

Submission re Noise test Guyra Shooting Complex

Reference Document 1 - Guyra Shire Council DA Noise Study amended September 2013

Page 2

Re Noise test - Changes in vegetation, topography and wind direction to be taken into account.

Vegetation, topography and wind direction not considered or discussed in noise report.

Weather 14 March 2013 –Guyra recorded by BOM as consistent SE wind 19-22kph - residents report winds gusting higher

Conditions unsuitable for shooting range noise testing – Cooper had previously used wind at that level to disregard noise readings (Hill Top) and the most recent noise testing by Cooper at Hill Top in September 2013 was at similar wind speed witnessed by EPA who commented that the wind affected measurements.

Noise testing was not “as required” for appropriate methodology for noise testing i.e. IN accordance with Chapter 164)

Test was therefore not as reported to Council by the applicant “the necessary sound testing specific to a shooting range/ranges” .

Impact of noise on the amenity of the surrounding residents cannot be determined from the testing carried out. (refer to rest of submission document)

Page 3

Noise testing has not been undertaken on the “revised layout “ for the Pistol/Single Action Range and Shotgun range.

Proposed range layout moves these ranges closer to the southern residence.

Page 5

Hours of Operation proposed by Cooper on behalf of applicant are not related to shooting range hours of use.

The proposed hours of use are based on a lolly shop pick and mix of various legislations e.g. firstly use of the methodology of noise tests as detailed in part of Chapter 164 (some of it) - then ignorance of the hours of use in Chapter 164 documented as appropriate based on the noise test method. Clearly this is not “a mistake” by Cooper considering his recent close experience with Chapter 164 - but deliberately intended to mislead Council to deliver an outcome that provides the ideal scenario for the proponent at the expense of the resident stakeholders. It proposes an outcome that does not meet the requirements of the only guideline used for noise testing and determining of hours of use for Shooting Ranges in NSW i.e. Chapter 164.

Cooper (noise consultant on at least 27 occasions for shooting ranges in NSW) is “as the only expert on shooting noise in NSW” as he describes himself, currently and keenly aware that Chapter 164 is the recommended guideline for both the testing to determine days of use and that it sets the hours of use for Shooting ranges in NSW. Cooper is also currently aware that the use of Chapter 164 in its entirety (including associated memos which he is currently also aware of and has had to apply at other locations recently), is currently supported by the EPA as the appropriate mechanism to monitor and measure shooting range noise in NSW. In fact recently Cooper was involved for the proponent in challenging a determination (Hill Top) where an absolute limit was set for the whole complex (not different noise limits for individual ranges) and after thorough investigation by a PAC the application to average and have different hours of use and days of use for various ranges in the complex **was refused**. Cooper also recently clarified the use of averaging with the EPA (as recently

as September) and is aware that a sufficient sample is required. In fact Cooper at one point in time attempted to include "inaudible noise" in his averages!. (interesting concept). The EPA have advised me today that Cooper's methodology in the Guyra Noise report wherein he uses a lolly shop pick and mix of various bits of legislation such as the hours of use for power tools (yet not using the noise testing methodology required that determined those hours in terms of dB levels or other considerations) is unacceptable and not supported. They support only the use of Chapter 164 and its related clarifications.

Council should be mindful that Cooper was the noise consultant recently for the Proponent of the Hill Top Southern Highlands Shooting Complex (similar ranges configuration to Guyra)(which has been the subject of three Land and Environment Court Hearings, an IHAP panel and a subsequent PAC). The PAC in considering a modification application to alter an absolute limit of 75dB for the whole complex (all ranges) which was proposed by the applicant in a report by Cooper requesting "averaging" of noise and permissibility of an "average of 80dB (initially 85 but revised down to 80dB)) (Lin) peak linear " **was refused**. (see attached PAC determination).

At least in that Noise testing which was subject as Cooper knew to close expert scrutiny at State level , Cooper did not deviate from the methods and recommendations of the Chapter. And at that complex 10am – 5pm is the approved hours of use where previous attempts to deviate from those hours have also **been refused**.

It can only be construed that Cooper chooses to randomly deviate from Chapter 164 in its entirety and its subsequent clarification memos of 1993 and 2002 (both of which he has direct experience with as the noise consultant on two developments where they were reinforced on very recently). Cooper appears to be misleading Guyra Council on behalf of his client, in proposing his mix and match methodology i.e. "the Cooper Methodology". The use of "power tools" as comparable to Shooting Range noise is rejected by the EPA and Council should consider the proposed hours of use of 8am – 8 pm to have no relationship to hours of use for Shooting Ranges in NSW in terms of current best practice and recent lawful precedents i.e. use of Chapter 164.

