathy Leahy on 20 October 2016. The applicant advises that all current event vehicles are within these proposed levels.

## **Transparency of the noise monitoring data**

The noise monitoring arrangements set out in the Management Plan are in place and in general function well. The monitors are active 24 hours a day seven days a week so they capture noise incidents on days when days when no motor vehicle events are taking place.

Whilst the site operators may refer to this as collecting spurious data it does give a better picture of the level of intrusion of motor noise relative to the other activities that take place in the area.

If the noise limits are exceeded by a motor vehicle activity at the site, then Runways Farm Partnership record the name of the operator, the time and date of the exceedance, the type of activity taking place, the circumstances leading to the transgression, and the remedial action taken or required to prevent its re-occurrence.

The council receives email alerts of any exceedances and events affecting the noise monitors (e.g. battery changes, case opened, windshield removed, etc).

This procedure does not provide independent corroboration of the actual sources of noise exceedances.

I propose that the Management Plan be amended to require a quarterly review of exceedances and the responses made to them by the Runways Farm Partnership. Such reviews could be face to face but could also be done by phone or email if appropriate. This would provide more transparency for the site operators and enable the council to feedback on the effectiveness of measures taken relative to any complaints received from local residents.

## **Operational Log**

A copy of all the operational logs for each operator over the past two year period has been received by the Council as requested. These detail the types of events taking place and the hours of operation.

## **Breakdown of noise exceedances, what has caused them, and the evidence that the exceedances have dropped**

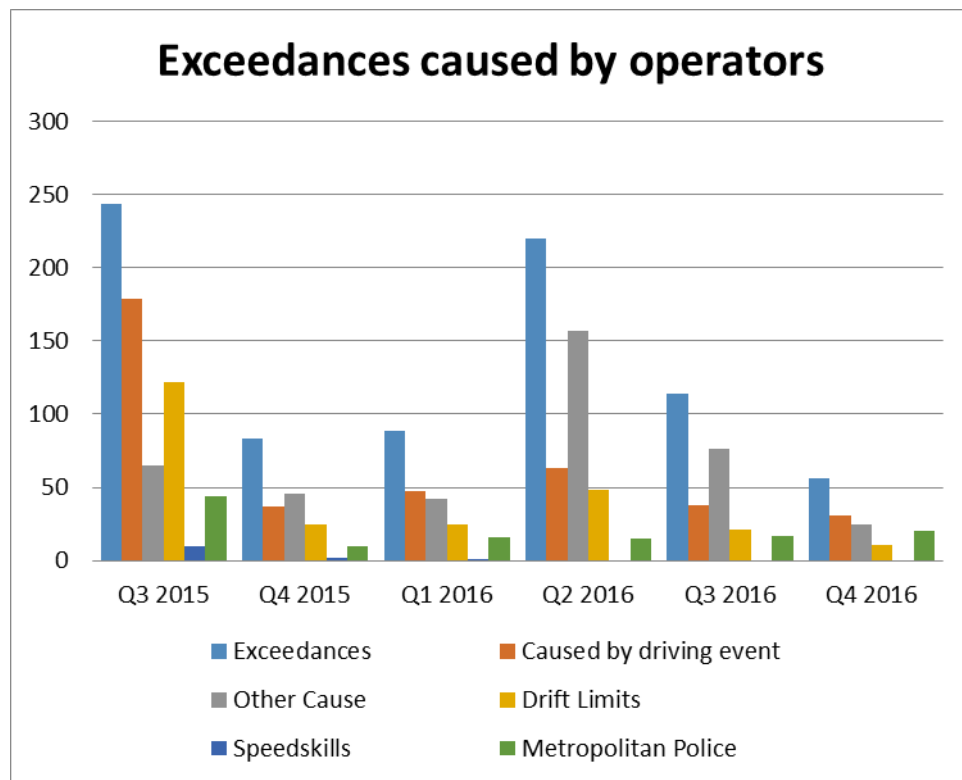
The council has received Noise Violation Log setting out all noise exceedances at Runways Farm, (see excel spreadsheet Noise Violations May 2015 to Jan 2017) including the following details:

- the name of the operator;
- the time and date of the exceedance;
- the type of activity taking place;
- the circumstances leading to the transgression; and
- the remedial action taken or required to prevent its re-occurrence.

The applicants have provided a summary of the noise exceedances.

