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| **Risk Assessment** | | | | |
| **Risk Assessment for the activity of** | **Firing Full-Bore (7.62mm Calibre) Target Rifles at Stationary Targets from a Prone Position at NSC Bisley** | | **Date** | **20/10/2020** |
| **Unit/Faculty/Directorate** | **Southampton University Rifle Club** | **Assessor** | **Matthew Crossley** | |
| **Line Manager/Supervisor** |  | **Signed off** |  | |

| ***PART A*** | | | | | | | | | | |
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| **(1) Risk identification** | | | **(2) Risk assessment** | | | | **(3) Risk management** | | | |
| **Hazard** | **Potential Consequences** | **Who might be harmed**  **(user; those nearby; those in the vicinity; members of the public)** | **Inherent** | | |  | **Residual** | | | **Further controls (use the risk hierarchy)** |
| **Likelihood** | **Impact** | **Score** | **Control measures (use the risk hierarchy)** | **Likelihood** | **Impact** | **Score** |
| Sound from firing of rifles | Hearing Damage-a full-bore 7.62mm rifle can produce a muzzle report of 170dB, which is loud enough to cause permanent hearing damage | Those on the range (Century/Stickledown) while firing is in progress | **5** | **4** | **20** | Anyone on the range while firing is in progress is to wear hearing protection at all times | **2** | **2** | **4** | The NRA range regulations will be followed to the letter.  These can be found here  <https://nra.org.uk/wp-content/uploads/20190624-NRA-RANGE-SPECIFIC-Risk-Assessment.pdf> |
| Out of battery detonation from ‘hangfire’ (round failing to detonate as desired, then detonates after being removed from chamber) | Injury from case fragments expelled by detonation. | Shooter and those in immediate proximity to shooter | **2** | **4** | **8** | All shooters made aware of misfire procedure (leave misfired round in chamber for at least 30 seconds to ensure that a hangfire does not occur), new shooters to be assisted by experienced shooters initially. | **1** | **3** | **3** | Any batch of ammunition found to be misfiring excessively to be checked and discarded if appropriate. Coaches at range to assist if needed. |
| Negligent or inappropriate discharge of firearm | Being shot, fatal injury possible | Anyone on premises | **3** | **5** | **15** | Shooters are not permitted to shoot without being given safety instruction by an experienced club member. New shooters will not be given direct access to ammunition until accompanying experienced club member is satisfied they are competent. All members will be required to read and sign the range safety document before being allowed to shoot.  Members are instructed to only load handle a rifle on the firing point when the range is clear, and only load the rifle when they are aiming at the target and ready to fire. They are instructed to unload the rifle if they need to stop pointing the rifle at the target for any reason. A safety brief will be carried out with this information at the start of every shooting session | **1** | **5** | **5** | The utmost care and attention will be paid to ensuring that breaches in range safety protocol do not occur, and any errors may lead to the member involved being prevented from shooting until the committee is satisfied that they can follow all required procedures.  Trained coaches (several coaches qualified for 2020/2021 year) will be present with two always at range.  In addition, the NRA Range Regulations and Risk Assessments will be followed to the letter. These can be found here:  <https://nra.org.uk/nra-bisley/ranges/latest-range-information/range-regulations/>  <https://nra.org.uk/wp-content/uploads/20190624-NRA-RANGE-SPECIFIC-Risk-Assessment.pdf> |
| Contact with harmful substances during cleaning of equipment | Harm from solvents and cleaning oils | Members cleaning equipment, and those in the vicinity while cleaning is taking place | **3** | **2** | **6** | Members to be trained on correct procedure for cleaning rifles prior to doing so. When solvents are being used adequate ventilation must be present | **2** | **2** | **4** | First aid kit accessible in cleaning area. NHS 111 or 999 will be called in the (unlikely) event of moderate/serious injuries. |
| Injury whilst shooting as a result of improper shooting position | Muscle strains and joint injuries in arms, especially wrists and hands | Members shooting with jacket/sling | **3** | **3** | **9** | Members to receive thorough coaching in first sessions to ensure that their shooting position does not cause undue strain on their arms, hands or wrists. Advice and coaching to be made available to all members regardless of experience who feel that their shooting position is causing discomfort or harm | **2** | **2** | **6** | Train club members to higher standard of coaching (possibly NRA Club Instructor or Club Coach standards) to improve chance of preventing members from being in harmful positions.  At least 2 trained coaches will be present at all sessions. |
| Injury from sharp objects | Cuts and scrapes | Those handling objects on range and in cleaning areas | **3** | **2** | **6** | Objects that are required to be rough or sharp (scissors/knives for cutting cleaning cloths, screwdrivers, other tools) are to be stored in a toolbox when not in use, and only those who are aware of the risks are to use them. If an object is damaged or wears in such a way that it becomes sharp it will be removed from active use and fixed/replaced immediately | **2** | **2** | **4** | First aid kit accessible on range and in cleaning areas at all times, in the case of heavy bleeding which does not cease, further medical assistance will be sought (e.g. NHS 111). |
