



National Shooting Centre
Bisley Camp
Brookwood
Woking
Surrey
GU24 0PB

NSC RANGE COMPLEX RISK ASSESSMENT DATED 23 NOVEMBER 2020

AIM

1. The aim of this Risk Assessment is to identify existing and potential hazards associated with normal range activity, demonstrate that the appropriate control measures have been put in place and to monitor the overall safety regime applied to the range. Where possible, hazards will be eliminated in their entirety, or reduced to as low as reasonably practicable.

ACTIVITIES

2. The primary activity is live firing, either as a leisure activity, competition or training for competition. The ranges are normally active six days a week, and up to 51 weeks annually. The complex consists of Gallery, Gallery Rifle, Electronic target and Moving Target ranges, it is used predominantly by NRA members and affiliated clubs on "Club Days" however MOD and commercial customers are also permitted to use the range under specified conditions.

3. The Range Danger Area (RDA) for Bisley range complex extends over a large area of Surrey Heath. The RDA is enclosed within a 16+ kilometre 'preventative' fence with razor wire affixed to the top of the structure raising the height, to approximately 2.0m. The Army Training Centre (Pirbright (ATC(P)) security fence south of the main Pirbright range complex forms, part of the RDA boundary fence. An inner Deer fence has been constructed in certain areas. Two small, separate sections consist of permanent 'HERAS' fencing and a triple concertina of razor wire running adjacent to the chain-link fence (to deter trespassers).

4. The RDA has historically been used as an impact/training area and contains an undetermined amount of unexploded ordnance within its boundary (surface and sub-surface).

HAZARDS

5. A summary of the major hazards:

Ref	Hazard	RA
1	Live firing	
2	Shooting in echelon	
3	Ricochet	
4	Noise	
5	Range Incursion	
6	Firearm malfunction	



7	Fall from height	
8	Fire	
9	Heathland Fire	
10	Unexploded ordnance	
11	Aircraft overflight	

PERSONS AT RISK

6. The following personnel are considered to be at risk:
- a. Range users.
 - b. Spectators.
 - c. NRA Staff.
 - d. Contractors.
 - e. Local Population/Persons in the surrounding area.
 - f. Aircraft and passengers.

RANGE SPECIFIC RISK ASSESSMENT AVAILABILITY

7. Range Specific Risk assessments are available to range users in the Range Control Office and on the NRA website and must be read by all personnel utilising the NSC ranges or entering the Range Danger Area.

RISK MATRIX

The risk matrix is used to define the level of risk by considering probability or likelihood against severity.

Likelihood		Risk Matrix		
Common/Regular/Frequent	3	Medium 3	High 6	High 9
Occasional	2	Low 2	Medium 4	High 6
Rare/Improbable	1	Low 1	Low 2	Medium 3
SEVERITY		1 Minor Injury or Illness	2 Serious Injury or Illness	3 Fatality Major Injury/Illness

RW Wells
Head of Range Services



Annexes

- A - Century Range
- B - Stickledown Range
- C - Short Siberia Range
- D - Melville Range
- E - Cheylesmore Range
- F - Winans Range
- G - Butt Zero Range

CENTURY RANGE - RISK ASSOCIATED WITH THE HAZARD

Hazard Ref	Risk Associated with the Hazard	Existing Control Measures	Risk Rating	Add Control	Review Freq
1, 5,10	Gunshot injury. Range incursion. Unexploded Ordnance.	<ul style="list-style-type: none"> - Boundary Fencing- a 2.0m perimeter fence has been erected around the RDA. - Signage - The RDA perimeter fence signs warn/inform the general public of the dangers from unexploded ordnance and that this is a: - MILITARY FIRING RANGE – KEEP OUT. The warning signs and the perimeter fence convey a clear message to the public warning of the dangers. - Range Clear Procedure - A track runs adjacent to the boundary fence (largely outside). This facilitates the MOD range clearance procedure and an integrity check of the perimeter fence. - Access Control – access to the RDA is controlled in consultation with the MOD. Contractors are instructed to report to Range Office to gain access to the ranges or range danger area. Where appropriate they receive a briefing or read and collect safety information. - Range regulations - contain details of range safety procedures and restrictions. - Movement shooting practises that entail movement with firearms are supervised one to one. Movement with loaded firearms is not permitted unless conducted a part of an NRA supervised practical shooting event. - Probationary training - . All live firing is conducted by personnel that have been certified as competent following completion of training. - Supervision – probationary members that have not completed training are supervised by qualified personnel at all times whilst on the range. - Range Officer maintains control of all movement and activity - Shooter Competency Certification process ensures all shooters are familiar with range procedures and competent with firearms. - Membership and Competence Card are checked prior to issuing an NSC firearm or allowing shooting 	1 x 3 Medium		