Geraldeve state that “the monitors are set to pick up exceedances in real time, they use an LAE measurement to “predict” when an LAeq1min level will be exceeded in each minute. This sometimes results in a “false positive”, where an exceedance is recorded, but actually the level was not quite exceeded.” Having raised this potential issue they give no indication as to how frequently this occurs and in the absence of any corroborating evidence the possibility of false positives as a significant factor can be discounted.

Both the total number of exceedances recorded and exceedances caused by driving events have reduced significantly since quarter 3 in 2015. There has been a 78% reduction in all exceedances and an 83% reduction in exceedances due to driving events. The proportion of exceedances caused by driving events has dropped from 73% to 55% (it was as low as 29% in quarter 2 of 2016).



Whilst exceedances by the Metropolitan Police (outside the scope of this planning application) reduced by 55% during the 6 quarters, Drift Limits reduced their exceedances by 81%.

Only Quarters 3 and 4 can be compared between 2015 and 2016. We do not have comparable data for Quarter 1 and Quarter 2 from 2015. It is possible therefore that some of the perceived improvement could be due to some seasonal (metreological) variation.



Likewise there is no information to explain why the exceedances from Metropolitan Police training activities and driving events by others such as Speedskills have also reduced.

**Catalogue of measures that demonstrate the efforts that have been made to reduce noise nuisance and the effect of these measures in practice, including the effect of wind direction and inconsistency of track wetting**

The applicants were asked to catalogue the measures they had taken to minimise noise emissions from the site.

The measures taken and their effects in practice are listed below:

a. Slick soft race compound tyres fitted to all experience cars on the circuit in dry conditions.

The applicant claims that this eradicates tyre squeal generated by road going tyres during hard cornering on tarmac in dry conditions.

This is demonstrably not true as shown by the Log of Complaints 2015 and 2016. In the 4<sup>th</sup> quarter of 2016 no less than 40 out of the 45 complaints received mentioned tyre squeal.

b. Installing larger back boxes /additional exhausts /more restrictive wadding/ additional bungs to tailpipes/ catalytic converters / different exhaust manifolds/ Repair exhaust leaks.

Effect: Drastically reduces noise output and changes tone from exhausts. Easily quantifiable with static noise Db tests as per section 6 of the noise management plan.

c. Installing more restrictive air filters or additional ducting and filters.

Effect: Reduces intake noise levels and pitch.

d. Removing gear sets from Formula Renault gearboxes – only 3rd gear retained.

e. Tightening up torque setting on Formula Renault rear limited slip differential.

f. Installing sound deadening acoustic foam to Formula Renault hood and side pod cowlings.

Measures d, e, & f were carried out but the decision was taken by the site operators not to continue the use of Formula Renault cars after Q3 in 2016.

g. Planned and methodical upkeep of the cars maintained professionally by 'Drift Limits Performance Ltd'.

Effect: Ensuring cars are kept in good overall mechanical order with no loose belts or tensioners that would otherwise create any unnecessary noise.

h. Ensuring staff driver training is carried out and by a senior instructor.

Staff are trained how to considerately deal with a customer who may be driving too aggressively or loudly on an experience day. Staff will also know how to anticipate untoward skids and prevent them from happening thus reducing incidents and noise levels. Staff are able to instruct and achieve smooth driving, keeping inappropriate and erratic driving to a minimum. The instructors guide the customers around the circuit in third gear which keeps excessive revs down to a minimum.

i. Clear and concise safety briefing made by a senior member of staff.

Effect: Makes the drivers aware of the implications of driving dangerously or too aggressively / loudly thus resulting in the right mind frame for a driving experience.

j. Removal of event vehicles from site if they do not adhere to noise limits as per the management plan.

Effect: If the event vehicles are unable to adhere to the noise limits set, the vehicles are removed from site and remedial action takes place to rectify the problem. This is a definitive way of ensuring noise thresholds are met. Since operation of the Formula Renaults resulted in a significant number of exceedances. Formula Renault experiences are no longer offered, notwithstanding that it was a bestseller for Drift Limits.

k. Relocating specific driving experiences to the most appropriate track.

Effect: By relocating the loudest experience (namely drifting, as shown by the noise data) from the Circuit to the Runway, which is further away from residential properties, noise complaints have reduced. Because the noise limits are a little higher on the Runway due to its geographical location in respect to neighbouring properties, this is the most appropriate track for drifting experiences. It is claimed that the Runway has the added advantage that its concrete surface is rough and abrasive which essentially cuts the tyres so drastically that it reduces tyre squeal. By comparison, when drifting took place on the tarmac Circuit, a high pitched squeal resulted unless wetted.