Recently when breaches of the absolute limit of 75dB at the complex at Hill Top occurred Cooper was again engaged to push the case for the noise limit to be raised citing a precedent (proven under FOI to not exist) and reporting that the three previous noise consultants used for the complex had no idea how to measure shooting range noise. The PAC refused the application on various grounds , not the least of which was (sic) "that the amenity of residents was more important than the desires of the shooters" and reinforced the requirement for acoustic treatments to be installed (as was agreed in the consent but then ignored in proposing instead to just lessen the restricted on noise to remedy breaches). PAC reinforced that 75dB was the highest level of noise residents would be required to endure regardless of what the noise emission was from the complex i.e. the noise generated does not necessarily determine the noise limit for residential receivers – that is up to the regulatory body!. I.e. The Regulatory body can enforce any noise limit they like if they consider that noise above 75 is not suitable. (as was the case at Hill top). i.e. the Council has ultimate control for noise in the Shire.

The consent at Hill Top also restricts use to NO public holidays and no nights for any gun types. The Minister for Planning Kristina Keneally determined this in fairness to the residents.

Page 5 – the use of the word "the "prescribed"!!! - yes BUT –" prescribed" for noise completely unrelated to shooting noise i.e. power tools!!) commencement time of 8 am

"practice and competition will be able to commence at a reasonable time so activities are not delayed or hurried to conform to unrealistic restraints".

Cooper deliberately ignores Chapter 164 in its entirety and transfers his focus to power tool guidelines so as to intentionally ignore the **"realistic and precedented restraints" re hours of use**

of shooting ranges in NSW..cause they don't suit his client!. The Cooper report is intentionally misleading Council 10am – 5 pm is the time recently reviewed at State Level and reinforced for a similar configuration of ranges at Hill Top- an 800m full bore range , a 500m range, a 200m rifle range, a pistol range and a shotgun range (the same ranges proposed for Guyra!!!).

No account has been made of cumulative use or details of the size of the ranges in terms of numbers of firing positions at Guyra . It should also be noted that Cooper is aware that testing is required to be carried out at all firing points i.e. on the 800m range at all 100 m intervals as naturally any guns fired at the 100m mark will be louder at the NE residence than the same gun fired at the 800m mark!. At Hill Top Cooper regularly tests at various distances at the 800m range yet he ignored that necessity at Guyra. Clearly the measurement for the loudest gun recorded at the main range from the 800m firing line of (Cooper average 80 – but highest measurement actually **84**) is going to be even louder 700m closer to the NE residence. And yes 308's are shot at 100m.

Page 5 – table re Cooper's recommendations for days and hours of use

Inaccurate and not based on any consistent methodology or noise control science other than the pick and mix proposed new "Cooper Method" to be hopefully enabled by an unaware Guyra Council due to their inexperience with shooting range noise measuring and ability to enforce compliance once the "proposed" hours and days of use become "conditions".

It should also be noted that unless a condition is included in any DA consent for the shooting complex , that actually documents the dB level limit for gun noise as measured at residences, details of days of use based on dB levels will be unable to be enforced as they will not be documented as governed by that relationship in the consent. Therefore breaches of noise above the related level will be unenforceable for compliance purposes. It needs to be spelled out.

This gives the community certainty that if the noise level at residences exceeds "75dB" the complex is in breach of the consent and acoustic mitigation must be enabled to continue use of the weapons that exceed the limit. Lack of financial viability for such mitigation by the club is not justification for allowing less strict noise limits than those enabled by Chapter 164.

Council would be wise to consider these matters seriously or risk Land and Environment Court challenges in relation to unintended consequences of untenable /unworkable/conditions of consent.

Page 6 Conclusion

"justified and appropriate for the proposed range operation"

'Justified and appropriate' only if you consider the non evidence based haphazard new "Cooper Methodology" for Noise control for Shooting Ranges in NSW to be appropriate! - when it is totally flawed and the Guyra noise tests actually invalid!!!

it is not a "range" but a group of "ranges" i.e. a complex – there is a cumulative effect of many guns firing simultaneously compared to a couple of guns firing from one range and this has not been considered.

In 2002 at Eurobodalla (where Cooper was again the consultant for the local gun club) the Council found that adding 3dB to the Chapter 164 outcomes for noise measured, accounted for the cumulative effect.

This should be considered also as precedent worthy of implementation in terms of the cumulative effect of many ranges vs one "range" as is also be the case at Guyra.

