

Mr Sam Haddad
Director-General
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Dear Mr Haddad,

Re: Determination of Major Project (06_0232) for the Southern Highlands Regional Shooting Complex, Hill Top – Section 75W Modification Application regarding Condition of Approval A9, A6 and D4

The Office of Communities, Department of Education and Communities hereby lodge a Modification Application under Section 75W of the Environmental Planning and Assessment Act 1979 in respect Determination of Major Project (06-0232). In summary, the application relates to:

- **Condition of Approval A9 - (Firearm Noise Limits) – See Attachment A**
We believe flaws in the initial noise testing and assessment by GHD and Norman Disney Young has led to unintended consequences through application of the outright noise limit of 75dB (L) peak hold. We advance a detailed modification proposal prepared with the assistance of Steven Cooper, The Acoustic Group that seeks to apply a logarithmic average consistent with earlier principles.

- **Condition of Approval A6 (d) - (Attended Noise Monitoring 800m range) – See Attachment B**
We believe that this Condition should be modified to allow a period of 30 days from the completion of noise testing for the lodgement of reports as per the Condition.

- **Condition of Approval D4 - (Acoustic Shelter 800m firing point) – See Attachment C**
We believe that the overall benefit to the community of a reduced noise level from the 800m firing point on this range will be slight. Further, its use (once the new 500m range is operational) will be limited to one week in eight.

Additional matters for consideration

(a) The Office of Communities confirm that attended noise monitoring was carried out in June, 2010 (over three days), October, 2010 and January, 2011 on the 800m range. A strict reading of the terms of Condition A6(c) would require

another attended noise monitoring test in April, 2011 under the quarterly monitoring regime and then annually.

We believe that compliance noise testing on the 800m multi-purpose range should now revert to an annual test. We do not believe that further attended noise monitoring at this time will provide any significant variation to the test data now available and provided to the Department of Planning and appearing on our website for access by members of the public.

Accordingly, the Office of Communities seeks agreement from the Department of Planning to conduct the next attended noise monitoring of the 800m range in January, 2012 and annually thereafter.

We acknowledge that attended noise monitoring for the new ranges is required pursuant to Condition of Approval D2 (b) and that testing regime will commence three months after commencement of use of those ranges. Given the cost and resource implications involved, the intention will be to coordinate future noise testing for all ranges at the same time.

(b) The Office of Communities seek clarification that the 'independent auditor' to be appointed by the Department of Planning pursuant to Condition of Approval A11 would be a person who could demonstrate the appropriate knowledge and experience in relation to noise assessment of shooting ranges or would seek to access that knowledge and experience in terms of fulfilling the review of compliance obligations under the Determination.

A 'Request to modify a major project' application and a cheque in the amount of \$30,761, being the relevant fee charge for the application is attached.

Yours sincerely



Darryl Clout
General Manager

13.5.11

ATTACHMENT A

Condition of Approval A9 – Firearms Noise Limits

Condition of Approval A9 currently provides as follows:

'The noise from firearms or use of the site must not exceed 75dB(L) peak hold at the boundary to any existing private property with a residential dwelling, or where this is more than 30 metres from a dwelling, at the most affected location within 30 metres of the dwelling. This is apply during prevailing weather conditions'.

In framing Condition of Approval A9, the Department of Planning had regard to the following:

- Initial noise testing, assessment and reporting undertaken by GHD Pty in February (civilian firearms) and June, 2007 (military firearms) and included in the Environmental Assessment Report lodged with the Department of Planning in February, 2008;
- Verification noise testing, assessment and reporting undertaken by Norman Disney Young (NDY) at the request of the Independent Panel constituted by the Minister for Planning under the Environmental Assessment and Planning Act; and
- Input from the noise expert appointed to the Independent Panel constituted by the Minister for Planning.