The Formula Renault Experience was also moved from the Runway to the Circuit in order to reduce noise levels.

Formula Renault cars are no longer operated at Runways Farm.

l. Developing a track fit for purpose:

Effect: By resurfacing the circuit professionally (works carried out by DW Surfacing) a track was created which provides much better tyre grip levels and surplus surface water run-off. This in turn reduces the amount of spins and road tyre noise. The track is marked out with appropriate brake markers and white lines / apex curbs to encourage to drivers to drive and brake at the right points which drastically reduces the amount of spins.

m. Designing a track with noise consideration in mind.

Effect: It was designed so that minimal gear changes are required – 3<sup>rd</sup> gear around the whole circuit is standard practice. The Circuit has no long straights. It has bends the whole way around reducing the opportunity for drivers to go full throttle for long periods of time ameliorating high RPMs and noise output.

n. Installing water lines onto the drifting areas.

The applicant states that *“The use of water to lubricate the track and tyres is an extremely effective way of reducing tyre squeal. When drifting used to take place on the tarmac Circuit it was a mandatory. Drift Limits installed a water line that runs at mains pressure and delivers water on the Runway track at two different points. Water reduces tyre noise further.”*

There is some concern as to whether the track wetting on the Runway is adequate as the areas wetted are small and some way before the points at which drifting actually takes place. The current version of the Management Plan still refers to drifting on the Circuit rather than the runway (Management Plan v6 June 2015 Appendix 3).

The Management Plan must be updated to cover current and planned activities, as set out in the recommendations

o. Installing rougher anti-skid – apex curbs on the drift Runway track.

The applicant states that a specialist contractor, WJ UK, have been subcontracted back to redo the apex curbs on the drift track on the main runway. They argue that the painted white lines and apex curbs are the main cause of tyre squeal when a vehicle is sliding over them rather than the rough concrete/stony asphalt surface.

It is accepted that the volume of the tyre squeak is not the main issue, it is the character of the high pitched sound and frequency that causes complaints.

Drift Limits have indicated they plan to apply anti-skid paint to the curbs which should abrade with the tyres and prevent the tyre squeal. No noise monitoring evidence has been provided to back up this assertion but any measure that potentially addresses this problem is to be welcomed

**Influence of Wind direction**

It appears that the potential influence of meteorological conditions on noise complaints was not considered when the temporary planning approval was given.

The monitoring of wind direction and other metrological conditions was not included in the approved management plan or highlighted by the council as it is outside anyone's control.

Wind and speed may make a significant difference as to whether motor activity can be heard and when it cannot. The nature of wind means that it is impossible to predict when wind direction and strength will cause a problem. The question is whether the operators can reduce the noise levels of their activities enough so that there is a margin of error to cater for wind blowing noise towards local residents.

The events calendars show that motor activities take place simultaneously on the circuit and the runway so it would be impracticable to move drifting back to the circuit in response to wind conditions.

### **Explanation of why drifting should be allowed to continue, despite large number of complaints being made against this activity**

Drift Limits argue that since the two year planning permission was issued in February 2015, they have taken a number of steps to operate within the noise thresholds agreed with the local council. The applicants view is that the site is operated without an adverse impact to the amenity of surrounding residents.

Whilst motor noise is only generated on 2 to 3 days during the week (mornings and afternoons) and Saturday mornings, some residents continue to suffer adverse amenity. Restrictions on hours of operation do limit the adverse effects so that the noise is below the threshold for statutory nuisance.

Drift Limits operate drifting experiences solely on the Runway which are similar in nature to the activities of the Metropolitan Police during their Anti-Hijack training. Both operators look to train drivers controlled skidding in a safe environment.

The Metropolitan Police have an existing planning approval that Drift Limits say demonstrates that this type of use is suitable for the Runway. Drift Limits appear to have achieved quieter operating procedures than the Metropolitan Police.

In the last three months during which both operators used the Runway (July 2016, November 2016, and December 2016), the applicants note that Drift Limits exceeded the noise levels 10 individual times out of a total of 55 event days, compared to 37 exceedances from the Police out of a total of 21 event days.

The applicants draw attention to regular meetings held with Bovingdon Action Group, Drift Limits and Phillip Stanley at Dacorum Borough Council.