In that instance also (as attached) the EPA detailed that Cooper's noise test had insufficient shots measured (up to 10) in each instance (same as Guyra) to enable any "average" to be determined and in light of insufficient sampling and the Council not requesting further appropriate noise testing,

“that the loudest measurement should be used” to determine days and hours of use!. The EPA this week advised that), if Guyra Council do not require the Acoustic Report to be undertaken again with sufficient sampling (as per Chapter 164 – 1993 memo i.e. around 50 shots), (and from the resident and Council perspective, i.e. with an acoustic consultant with impartial expertise - chosen by Council at the expense of the applicant ,) for each loudest gun type o be used on each range (again as per the Chapter 164 1993 memo and Hill Top precedents) – **then the use of the highest measurement taken is required. (plus the addition of a 3dB penalty for cumulative use).** This of course gives a considerably different outcome to the “Cooper Methodology” recommendations.

Considering Cooper’s direct experience with Chapter 164 and the two clarification memos from the EPA one can only question Cooper’s ability to provide “independent” and unbiased testing and reporting on outcomes of such testing of shooting range noise in NSW.

The Memo attached to the Chapter 164 Guideline referenced earlier requires a minimum of 50 shots to be used in the relevant firing position from the gun fired at that position for any “average” to be determined and that any “non representative” shots should be discarded. **Reference Paras 2 Page 7 PAC determination also.**

This requirement of the Chapter 164 guideline – as Cooper is aware - actually makes the noise test he undertook invalid and of no use to Council, given the wind, lack of appropriate firing positions (for new configuration as yet untested) and lack of sufficient representative shots measured if averaging was even appropriate (which it isn’t).

Comment on Noise Report Document

Report dated 30 August 2013 from The Acoustic Group/Cooper

1. Testing carried out on 14 March 2013 is at firing point locations that are not relevant on range to the now proposed range layout for both the 300m range 300m firing line not tested, pistol and rifle range (200m) – not tested for SE residence and the shotgun range – not tested for the NE residence.
2. Methodology is inaccurate in terms of number of shots measured and application of averaging to insufficient sampling.
3. Tests carried out under inappropriate wind weather conditions for any type of noise testing – not just shooting noise but definitely precedents for 22kph to be inappropriate for shooting noise testing.
4. Use of the results is invalid due to 2 & 3.
5. Conclusions are irrelevant due to 1, 2 & 3 and 4.

Page 1.

Cooper agrees that Chapter 164 is required to used - **but intentionally does not use Chapter 164 in its entirety. Cooper abandons requirements which misleads the intended recipient of the report i.e. Guyra Council who are inexperienced in these matters and who will rely on the report.**

Cooper abandons the requirements of the EPA Memos of 1993 and 2002 in relation to clarification and use of Chapter 164 - re number of shots and how to manage insufficient sampling – and instead he implements desirable methodologies from inappropriate noise guidelines unrelated to shooting noise controls to mislead Council e.g. examples of hours of use for power tools because that would stretch the operating hours and deliver a better outcome for his client at the expense of all other stakeholders , leaving any Council consent open to possible legal challenge.

“where there are different classifications of firearms that may use a range, or multiple firing ranges on the one site, there can be different approvals of use”

It could be argued that here Cooper attempts to imply to the unaware Guyra Council that this “proposal” for “different approvals of use” is in fact enabled by some guideline or legislation”.

That is not the case – there is no guideline for this – in fact the precedent at Hill Top most recently, wherein Cooper tested this “proposition” on the Planning Assessment Commission (similar configuration to Guyra) was refused – it was agreed by the local Council (wingecarribee) and the PAC that the noise received by residents at its maximum level for any range determines the days of use for the whole complex!. (Cooper proposes the opposite outcome as “the norm”).

An example of Cooper appearing to influence the Guyra Council with a “biased” partisan and unethical lack of “independence” as an acoustical engineer - who should be able to deliver outcomes for the community and regulation authorities that are impartial.

Clearly Cooper has a perceived and/or pecuniary conflict of interest with his history of employment on 27+ occasions for Shooting Clubs. Obviously many Council’s including Guyra are gullible targets for “wish list” attempts tried on by “the expert in shooting range noise (so claimed by Cooper” on behalf of the shooting clubs .

Residential locations for monitoring

In terms of “locations for monitoring shooting noise at residences “ - it is documented that Cooper had discussions with Council.

Council may have been unaware that measuring for noise at residential receivers is required under the Industrial Noise Policy and recently confirmed by PAC for the Hill Top Complex to be required to be carried out “on property” and where residences are more than 30m from the boundary, to within 30m of the dwelling at the most affected location ie. On the range side of the property boundary. Cooper is aware of this but attempted to use off property locations at Hill Top and was refused. Excuses that “residents are not available etc” were dismissed as he at that time had never been refused by residents! I assume Cooper would not be refused by residents at Guyra either.

Clearly with sound pressure measurement the differences in measuring at various locations are crucial and can adversely or perhaps even in some instances positively affect outcomes for various stakeholders – but in the case of Guyra it requires review to determine which outcome resulted as the exact location of the residential monitoring has not been documented.