**ANNEX A TO
NRA RISK ASSESSMENT
DATED 23 NOVEMBER 2020**

		<ul style="list-style-type: none"> - Accessible range floors and firing points have been cleared of unexploded ordnance - All ground penetration in the range danger area must be approved by the Head of Range Services 			
1	Injury from splash back	<ul style="list-style-type: none"> - 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 NSC approved targets. - 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 x 3 Medium	N	
2	Shooting in Echelon	<ul style="list-style-type: none"> - 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 x 3 Medium	N	
3	Injury from ricochet	<ul style="list-style-type: none"> - Range regulations mandate the cladding of ricochet inducing material used in range construction - All ranges are inspected regularly - Century has a Gallery range safety template applied - Stop butt and mantlet profile are maintained at 34° plus - Raised firing point projects forward the point of first of impact. - Raised targetry reduces the possibility of ground strike - Calibre, muzzle velocity and muzzle energy are restricted. 	2 x 2 Medium	N	
3	Burn from ejected case or metal shard	<ul style="list-style-type: none"> - Range design provides lane separation - Safety space provided for sporting stances - Firing points are marked by pegs and separation distances maintained 	2 x 1 Low	N	
4	Hearing damage	<ul style="list-style-type: none"> - Range Regulations mandate hearing protection 	1 x 2	N	

**ANNEX A TO
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		<ul style="list-style-type: none"> - Range is remote from habitation - RO must check hearing protection before firing commences - Signage displayed at appropriate places 	Low		
5	Range Incursion	<ul style="list-style-type: none"> - RDA is enclosed by a security fence - Ranges Live signs are displayed on the main access route - Live firing times published on the NSC website and Range Regulations - Klaxon sounds commencement and cease of shooting - Danger Live Fire signs are deployed daily iaw safety plot - RO is responsible for observing range - Firing not permitted during fog - Emergency Stop procedure is in place and instructed on all courses 	1 x 2 Low	N	
6	Firearm malfunction	<ul style="list-style-type: none"> - Range regulations describe misfire procedures - Probationary training covers malfunctions in detail - Restricted access to firing points - RO observation and control of firing - Safety Supervisors monitoring firing - Range cOntrol and an Armourer are available to assist with firearm incidents/faults/issues. 	2 x 1	N	
7	Falling from height, incl. open trenches, gallery roofs and other buildings	<ul style="list-style-type: none"> - Authorised users are aware of the hazards associated with gallery range construction - Public/member movement on, or over, the mantlet is not permitted less authorised employees - Vertical drop signs are deployed where appropriate 	2 x 1 Low	N	
8	Fire	<ul style="list-style-type: none"> - The use of tracer and pyrotechnics is not permitted within the Bisley complex or on NSC ranges. - Open fires are not permitted. - The undergrowth and trees on the RDA perimeter tracks and the perimeter fence are cleared periodically by the MOD. This provides a fire break and clear access for fire service vehicles where appropriate. - Annual mowing of fire breaks within the RDA - Fire service personnel have access to both the Pirbright & Bisley range complexes to fight heath fires. Their area of operation is limited to the purpose-built range facilities which have been subject to EOC. Their limit of exploitation is no further north of the butts/target lines on the ranges. 			