The applicants make the point that residents complain to the council rather than the site operators, so they find it difficult to comprehend the precise nature of the complaints when they do not correspond with recorded exceedances.

This is another area where the Management Plan could be improved if details of the complaints received by the Council were shared with the site operators on a more regular basis so that they could inform mitigation measures required.

The provision of real time noise data would also allow a better more informed response to complaints.

The applicants understand from previous meetings with Drift Limits and Bovingdon Action Group and Environmental Health that it seems to be the screeching itself which is considered to be the noise issue.

In consideration of this, WJ UK (road marking specialists) have now been commissioned by the applicants to install anti-skid coating on the painted curbs. They claim this will have the effect that on any occasion when a vehicle does slide over the curb it will no longer create a squeal. The works are to be carried out early in February 2017 after which a comparison of the level of noise complaints received can be made.

### **Evidence of a learning curve over the last 2 years which has informed the introduction of appropriate noise mitigation measures as a result**

The applicants refer to the “Automotive Sound Control document”, aka the Sharps Redmore report dated 18 November 2016 as evidence of their learning curve.

This report in the main seeks to justify the current monitoring arrangements, without any technical justification of the validity of the trigger threshold levels.

The changes it records for reducing exceedances are set out in paragraph 3.5: the Renault Experience which is no longer operated at the site and drifting which is now carried out on the Runway.

Paragraph 3.16 argues that the LAeq measurement period for the Circuit monitor is increased to 10 minutes “to represent the actual time taken for the super car experience”. There is no justification for this and it is not appropriate given the short duration of the sounds that cause annoyance. Rather it would lead to an even larger disparity between exceedances and complaints by residents. The report does not propose lowering the dBA sound level from the existing 1 minute LAeq sound level of 69 dBA.

Paragraph 3.19 goes on to advance the same argument for the Runway monitor and recommends that the LAeq time period is increased to 30 minutes “in line with the actual driving experience”. Once again no reduction in the dBA threshold level is suggested.



In view of the nature of the complaints received and the need to differentiate between problems caused by the Metropolitan Police these suggestions have to be rejected.

## **Conclusions**

There has been some reduction in noise threshold exceedances during the two year trial period due to changes in operating practices.

However some residents are still experiencing some detrimental noise on a regular basis to the extent that the Bovingdon Action Group commissioned their own noise consultants. The applicants have not demonstrated that they have employed all the best practicable means available to a motor sports business.

The Council's environmental health officers have reviewed the applicants' records, historical measurements and residents' complaints, in addition to taking new measurements, in order to arrive at some conclusions regarding this application.

The level of engine noise complaints has dropped substantially over the past two years and it appears that tyre squeal is now the major cause of residents' complaints.

I believe this is largely for real psychological reasons rather than the actual volume of the noise involved. The tyre squeal is very distinctive and there may be a natural tendency for people to tune into this sort of sound because of its association with cars crashing.

This review has centred on the reasoning behind the current monitoring set up and the standards previously set. The information gained so far supports our opinion that the degree of wetting on the track has a major effect on tyre squeal, and less effect on other aspects of noise produced during drifting.

The target set for the operators is that the sound level due to motorsport should be at least five decibels below the measured background level at five identified locations. In practice this has to be achieved by measurements at source and calculation because it is technically impossible to measure noise levels that are below the background level at the recipients location.

Subsequently, noise levels were set at the track that were calculated to produce sound levels at the nearest potential complainants premises which would be a minimum of five decibel's below background.

During measurements taken by council officers in February 2017, even when both tyre noise and some engine noise were audible from the track, the sound level meter did not register the variation at any of the 5 locations visited. The monitoring points were all away from the track and within the residential areas

of Bovingdon. This is the result expected given the limits imposed on the site operators.

It therefore appears that the ongoing complaints are testimony to the human ears ability to pick out unusual noises, especially noises that might indicate danger, rather than any overall rise in the volume of noise above the existing background noise levels within the village.

We have come to the conclusion that the current noise limits are still the appropriate means of controlling the overall noise levels from the motor activities on Runways Farm. However there is an ongoing problem with perception of the noise due to its nature and characteristics.

We also conclude the gains from recommending additional noise monitoring on site are marginal.

Instead the concentration should be on achieving cumulative minor reductions of noise at source. It appears to us that significant improvements could be achievable beyond the current situation and it would therefore be worthwhile extending the trial period in this instance.