CONDITION: Council should include a condition of consent in relation to the noise testing nominating “the location” for residential monitoring to be “on property within 30m of the dwelling at the most affected location”.

Paragraph 5.

Cooper discusses the method of noise measurement for shooting ranges as being unique i.e. peak linear hold - not dBA - yet then uses completely irrelevant “power tool” controls to persuade Council to approve hours of use that are inappropriate.

Biased, incompetent and incomplete testing and reporting resulting in misleading invalid recommendations by the “expert”.

Para 4 – Ranges!! Not range

It is an interesting tactic common across the whole shooting fraternity to regularly describe complexes of ranges as “range” in order it would seem to “diminish” the perception of impact. There are five ranges proposed from my observations – an 800m range, a 500 m range, a 300m range, a pistol/rifle range and a shotgun range!

Insufficient sampling

The testing procedure did not meet the Chapter 164 guideline wherein it is recommended up to 50 representative shots are required (see EPA document attached) to consider application of “averaging”.

“ The number of noise measurements should be sufficient to determine a noise level that is representative of the type of firearm being used. In the past assessments have been based on up to 50 shots. In determining the final noise level, measured levels that are clearly not representative should be excluded. This relies on the person conducting the assessment having a level of acoustic experience. “

Other shooting range noise tests carried out by Cooper recently at Hill Top sampled up to 100 shots for one gun type!! Despite Cooper’s “expertise” it is clear he is no longer capable of undertaking testing that meets the requirements of Chapter 164 in its entirety or capable of delivering unbiased accurate scientific outcomes to his clients or the community at large that Consent Authorities might be reasonably able to rely upon.

Wind conditions and lack of sufficient shots – all tests invalid .

Test series 1 – Location SE residence.

1. **Shotgun test invalid** if proposed new location used and 2,3,4 below
2. **All tests invalid** (wind) and number of shots (significantly less than 50).
3. **Precedent for adding 3 dB** for cumulative effect (Eurobodalla Council, EPA memo 2002)
4. **No averaging** - EPA directive when less than 10 shots - use highest measurement only (Cooper is aware he was the consultant whose test resulted in that directive from the EPA at Eurobodalla). EPA directive 2002 (attached)

Table Appendix Page D1 - Test series 1 – SE residence

Shorter barrel is always louder - test shortest barrel permissible for shotgun - check with NSW Firearms Registry for permissibility on range for shotguns i.e. 20 inch or 24inch

TABLE OF RESULTS COOPER TEST 1 (CORRECTED)

Highest measurement /3dB penalty (insufficient sample for all testing & cumulative effect)

Test 1 – SE Location	Gun tested	Highest * Cumulative Penalty Cooper	Days of use	Comment
Pistol/rifle range (new configuration)	-	-	Cannot be determined	Test on eastern most firing point closest to residence of new range position
Shotgun range (new configuration)	-	-	Cannot be determined	New SHOTGUN range location to be tested
Shotgun Range (old configuration)	Shotgun 12 gauge	71* = 75 5 shots 71*+3 – 74/75 Cooper 62	4 days 4 days 5/2	No nights
Main range ****	Remington 700	58* = 60 7 shots 58*+3 =61/65 Cooper 56	7/3 5/2 7/3	**Eastern most point of 300m range at 300m firing line to be tested for SE residence
	Rimfire 22	-	7/3	Invalid for new location of pistol/rifle range – testing at eastern most firing position required SE residence
	Pistol – Ruger Bisley Vaquero	-	7/3	Invalid for new location of pistol range - testing eastern most firing position required SE residence

* If insufficient test sample is accepted by Council and new tests not ordered - highest measurement used.

****Only Main range test of Remington 700 (7 shots in total) for testing of new range configuration for SE residence of any possible use

Test series 2 – Location NE residence

1. All tests invalid (wind) and number of shots (significant less than 50 i.e. 10) (Averaging not permissible) and because of points 2-6 below.
2. Add 3 dB cumulative effect - EPA Precedent at Eurobodalla - more than one gun firing simultaneously in normal conditions.
5. No Averaging permitted- EPA Precedent with less than 10 shots and use of highest measurement only. EPA directive to Eurobodalla Council precedent.
3. 100m firing line of 800m range not tested - highest impact of main range configuration for NE residence.
4. Wind SE22kph with gusts - resultant invalid test - wind acknowledged by Cooper (para 2 Page 4 of his report)
5. No testing carried out at 100m position on 800m range. (most affected firing line for impact to NW residence). (i.e. 700m closer to residence).
6. Pistol range test invalid for new configuration

Table Appendix Page D3 - Test Series 2 Wylie Residence (NW residence)

Pistol range (old location)

Could be used for simulation/model of impact of noise from 100m firing line of 800 range on NE residence. Results show consistent 3 days per week for main range at all shooting positions i.e. 800m to 100m i.e. (100m worst impact for NE residence.)