**ANNEX A TO
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		- Fire breaks within the RDA are mowed regularly			
10	Unexploded Ordnance	<ul style="list-style-type: none"> - All NRA/NSC Range staff receive an annual military debris brief from MoD Range Safety Staff. - Access restricted and controlled collaboratively via Pirbright and Bisley Range Control. - All persons not engaged in official business entering the RDA are mandated to book on and off the area via Longmoor Ops Room - All ground penetration in the range danger area must be approved by the Head of Range Services 			
11	Damage to aircraft	<ul style="list-style-type: none"> - The RDA incorporates Air Danger Area designated EGD 133 & 133A with an ADH at 1200ft (amsl), increasing to 2400ft (amsl - EGD 133 only). - Quadrant Elevation is limited to 70 mils on Century Range and enforced by ROs - Air sentries (Range Officers) must be alert to unauthorised air traffic during live firing. - Firearms are to be in the shoulder levelled at the target prior to fully closing the action. 			

Review Date:	23 November 2020	Review Date:	
Name:	R Wells	Name:	
Rank/Grade:	Head of Range Services	Rank/Grade:	
Signature:		Signature:	

STICKLEDOWN RANGE - RISK ASSOCIATED WITH THE HAZARD

Hazard Ref	Risk Associated with the Hazard	Existing Control Measures	Risk Rating	Add Control	Review Freq
1/5	Gunshot injury	<ul style="list-style-type: none"> - Boundary Fencing- a 2.0m perimeter fence has been erected around the RDA (a standard security fence accounts for a small proportion of the fence line) - Signage - The RDA perimeter fence signs warn/inform the general public of the dangers from unexploded ordnance and that this is a: MILITARY FIRING RANGE – KEEP OUT. RDA boundary red flags are not flown at Bisley. The warning signs and the perimeter fence convey a clear message to the public warning of the dangers. - Movement with loaded firearms is not permitted unless conducted a part of an NRA supervised practical shooting event. - Range Clear Procedure - A track runs adjacent to the boundary fence (largely outside). This facilitates the MOD range clearance procedure and an integrity check of the perimeter fence. - Access Control – access to the RDA is controlled in consultation with the MOD. Contractors are instructed to report to Range Office to gain access to the ranges or range danger area. Where appropriate they receive a briefing or read and collect safety information. - Range regulations - contain the site emergency and range procedures/restrictions. - Probationary training - . All live firing is conducted by personnel that have been certified as competent following completion of training. - Supervision of probationers – probationary members that have not completed training are supervised by qualified personnel at all times whilst on the range. - Range Officer maintains control of all movement and activity - Shooter Competency Certification process ensures all shooters are familiar with range procedures and competent with firearms. 	1 x 3 Medium		
1	Injury from splash back	<ul style="list-style-type: none"> - Range Regulations designate minimum engagement distances. - Members are only permitted to fire at NSC approved targets. - Range design – Mandatory distances between stop butt and mantlet are strictly observed. Personnel are instructed to remain under the mantlet during firing. - Sand stop butt is inspected serviced and de-leaded regularly 		N	

**ANNEX B TO
NSC RISK ASSESSMENT
DATED 23 NOVEMBER 2020**

1	Injury from military shooting at Pirbright	<ul style="list-style-type: none"> - Daily liaison with Pirbright ref range clear procedure - Coordinated timing of access and egress to/from Stickledown Butts - Fence line at 800yd point preventing access to danger area - Locked gate at 800yd point - Radio comms with Stickledown butts - Regular liaison with HQ DTE and TSO Pirbright 	1x3 Medium		
2	Shooting in Echelon	<ul style="list-style-type: none"> - 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 - For CNC use Stickledown Range is split into Stickledown A & B this permits the use of Butt Zero and remaining Stickledown targets simultaneously subject to safety separation constraints. BRON 2015/1A refers. - Live firing Boards are deployed to indicate safety demarcation lines 	2 x 2 Medium		
3	Injury from ricochet	<ul style="list-style-type: none"> - Range regulations do not permit ricochet inducing material in range construction - Range regulations mandate the cladding of ricochet inducing material used in range construction - All ranges are inspected regularly - Stickledown has a Full Danger Area safety template - Stop butt profile is maintained at 34° - Raised firing point projecting forward the point of first strike. - Raised targetry reducing the possibility of ground strike - Calibre, muzzle velocity and muzzle energy are restricted 	2 x 2 Medium	N	
3	Injury from ricochet originating from elsewhere	<ul style="list-style-type: none"> - Ricochet risk from Melville into Stickledown A (Butt Zero) reduced by removal of intermediate targetry - Melville Witness screens will identify increased ricochet risk early - Ballistic tiles present vertical mini mantlet - All Stop Butts regularly maintained - RO responsibility for control, observation and reporting. 			
10	Unexploded Ordnance	<ul style="list-style-type: none"> - All NRA/NSC Range staff receive an annual military debris brief from MoD Range Safety Staff. - RDA access restricted and controlled collaboratively via Pirbright and Bisley Range Control. 			