| Detonation of ammunition from mishandling (mostly being dropped) | Injury from fragments of bullet casing and ammunition box | Anyone in the vicinity | **2** | **4** | **8** | Danger of ammunition detonating if dropped to be expressed to members, advise that ammunition should be carried as little as possible | **1** | **4** | **8** | First aid kit accessible for minor injuries, NHS 111 or 999 will be called in the (very unlikely) event of moderate/serious injuries. |
| Injury from equipment malfunction | In most severe cases, a breech explosion could cause severe injury or death. This is extraordinarily unlikely however. | Shooters, those in the immediate vicinity | **2** | **5** | **10** | Regular inspection of equipment by experienced members to be carried out, any questionable equipment to be removed from use and inspected by a qualified gunsmith.  Rifles are to be visually inspected for safety issues before each use, with a more detailed inspection to be carried out at least once a month. | **1** | **5** | **5** | First aid kit accessible for minor injuries, NHS 111 or 999 will be called in the (very unlikely) event of moderate/serious injuries. |
| Malicious use of firearms | Someone with malicious intent could use firearms and ammunition to cause severe injury or death | Anyone on the range/storage areas and in the vicinity | **2** | **5** | **10** | Per legal requirements, anyone who the committee deems to be unsuitable to be around firearms is not to be permitted to shoot. The information of each member is passed to Hampshire Police upon joining, and should they pass on concerns over any member they will not be permitted to continue membership of the club. Committee are required to prevent access to the firearms of anyone that displays concerning behaviour, while taking an abundance of caution in this matter. Some guidance on this matter is given in the document from the Home Office entitled “Approval of Rifle And Muzzle-Loading Pistol Clubs”.  The firearms and ammunition are locked in secure cabinets separately per legal requirements. Access to the keys to those cabinets is to be limited to the committee (or a subset thereof). During taster sessions the ammunition and rifles are to be kept separate until required by the accompanying experienced members. A committee representative responsible for the mental health and wellbeing of members will work to mitigate the risk of malicious firearm usage. Existing (or new) members who are thought by the committee to be a danger to themselves or others will have their access restricted, and Hampshire Police may be informed in the most extreme cases. | **1** | **5** | **5** |  |
| Incident during social events | Injury to participants in social activity | Club committee and members/ those nearby | **3** | **2** | **6** | Appointed social secretaries and committee members ensure to point out fire exits/risks at start of social event, with regular checks that no new risks have presented themselves through the event. | **2** | **1** | **2** |  |
| **The following hazards have been identified by the NRA Range Risk Assessments here:** | [**https://nra.org.uk/wp-content/uploads/20190624-NRA-RANGE-SPECIFIC-Risk-Assessment.pdf**](https://nra.org.uk/wp-content/uploads/20190624-NRA-RANGE-SPECIFIC-Risk-Assessment.pdf) |  |  |  |  |  |  |  |  |  |
| Shot Splash Back | Injury from splash back | Those butt marking targets manually | **2** | **4** | **8** | - Range Regulations mandate minimum engagement distances which are strictly enforced for hard targets. - All standard targetry is manufactured from non-ricochet inducing materials - Members are only permitted to fire at NRA targets. Non-standard targetry must be approved for use by range staff - Prior permission is required to fire at non-standard targetry. - Range design – Ranges comply with mandatory distances between stop butt and mantlet. - Personnel are instructed to remain under the mantlet during firing. - Bullet catchers are inspected serviced and de-leaded regularly | **1** | **4** | **8** |  |
| Shooting in echelon | Walking onto a live section of the range in front of the range firing point | Anyone on the range | **3** | **5** | **15** | All range bookings are plotted on a master sheet by the Range Office ensuring safe separation distances are maintained. - The Safety Plot sheet is subjected to 3 x independent checks throughout the week. - Range Safety Staff ensure the correct physical laydown of the range. - Movement on the range (falling back) is coordinated and controlled - Live firing Boards are deployed to indicate safety demarcation lines | **1** | **5** | **5** |  |
| Ricochets from fired rounds | Impact from bullet fragments ricocheting from downrange can cause injury | Those on the range while firing is in progress | **1** | **4** | **4** | - Range regulations mandate the cladding of ricochet inducing material used in range construction - All ranges are inspected regularly - Gallery range safety template applied - Stop butt profile is maintained at 34° - Raised firing point projects forward the point of first strike. - Raised targetry reducing the possibility of ground strike - Calibre, muzzle velocity and muzzle energy are restricted. | **1** | **2** | **2** |  |