Test 2 – NE residence	Gun	*High Measurement Cumulative Penalty Cooper	Days of use	Comment
Pistol/rifle range (new configuration)				Not tested - New range configuration requires testing
Pistol /Rifle Range (old configuration) (invalid for new configuration) <i>Main Range 100m firing line simulation</i>	CF Rifle	74*/75 7 shots 74 + 3 = 77/80 Cooper 69	4 days 3 days 5/2	Invalid if new location used
Pistol/Rifle Range (old configuration) <i>Main Range 100m firing line simulation</i>	Centrefire Pistol	75*/75 5 shots 75 + 3 = 78/80 Cooper 69	4 days 3 days 5/2	Invalid if new location used
<i>Main Range 100m firing line simulation</i>	Centrefire Pistol (towards right)	76*/80 6 shots 76+3 = 79/80	3 days 3 days	
Pistol/Rifle Range (old configuration)	Shotgun - invalid - not shot at shotgun range (old configuration)	82*/85 8 shots 82+3 = 85/85 Cooper 74	2 days 2 days 4 days	
Shotgun range (new configuration)				Not tested
Main range 800m firing line	Remington 700	84*/85 ** 5 shots (60% 80/+) 84 + 3 = 87/90 Cooper 80	2 days 1 day 3 days	
Main Range 100m firing line simulation		76*/80 76+3=79/80	3 days 3 days	

Excessive wind conditions ignored

*If insufficient test sample accepted by Council and new noise tests not ordered – highest reading with or without penalty (Eurobodalla precedent for unreasonable sample)

** Only 5 measurements used for loudest gun main range i.e. Remington 700.

Summary

If council uses these results and does not reorder compliant testing with Chapter 164 and its explanatory memos -in light of results at Location Test 2 –the results at Main range for Location test 1 are overridden.

IF the technically invalid tests (due to insufficient samplings and wind at regularly 22kph with higher gusts recorded on the day of testing which are considered inappropriate conditions for testing) are ignored by Council and the invalid test is relied upon:

The only possibly valid test result is the Main range test which enables use 1-2 days per week. It is already established that hours of use of Shooting Ranges in NSW (with many precedents) are 10am -5 pm in accordance with Chapter 164. Any change from those hours is required to be negotiated with affected residences where ranges may trade off hours of use for less days

e.g. The Complex range may prefer to operate one day per week (say Saturday) from 8am – 8 pm with agreement from residents – or perhaps from 10-8pm on Saturdays but from 12-5 on Sundays – these types of agreements are not uncommon but are negotiated through Council with all stakeholders e.g. shooting clubs and affected residents to achieve outcomes that are fair on all parties.

The recent decisions in relation to the shooting complex at Hill Top are BMP for shooting ranges in NSW and were the result of 7 years of negotiation between the Government, Council, the gun clubs and resident. (and the complex is at present closed to large guns due to noise breaches)and acoustic attenuation is being built. The complex has been the subject of three 3 L & E court challenges (which were all proven in favour of the residents). An IHAP hearing and a PAC hearing – Council should not ignore these findings.

The most recent challenge re noise controls by the Proponent (based on reporting by Cooper), resulted in the PAC accepting Wingecarribee's Council's and residents views and retaining :

- A condition of consent limiting all ranges to an absolute (not averaged) limit of 75dB thereby permitting 4 days use (the same days) for all ranges – 10 am – 5 pm with NO shooting on public holidays.
- Annual noise testing to be carried out of the loudest guns licensed on the range used in their firing lines i.e. at all lengths of the 800m range, and the firing lines closest to residences.
- Any changes to the Range licence, to require testing of the new gun types and calibres proposed, and if over 75dB the complex required to adjust days of use if necessary ,or provide mitigation of noise or restrict those guns.
- Single noise limit for the “complex” NOT individual ranges as the PAC determined (as was agreed by the local Council when consulted by the PAC) that the enforcement of compliance for different noise levels and days of use for different ranges was impossible to monitor.

“Council advised that it is difficult to monitor, enforce or verify breaches of noise limits given the technical nature of the noise controls, lack of appropriate monitoring equipment and lack of technical expertise. Council considered that the conditions as recommended would be unenforceable”

“Council considers that the shooting range(sic “ranges”) is a single complex. Monitoring of two different noise levels from a single shooting complex ...would be impractical”

“Council expressed a need for funds and equipment to enable appropriate monitoring of the facility if the application (sic..for different noise levels for different ranges) were to be approved...”