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		<ul style="list-style-type: none"> - All persons not engaged on official business entering the RDA are mandated to book on and off the area via Longmoor Ops Room - All ground penetration in the range danger area must be approved by the Head of Range Services 			
3	Burn from ejected case or metal shard	<ul style="list-style-type: none"> - Range design provides lane separation - Safety space provided for sporting stances - Firing points are marked by pegs and separation distances maintained 	2 x 1 Low	N	
4	Hearing damage	<ul style="list-style-type: none"> - Range Regulations mandate hearing protection - Range is remote from habitation - RO check hearing protection before firing commences - Signage displayed at appropriate places 	1 x 2 Low	N	
5	Range Incursion	<ul style="list-style-type: none"> - RDA is enclosed by a security fence - Ranges Live signs are displayed on the main access route - Live firing times published on the NRA website and Range Regulations - Klaxon sounds commencement and cease of shooting - Danger Live Fire signs are deployed daily iaw safety plot - RO is responsible for observing range - Firing not permitted during fog - Emergency Stop procedure is in place and instructed on all courses - Range floor forward of 800yds is fenced and gate locked - Movement forward of 800yds is coordinated with Pirbright Range Control 	1 x 2 Low	N	
6	Firearm malfunction	<ul style="list-style-type: none"> - Range regulations - Probationary training - Misfire drills - Restricted access to firing points - RO observation and control of firing - Safety Supervisors monitoring firing - Armourer available to assist with firearm faults/issues. 	2 x 1	N	
7	Falling from height, incl. open trenches, gallery roofs and other buildings	<ul style="list-style-type: none"> - Authorised users are aware of the hazards associated with gallery range construction - Movement on, or over, the mantlet is not permitted less authorised employees - Vertical drop signs are deployed where appropriate. 	2 x 1 Low	Yes Signage required on mantlets to prevent access and warn of sheer drop	

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9	Fire	<ul style="list-style-type: none"> - The use of tracer and pyrotechnics is not permitted within the Bisley complex. - Open fires are not permitted. - The undergrowth and trees on the RDA perimeter tracks and the perimeter fence are cleared periodically by the MOD. This provides a fire break and clear access for fire service vehicles where appropriate. - Annual mowing of fire breaks within the RDA - Fire service personnel have access to both the Pirbright & Bisley range complexes to fight heath fires. Their area of operation is limited to the purpose-built range facilities which have been subject to EOC. Their limit of exploitation is no further north of the butts/target lines on the ranges. - Fire breaks within the RDA are mowed regularly 	2 x 1 Low		
11	Damage to aircraft	<ul style="list-style-type: none"> - The RDA incorporates Air Danger Area designated EGD 133 & 133A with an ADH at 1200ft (amsl), increasing to 2400ft (amsl - EGD 133 only). - Quadrant Elevation is limited to 150mils on Stickledown Range and enforced by ROs - Air sentries (Range Officers) must be alert to unauthorised air traffic during live firing. - Firearms are to be in the shoulder levelled at the target prior to be made ready 	2 x 1 Low		
Review Date:		23 November 2020	Review Date:		
Name:		R Wells	Name:		
Rank/Grade:		Head of Range Services	Rank/Grade:		
Signature:			Signature:		