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| ***PART B – Action Plan*** | | | | | | |
| **Risk Assessment Action Plan** | | | | | | |
| **Part no.** | **Action to be taken, incl. Cost** | **By whom** | **Target date** | **Review date** | **Outcome at review date** | |
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| Responsible manager’s signature: | | | | Responsible manager’s signature: | | |
| Print name:  MATTHEW CROSSLEY | | | Date:  20/10/2020 | Print name:  KACPER WLODARCZYK | | Date  23/10/2020 |

**Assessment Guidance**

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| 1. Eliminate | Remove the hazard wherever possible which negates the need for further controls | If this is not possible then explain why |  |
| 1. Substitute | Replace the hazard with one less hazardous | If not possible then explain why |
| 1. Physical controls | Examples: enclosure, fume cupboard, glove box | Likely to still require admin controls as well |
| 1. Admin controls | Examples: training, supervision, signage |  |
| 1. Personal protection | Examples: respirators, safety specs, gloves | Last resort as it only protects the individual |

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| **LIKELIHOOD** | 5 | 5 | 10 | 15 | 20 | 25 |
| 4 | 4 | 8 | 12 | 16 | 20 |
| 3 | 3 | 6 | 9 | 12 | 15 |
| 2 | 2 | 4 | 6 | 8 | 10 |
| 1 | 1 | 2 | 3 | 4 | 5 |
|  | | 1 | 2 | 3 | 4 | 5 |
| **IMPACT** | | | | |

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| Impact | | Health & Safety |
| 1 | Trivial - insignificant | Very minor injuries e.g. slight bruising |
| 2 | Minor | Injuries or illness e.g. small cut or abrasion which require basic first aid treatment even in self-administered. |
| 3 | Moderate | Injuries or illness e.g. strain or sprain requiring first aid or medical support. |
| 4 | Major | Injuries or illness e.g. broken bone requiring medical support >24 hours and time off work >4 weeks. |
| 5 | Severe – extremely significant | Fatality or multiple serious injuries or illness requiring hospital admission or significant time off work. |

Risk process

1. Identify the impact and likelihood using the tables above.
2. Identify the risk rating by multiplying the Impact by the likelihood using the coloured matrix.
3. If the risk is amber or red – identify control measures to reduce the risk to as low as is reasonably practicable.
4. If the residual risk is green, additional controls are not necessary.
5. If the residual risk is amber the activity can continue but you must identify and implement further controls to reduce the risk to as low as reasonably practicable.
6. If the residual risk is red do not continue with the activity until additional controls have been implemented and the risk is reduced.
7. Control measures should follow the risk hierarchy, where appropriate as per the pyramid above.
8. The cost of implementing control measures can be taken into account but should be proportional to the risk i.e. a control to reduce low risk may not need to be carried out if the cost is high but a control to manage high risk means that even at high cost the control would be necessary.

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| Likelihood | |
| 1 | Rare e.g. 1 in 100,000 chance or higher |
| 2 | Unlikely e.g. 1 in 10,000 chance or higher |
| 3 | Possible e.g. 1 in 1,000 chance or higher |
| 4 | Likely e.g. 1 in 100 chance or higher |
| 5 | Very Likely e.g. 1 in 10 chance or higher |