"Council considers noise monitoring should continue to be carried out on private properties".... (using NSW Industrial Noise Policy principals for locations for monitoring)....." (Applicant attempted to have approved that noise only be measure at boundaries and attempted for that to not be the closest boundary to the noise source). ReferencePage 3 PAC determination.

(It would appear Guyra Council also does not have an acoustic expert on staff, nor does it have appropriate monitoring equipment.)

It should be considered – if a range can operate 7 days a week at 60 dB– no other range can operate at 80dB 3 days. There could be no concurrent use of both ranges. i.e. the intent of the Chapter 164 noise regulation is that what residents hear determines days of use – NOT to determine different noise levels for different ranges in a complex dependent on range noise.

If the resident is exposed to 60dB 7 days a week then obviously, they don't also have to listen to 70 dB from another range on 5 of those days. Nor does the noise emitted necessarily require Council to approve the days of use in the table where favourable conditions i.e. isolation, no affected residents, natural buffers (i.e. set in quarry with high surrounds etc) might allow Council to be more lenient. On the other hand Council can also restrict the noise (as at Hill Top -to 75db regardless of emission) and require mitigation if noise is over that limit.

IfCouncil has an Environmental Officer on call during the hours 8 am to 8 pm 7 days a week - with the Acoustic expertise to measure Peak Linear Hold - and the appropriate acoustic equipment to enable monitoring for compliance - of any range at any time if various ranges are permitted days of use and hours of use that are not consistent i.e. as proposed by the applicant (on advice by Cooper based on his flawed noise tests), then that is what such a condition of approval will require. BMP and current valid review of this scenario says it is IMPOSSIBLE to monitor for compliance purposes (according to the PAC) who refused this request based on Cooper tests at Hill Top). In fact Wingecarribee Shire Council requested the proponent for the complex provide financial assistance to train an acoustic environmental officer and purchase appropriate equipment, if varying range use and noise limits were permitted due to their lack of expertise. i.e. the consent would be unworkable for the purpose of enforcing compliance.

Pages 4 & 5 of the PAC determination should be read and understood by Guyra Council.

After deliberate and intense investigation with the shooting clubs, the State and the Council and resident stakeholders ,the PAC determined that an absolute noise level of 75dB was appropriate for all ranges and refused to alter the consent absolute limit and permit averaging as requested by the proponent:

Page 11 /12 PAC determination

"However, this approach (averaging) is not suitable for enforcement purpose. It requires active co-operation and action from the entity against which legal action may be taken(e.g. access, number of shots to be fired specific calibres, etc). It cannot be undertaken unannounced, either in response to complaints or on the regulator's own initiative; and it requires the regulator (Council) to have the equipment and trained personnel to conduct the tests and interpret the results (or employ a noise consultant to do this).

"The Commission agrees that of the options considered, an absolute limit provides the only feasible option for enforcement in response to complaints or own-initiative inspections by the regulator. " (e.g. Guyra Council)

"Protection of residential amenity must be the primary consideration and the range (sic complex) noise limit must be able to achieve this even if it requires implementation of mitigation measures from the outset."

The Commission is of the view that the site is correctly described as a shooting complex and a single site for regulatory purposes. The difficulty in effectively enforcing multiple noise limits is sufficient on its own to make the proposition for multiple noise limits untenable”.

An absolute (not averaged) level of 75dB (application was to raise this to “average 85 then revised to average 80 to make “non compliance” “go away”) was upheld by PAC. The PACommission had the opportunity to approve an absolute limit of 80 - but did not!. They considered that just cause noise might reach 80 doesn’ t mean residents had to tolerate it and that the complex should implement acoustic measures to prevent such noise to rectify the breaches – not just get around them with more lenient noise levels. Chapter 164 guideline was reinforced as the mechanism for methodology of testing -without averaging for Hill Top (regardless of the number of shots fired in tests). The conditioned limit of 75dB therefore permitting 4 days of use (the same four days) for any range in the complex .

The Commission further reviewed and investigated the hours of use and confirmed that it was fair to residents and the gun club in terms of use that use is 10am -5pm and no shooting permitted on public holidays.

Size does matter! – length of range is relevant but so are “number of firing positions”

The DA does not document the number of firing positions proposed for each range. i.e. how many firing points are there at the shotgun range, the 800 m range, the adjoining 500m range, the adjoining 300m range and the adjoining 200m Pistol and Rifle range.(effectively 5 ranges). With the new configuration it is acknowledged that some ranges may not operate whilst others do but that has not been considered in terms of “maximum” number of firing points that could be used at once and the impact of that. 50 – 100 – 200. Of course 50 guns firing simultaneously is not the same as 100. It significantly affects noise impacts (cumulative impact) hence the 3dB penalty for cumulative effect being applied or negotiated concession for the impact of the multiple use being made in the days and hours of use.