SHORT SIBERIA RANGE - RISK ASSOCIATED WITH THE HAZARD

Hazard Ref	Risk Associated with the Hazard	Existing Control Measures	Risk Rating	Add Control	Review Freq
1	Gunshot injury	<ul style="list-style-type: none"> - Boundary Fencing- a 2.0m perimeter fence has been erected around the RDA (a standard security fence accounts for a small proportion of the fence line) - Signage - The RDA perimeter fence signs warn/inform the general public of the dangers from unexploded ordnance and that this is a: MILITARY FIRING RANGE – KEEP OUT. RDA boundary red flags are not flown at Bisley. The warning signs and the perimeter fence convey a clear message to the public warning of the dangers. - Movement with loaded firearms is not permitted unless conducted a part of an NRA supervised practical shooting event. - Range Clear Procedure - A track runs adjacent to the boundary fence (largely outside). This facilitates the MOD range clearance procedure and an integrity check of the perimeter fence. - Access Control – access to the RDA is controlled in consultation with the MOD. Contractors are instructed to report to Range Office to gain access to the ranges and range danger area. Where appropriate they receive a briefing or read and collect safety information. - Range regulations - contain the site emergency and range procedures/restrictions. - Probationary training - All live firing is conducted by personnel that have been certified as competent following completion of training. - Supervision of probationers – probationary members that have not completed training are supervised by qualified personnel at all times whilst on the range. - Range Officer maintains control of all movement and activity - Shooter Competency Certification process ensures all shooters are familiar with range procedures and competent with firearms. 	1 x 3 Medium	Yes – RTC must be established and presence on the range increased	
1	Injury from splash back	<ul style="list-style-type: none"> - Range Regulations designate minimum engagement distances. - Members are only permitted to fire at NSC approved targets. 	1 x 3	N	

**ANNEX C TO
NSC RISK ASSESSMENT
DATED 24 JUNE 2019**

		<ul style="list-style-type: none"> - Range design – Mandatory distances between stop butt and mantlet are observed. Personnel are instructed to remain under the mantlet during firing. - Bullet Catcher is inspected serviced and de-leaded regularly 	Medium		
2	Shooting in Echelon	<ul style="list-style-type: none"> - 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, including fall backs, is coordinated and controlled - Live firing Boards are deployed to indicate safety demarcation lines 			
3	Injury from ricochet	<ul style="list-style-type: none"> - Range regulations do not permit ricochet inducing material in range construction - Range regulations mandate the cladding of ricochet inducing material used in range construction - All ranges are inspected regularly - Stop butt profile is maintained at 34° - Raised firing point at 200yds projecting forward the point of first strike. - Raised targetry reducing the possibility of ground strike - Calibre, muzzle velocity and muzzle energy are restricted 	2 x 2 Medium	N	
10	Unexploded Ordnance	<ul style="list-style-type: none"> - All NRA Range staff receive an annual military debris brief from MoD Range Safety Staff. - Access restricted and controlled collaboratively via Pirbright and Bisley Range Control. - All persons not engaged in official business entering the RDA are mandated to book on and off the area via Longmoor Ops Room - All ground penetration in the range danger area must be approved by the Head of Range Services 			
3	Burn from ejected case or metal shard	<ul style="list-style-type: none"> - Range design - Firing points are marked by pegs and separation of shooters maintained - Spectators are kept behind the firing line. 	2 x 1 Low	N	