The existing 800m multi-purpose range provides firing mounds at eight separate firing distances, with shooters physically moving up/down the range to shoot different disciplines over different distances. It is noted that the initial noise testing undertaken by GHD in 2007 was based only on firearm discharges from the elevated target embankment adjacent to the stop-but (100m firing position). The GHD report (Appendix F page 15 of the Environment Assessment Report February, 2008) states:

'It is GHD's opinion that the testing simulated a worst-case configuration for the following reasons:

- *Firing was undertaken at the end of the firing range nearest to the rear target earth embankment. Firing would normally occur at a further set back distance from the target than that tested, providing further distance loss attenuation of sound at the nearest receivers*

Arising from the foregoing processes and reports, an outright noise limitation of 75dB (L) peak hold was incorporated within Condition of Approval A9 to apply to the operation of all ranges at the facility (ie existing and future ranges). This figure would appear to relate to the initial 2007 GHD test results (confirmed by NDY) which recorded firearm discharges from the 800m multi-purpose range (military and civilian), with the highest level of 73dB (L) peak hold being recorded at one measuring point.

In accordance with requirements of Condition of Approval A6(c) in respect to the existing 800m multi-purpose range, attended noise monitoring (compliance) testing was carried out in June, 2010. GHD undertook this testing, with the results provided to the Department of Planning on the 30th June, 2010. The results were also placed on the

website of the Office of Communities (Sport and Recreation) in accordance with Condition of Approval A6(d).

The June, 2010 noise monitoring test on the 800m multi-purpose range was based on firearm discharges from the 100m, 300m and 800m firing positions. These firing positions differed in two respects from the initial 2007 tests. The results recorded firearm discharges beyond the 75dB (L) peak hold limit, with the highest peak noise level being recorded at 81.4dB (L) at one location at a time when the peak noise from wind gusts was ranging from 75dB to 85dB.

Due to the differing noise levels recorded by GHD in 2007 (confirmed by NDY) and 2010, the Office of Communities (Sport and Recreation) engaged The Acoustic Group to review all relevant reports and assessments which led to the Condition of Approval A9 outright noise limit of 75dB (L) peak hold for all ranges.

I attach a copy of two reports provided to the Office of Communities (Sport and Recreation) by The Acoustic Group:

- The first is dated 31st August, 2010 with reference 40.4883.R1:ZDS. This report provides a critical review of the GHD and NDY noise assessment processes and identifies errors in those processes; and
- The second is dated 27th October, 2010 with reference 40.4883.R2:ZDS. This report reviews the GHD June, 2010 compliance noise monitoring processes and identifies further errors in the GHD methodology.

Steven Cooper (Principal, The Acoustic Group) is an internationally respected acoustic expert, with an extensive experience in firearm noise assessment and compliance testing, prepared the foregoing two reports. Both reports provide detail of the unique position he holds in the area of firearm noise assessment. It is clear to the Office of Communities (Sport and Recreation) that the initial 2007 GHD noise assessment – subsequently confirmed by NDY – has underestimated the range of firearm noise levels generated at varying firing points on the existing 800m multi-purpose range.

The practical outcome of the failure by GHD to accurately record, measure, identify and report the range of noise levels generated on that range is the imposition – through Condition of Approval A9 – of an operating noise limit that effectively reduces the 800m range to four firing points (100m through to the 400m firing points). Certain firearm discharges from the remaining four firing points will, in all likelihood, exceed the outright 75dB (L) peak hold limit, reducing not insignificantly the extent of shooting disciplines that can be enjoyed on the range.

The 800m multi-purpose range has been in use continually since 1987, for the majority of that time under operating conditions imposed by the Wingecarribee Shire Council. The Council did not impose an outright noise limit on the range and, in general terms, the firearms in use since 1987 (and hence the noise levels) have remained constant to this date and continuing. At a public meeting in 2008 related to the site development proposal, Council representatives confirmed that they had no record of complaints about the range operations over a 20 year period.

It would seem to be an unintended consequence that the Condition of Approval A9 noise limit could operate to effectively eliminate certain disciplines from a number of firing points on the 800m range.

By reference to the earlier Chapter 164 of the Environmental Noise Control Manual (ENCM) – certainly guidelines that continue to be applied across Government and Council agencies in respect to firearm noise management – Communities NSW (Sport and Recreation) believe that a more correct noise restriction on the existing 800m multi-purpose range would be to apply the 'existing range' prescription that is identified in those guidelines as no additional controls were/are envisaged for the existing range.

Without any additional noise controls (such as earth mounds along the side of the range which would come at high cost and possible environmental impacts) there would be no reduction in noise from existing operations. Hence, the imposition of a lower noise limit would automatically restrict the operations that have occurred at the range for many years.