Considering that any gun club member anywhere in Australia can shoot at any gun range in Australia there is no limit to the use of the complex proposed at Guyra in terms of numbers of attendees. Estimates by the clubs are irrelevant as they are plucked from thin air and unenforceable by Council so whatever is the “maximum” permissible at any time – and then “all day” is the scenario that Council needs to be basing any consent noise and use limit on.

It should be noted that because the site is unsuitable for “concurrent” operations of all ranges at the same time – the closure of some ranges whilst others operate is an issue for the club not the residents nor Council i.e. the residents should not be penalised in terms of higher or prolonged impacts and hours of use - simply to facilitate the desired operating hours of the club for the ranges proposed - merely because the site they have chosen is inappropriate for what they “want” – perhaps it would have been wise for the Club to not have purchased the property without Council consent for the Development and without having undertaken noise testing!.

Clearly the pressure is being applied by the Application to Council officers (and Councillors) to enable the development regardless of normal planning considerations because the Club put the cart before the horse and purchased a property with no development consent for a use that is not only “unusual” but has high impact environmentally and is not well accepted in the community due to its disturbing and distressing impacts in terms of noise. Now it seems that on reviewing the noise testing the hours of use proposed will not be enabled and even more pressure will be applied. Council would be wise to engage an independent Acoustic consultant or consult with the EPA ‘s Gordon Downey or Department of Planning’s Acoustic consultants to verify the information provided her by me in this Submission – and to get an independent perspective on the implications of any consent in terms of conditioning noise.

Until the licence for guns is approved by the NSW Firearms registry – and the guns permitted tested in the appropriate ranges at all firing lines – no days or hours of use can be considered as the condition would be premature.

“Prior to commencement of use for the purpose of determining days and hours of use – noise testing according to Chapter 164 and its related memos shall be undertaken –for all licensed gun calibres fired on their nominated ranges at all firing lines - to determine hours and days of use”.

This is fair to all stakeholders and protects the clubs and Council from wasting resources on future investigations of breaches of consent resulting in costly mitigation or further restrictions in use, Noise abatement orders and Land and Environment Court challenges for unenforceable/unworkable conditions.

Cooper has ignored Chapter 164 and its explanatory memos though he has intimate knowledge of it. If Council is of a view to even contemplate considering the results to be of any use - residential Location 2 measurements (not averaged) permits 1-2 days per week for all ranges from 10-5 pm.

The Shotgun range has not been tested at its newly proposed location for any residence - and until such time as it is no conclusions can be drawn as to use of that range. If it is louder than the main range for SE resident then further restrictions would be required.

The new location proposed for the rifle and pistol range has not been tested for Location 1 i.e. the SE residence – from the most easterly firing point which has the most effect on the SE residence – therefore no conclusions can be drawn as to use of the range.

The results from the invalid test at the original pistol range position if used to estimate the noise at the NE residence for firings from the 100m position of the 800m range result in possibly 3 days - 80dB use of the Complex (all ranges one limit scenario). No doubt residents would prefer to allow 4 days use with a limit of 75dB so that could be negotiated in a meeting with Council, residents and the club.

Noise controls and days of use

Firstly –

In Cooper’s summary of recommended range use :

1. Cooper averages the Main range as limit 80dB - 3 days

Incorrect - Use is determined by highest measurement i.e. 84*/85dB – **2 days**

If the penalty for cumulative use is applied +3dB + 87* = 90dB - **1 day**

Reason:

Coopers averaging is not appropriate due to the sampling size and the Eurobodalla precedent wherein the EPA instructed “no average and +3 penalty” directive for limited sampling and cumulative use. This was in fact applied specifically as a result of the Cooper’s Noise test for that Eurobodalla range 2002 that also had insufficient sampling. (Cooper in his test for Guyra intentionally ignores two EPA directives he is intimately aware of) i.e. Memo re Eurobodalla (2002) attached and Chapter 164 memo 1993 attached.

2. Cooper states that the shotgun range can be used 4 days

Original location:

Incorrect – use is highest measurement 82*/85 dB – **2 days**

Reason:

Coopers averaging is not appropriate due to the sampling size and the Eurobodalla precedent wherein the EPA instructed “no average and +3 penalty” directive for limited sampling and cumulative use. This was in fact applied specifically as a result of the Cooper’s Noise test for the Gun Club at Eurobodalla range 20 that had insufficient sampling. (Cooper in his test for Guyra intentionally ignores two EPA directives he is intimately aware of) i.e. Memo re Eurobodalla (2002) attached and Chapter 164 memo 1993 attached.