**ANNEX C TO
NSC RISK ASSESSMENT
DATED 24 JUNE 2019**

4	Hearing damage	<ul style="list-style-type: none"> - Range Regulations mandate hearing protection - Range is remote from habitation - RO check hearing protection before firing commences - Signage displayed at appropriate places 	1 x 2 Low	N	
5	Range Incursion	<ul style="list-style-type: none"> - RDA is enclosed by a security fence - Ranges Live signs are displayed on the main access route - Live firing times published on the NRA website and Range Regulations - Klaxon sounds commencement and cease of shooting - Danger Live Fire signs are deployed daily iaw safety plot - RO is responsible for observing range - Firing not permitted during fog - Emergency Stop procedure is in place and instructed on all courses - Area between 100 and 200yds is demarcated with a rope barrier discouraging access 	1 x 2 Low	N	
6	Firearm malfunction	<ul style="list-style-type: none"> - Range regulations describe misfire drills - Probationary training covers firearm incidents in detail - Misfire drills - Restricted access to firing points - RO observation and control of firing - Safety Supervisors monitoring firing - Range Control and an Armourer are available to assist with firearm incidents/faults/issues. 	2 x 1	N	
7	Falling from height, incl. open trenches, gallery roofs and other buildings	<ul style="list-style-type: none"> - Authorised users are aware of the hazards associated with gallery range construction - Movement on, or over, the mantlet is not permitted less authorised employees - Vertical drop signs are deployed where appropriate 	2 x 1 Low		
8	Fire	<ul style="list-style-type: none"> - The use of tracer and pyrotechnics is not permitted within the Bisley complex or on NSC ranges. - Open fires are not permitted. - The undergrowth and trees on the RDA perimeter tracks and the perimeter fence are cleared periodically by the military. This provides a fire break and clear access for fire service vehicles where appropriate. 			

**ANNEX C TO
NSC RISK ASSESSMENT
DATED 24 JUNE 2019**

		<ul style="list-style-type: none"> - Annual mowing of fire breaks within the RDA - Fire service personnel have access to both the Pirbright & Bisley range complexes to fight heath fires. Their area of operation is limited to the purpose-built range facilities which have been subject to EOC. Their limit of exploitation is no further north of the butts/target lines on the ranges. 			
11	Damage to aircraft	<ul style="list-style-type: none"> - The RDA incorporates Air Danger Area designated EGD 133 & 133A with an ADH at 1200ft (amsl), increasing to 2400ft (amsl - EGD 133 only). - Quadrant Elevation is limited to 70 mils on Short Siberia Range and enforced by ROs - Air sentries (range Officers) must be alert to unauthorised air traffic during live firing. - Firearms are to be in the shoulder levelled at the target prior to be made ready 			

Review Date:	23 November 2020	Review Date:	
Name:	R Wells	Name:	
Rank/Grade:	Head of Range Services	Rank/Grade:	
Signature:		Signature:	

**ANNEX D TO
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DATED 23 November 2020**

MELVILLE RANGE - RISK ASSOCIATED WITH THE HAZARD

Hazard Ref	Risk Associated with the Hazard	Existing Control Measures	Risk Rating	Add Control	Review Freq
1	Gunshot injury	<ul style="list-style-type: none"> - Melville Range is enclosed with access points to the rear of the firing point. - During NRA sponsored activity movement with loaded firearms is not permitted. - Range Clear Procedure - A track runs adjacent to the boundary fence (largely outside). This facilitates the MOD range clearance procedure and an integrity check of the perimeter fence. - Access Control – access to the RDA is controlled in consultation by the military and Bisley Range Office. Contractors are instructed to report to Range Office to gain access to the ranges and range danger area. Where appropriate they receive a briefing or read and collect safety information. - Range regulations - contain the site emergency and range procedures/restrictions. - Probationary training - . All live firing is conducted by personnel that have been certified as competent following completion of training. - Supervision of probationers – probationary members that have not completed training are supervised by qualified personnel at all times whilst on the range. - The Range Officer maintains control of all movement and activity - Shooter Competency Certification process ensures all shooters are familiar with range procedures and competent with firearms. 	1 x 3 Medium	N	
1	Injury from splash back	<ul style="list-style-type: none"> - Members are only permitted to fire at NSC approved targets. - Bullet Catcher is inspected serviced and de-leaded regularly - Range Regulations designate minimum engagement distances. - All ricochet inducing materiel is removed or protected. 	1 x 3 Medium	N	
2	Injury from ricochet	<ul style="list-style-type: none"> - Range construction advice does not recommend use of ricochet inducing material in range construction - Range regulations mandate the cladding of ricochet inducing material used in range construction 	2 x 2 Medium	N	