It has also come to the Office of Communities (Sport and Recreation) attention that the application of the Chapter 164 Guidelines utilised a logarithmic average of the noise levels to accord with socio-acoustic survey material for rifle ranges. The use of an absolute maximum level does not accord with Environmental Protection Authority practice, whilst a logarithmic average (rather than an arithmetic average) uses the EPA/DECCW 'Leq' concept (ie. equivalent continuous sound pressure level).

Steven Cooper has identified the State Pollution Control Commission/State Shooters' Liaison Committee confirmed the use of logarithmic averaging for rifle ranges when using the Chapter 164 Guidelines. Furthermore, for mixed use ranges, the guidelines were applied to individual classification of firearms (eg. rimfire separately to centrefire rifles).

It is noted that under the Chapter 164 Guideline, any existing range that operates in the day time only would be permitted for a maximum usage of four days per week at the logarithmic average noise limit of 95dB(Lin) Peak Hold, reducing to a level of 85dB(LIN) Peak Hold for an existing range used seven days per week.

What is proposed for the existing range is to specify a logarithmic average level of 85dB(L) Peak Hold for a maximum of four days a week to reflect a more stringent operating requirement to that which would be obtained by an application of the Chapter 164 Guidelines.

In respect to the various future ranges approved in the Determination of Major Project at the Hill Top site, Communities NSW (Sport and Recreation) accepts that the 75dB (L) peak hold is the appropriate noise restriction, provided that it is expressed as the logarithmic average of 75dB (L) peak hold in keeping with the Guidelines. This formula will allow those ranges to function well within that particular noise restriction.

Accordingly, it is requested that the Department of Planning modify Condition of Approval A9 in the following terms:

Modified Condition of Approval A9 – Firearm Noise Limits

- *The noise from firearms or use of the existing 800m range must not exceed 85dB(Lin) Peak Hold at the boundary to any existing private property with the residential dwelling, or where this is more than 30m from a dwelling, at the most affected location within 30m of the dwelling or an equivalent position when access to the property is not available;*
- *The noise from firearms or use of the new ranges must not exceed 75dB(Lin) Peak Hold at the boundary to any existing private property with the residential dwelling, or where this is more than 30m from a dwelling, at the most affected location within 30m of the dwelling or an equivalent position when access to the property is not available; and*
- *For the purpose of this Condition, the noise limit associated with the existing range and new ranges is a logarithmic average of the measured levels. Such monitoring is to occur under still wind or light wind conditions so as to avoid the sound level meters recording wind rather than noise from the rifle range.*

ATTACHMENT B

Condition of Approval A6 (c) and (d) – Attended noise monitoring 800m range

Condition of Approval A6(d) presents difficulty in a practical application where compliance testing is carried out at the monitoring locations over the entire day. The significant volume of noise data when monitoring is conducted in accordance with the previous SPCC/EPA requirements does not permit the provision of a report within seven (7) days of such monitoring.

Examination of the compliance reports prepared by The Acoustic Group indicates a significant degree of processing is required which simply cannot be undertaken within seven days.

It is considered appropriate to modify this Condition to allow thirty (30) days from the period of testing for the lodgement of reports in lieu of the present requirement.

ATTACHMENT C

Condition of Approval D4 - Acoustic Shelters

This Condition requires an acoustic shelter be provided at the 800m firing point on the existing 800m multi-purpose range as per proposals in the Preferred Project Report. We believe this measure will have a slight reduction of the noise level from this particular firing point, noting that no similar measures are required for the other seven firing points on this range.

With the opening of the new 500m rifle range, only three of the present SHRSC Inc rifle related clubs will continue to use the 800m range. The other two clubs will transfer exclusively to use the new 500m rifle range. Of the three clubs who will continue to use the 800m range, only one club will run competitions from the 800m firing point. However, that use would only occur on the 8th week of a competition cycle (ie. competitions rotate weekly through the 100m firing point to the 800m firing point).

In effect, the use of the existing 800m range will markedly reduce and, more significantly, the 800m firing point where the Condition requires we install an acoustic shelter, will only be used one week in eight. The design and construction costs involved to meet this Condition will be significant for, we believe, little overall benefit.

Accordingly, the Office of Communities (Sport and Recreation) seeks a modification to the Determination to have Condition D4 varied so as not to require an acoustic shelter be installed at the 800m firing point of the 800m range.