For new configuration

Incorrect – no testing has been undertaken – **no days of use can be determined.**

3. Cooper states that the pistol range (Pistol/single action Range?) can be used 5 days/2 nights for certain guns and/or 4 days for others

Original location:

Incorrect – use is highest measurement 76*/80dB – **3 days**

Reason:

Coopers averaging is not appropriate due to the sampling size and the Eurobodalla precedent wherein the EPA instructed “no average and +3 penalty” directive for limited sampling and cumulative use. This was in fact applied specifically as a result of the Cooper’s Noise test for the Gun Club at Eurobodalla range 20 that had insufficient sampling. (Cooper in his test for Guyra intentionally ignores two EPA directives he is intimately aware of) i.e. Memo re Eurobodalla (2002) attached and Chapter 164 memo 1993 attached.

For new configuration

Incorrect – no testing has been undertaken – **no days of use can be determined.** Test firing should be carried out with appropriate sampling as Per Chapter 164 using the most to determine impacts specifically for the SE residence.

Secondly –

Use of different ranges on different days and at different noise levels:

Use of rimfire i.e. 22cal does appear to be inaudible for all residential receivers.

BUT Council needs to be mindful if approving different days of use for different ranges that they have the expertise and equipment to monitor compliance. Considering Council does not own suitable noise equipment, will have to meet expense of employing independent noise consultants to investigate complaints, or bear the cost of purchasing suitable noise monitoring equipment, and the cost of training its own staff to enforce compliance for various noise limits relating to various days of use for various guns at various ranges in various weeks. Clearly this is the devil in the detail that Council will need to consider. Such condition allowing that type of use for a complex of multiple ranges has been very recently found to be fraught with compliance monitoring headaches.

Recently when variable use of different outdoor ranges was attempted to be applied at Hill Top by Cooper citing a precedent that didn't in fact exist (as revealed from FOI, the State Government Dept of Planning PAC refused to allow such variable range operations, and continued to enforce one overriding noise limit for all ranges, resulting in use 4 days per week with no noise to exceed 75dB. That complex consent also has the same configuration of ranges as proposed at Guyra. The PAC consulted with the local Council intensely on this matter and the Council view was the confusion and unmanageability of compliance for such variations in use at the one site).

Though other examples might exist historically when such matters were less intensely reviewed as has occurred at Hill Top, the current model is as above. One set noise limit, absolute (not averaged) and that it applies to all ranges and disciplines in a complex.

In conclusion

If Council is to rely on the incomplete/invalid testing carried out to date for the Guyra development– if consent should be issued for the LUA, the noise limit set for the complex should be (even to play the devils advocate and be fair to the shooters) and in light of the recent Hill Top decision which has been picked over time and again and stood up to challenge and in light of the expense now involved in meeting the noise level for large bore rifles, an absolute limit of 75dB 4 days per week - for all ranges in the complex – allowing operation 4 days per week - no nights and no public holidays - unless the club through Council wishes to negotiate variations from time to time for special events in exchange for less use say 3-4 times per year as discussed earlier.

Conditions of consent must include:

- A condition setting the maximum noise limit permissible at residential receiver locations
- A condition setting days of use and relating it to the noise limit so that non compliance with the noise limit further restricts days of use (i.e. application of Chapter 164 and its two clarification memos 1993/2002).
- An annual requirement for the first three years of operation for noise testing of all guns permitted on the ranges in accordance with Chapter 164 and Memos 1993/2002, then at intervals in line with the renewal or any alteration to the permitted Range licence which details types of guns and events permitted on the ranges as issued from time to time by the NSW Firearms Registry.
- A condition setting out what is required of the applicant, if the above noise conditions are breached i.e. acoustic attenuation barriers/structures to be implemented, mitigation such as restrictions on types of guns/calibres and/or reduction in days of use etc. (This requirement was upheld at Hill Top recently, rather than an approval given for an application to modify the noise limit to avoid such constraints. This condition will protect affected residents from the “easy way out” with breaches – wherein a modification application seeking to remove the noise constraints when larger louder guns are introduced might be attempted.

All of these conditions are in the Hill Top consent (attached) and can be used as models for the Guyra application should Council be of a mind to approve the LUA in a fair and unbiased manner to ALL stakeholders.

The hard work has been done, fought for and achieved by all stakeholders in shooting club developments over the last 8 years and tested time and again at Hill Top – the “new” paradigm for range approvals does exist and the Hill Top Complex is the BMP model that should be copied. It was a state government initiative and has stood up to many challenges and the outcomes though

they may not have provided everything that either the shooters or residents wanted, they have been found to be fair for all parties and it behoves Guyra Council to be consistent with those outcomes in its approach for this development.