**ANNEX D TO
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		<ul style="list-style-type: none"> - All ranges are inspected regularly - Stop butt profile is maintained at 34° - Calibre, muzzle velocity and muzzle energy are restricted - Witness screens are fitted to firing bay walls to provide early warning of ricochet - Requirement to report side strike/ricochet - Ballistic tiles are fitted to mantlet walls - Vertical mini mantlet in the form of a wall - Raised firing point projecting first point of impact forward 			
3	Burn from ejected case or metal shard	<ul style="list-style-type: none"> - RO briefing warning of risk - Lane spacing and marking - Lane screening available at 50yd point - Eye protection recommended and mandatory for muzzle loaders. 	2 x 1 Low	N	
4	Hearing damage	<ul style="list-style-type: none"> - Range Regulations mandate hearing protection - Range is remote from habitation - RO check hearing protection before firing commences - Range is enclosed - Warning signs displayed outside of the complex 	1 x 2 Low	N	
5	Range Incursion	<ul style="list-style-type: none"> - Range enclosed by external walls - Entry behind the firing point - Range floor and target line enclosed - Range Officer duties include vigilance for range incursion - Signage and barrier on access to the bullet catcher. 	1 x 2 Low	N	
6	Firearm malfunction	<ul style="list-style-type: none"> - Range regulations describe misfire drills - Probationary training covers firearm malfunction in some detail - Misfire drills - Restricted access to firing points - RO observation and control of firing - Safety Supervisors monitoring firing - Armourer available to assist with firearm faults/issues. 	2 x 1	N	
7	Slip/Trip	<ul style="list-style-type: none"> - Non slip floor covering - Ramps provided at terraces - Position of firer controlled by RO - Approach to target controlled by the RO - Approach to target via ramped route 	2 x 1 Low	N	

**ANNEX D TO
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8	Persons struck by advancing targets	<ul style="list-style-type: none"> - Position of firer supervised and controlled by RO. - No requirement to approach target - Designated firing point - No movement forward of the firing point permitted without authorisation from Range Services personnel agreed with the RO. 	1 x 2 Low	N	
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Review Date:	23 November 2020	Review Date:	
Name:	R Wells	Name:	
Rank/Grade:	Head of Range Services	Rank/Grade:	
Signature:		Signature:	

**ANNEX E TO
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CHEYLESMORE RANGE - RISK ASSOCIATED WITH THE HAZARD

Hazard Ref	Risk Associated with the Hazard	Existing Control Measures	Risk Rating	Add Control	Review Freq
1	Gunshot injury	<ul style="list-style-type: none"> - Cheylesmore Range is enclosed with access points to the rear of the firing point. - During NRA sponsored activity movement with loaded firearms is not permitted. - Cheylesmore Range is a NDA range - Range regulations - contain the site emergency and range procedures/restrictions. - Probationary training - . All live firing is conducted by personnel that have been certified as competent following completion of training. - Supervision of probationers – probationary members that have not completed training are supervised by qualified personnel at all times whilst on the range. - Range Officer maintains control of all movement and activity - Shooter Competency Certification process ensures all shooters are familiar with range procedures and competent with firearms. - Range regulations restrict: <ul style="list-style-type: none"> - the calibre and type of firearm that may be used. - Placement of targets - Firing point and positions - Spectators are kept to the rear of the firing point or inside the Club Room 	1 x 3 Medium	N	
1	Injury from splash back	<ul style="list-style-type: none"> - Range Regulations designate minimum engagement distances. - Members are only permitted to fire at NSC approved targets. - Bullet Catcher is inspected serviced and de-leaded regularly - Range Regulations designate minimum engagement distances. - All ricochet inducing material is removed or protected. 	1 x 3 Medium	N	
2	Injury from ricochet	<ul style="list-style-type: none"> - Range construction advice does not recommend use of ricochet inducing material in range construction - Range regulations mandate the cladding of ricochet inducing material used in range construction - All ranges are inspected regularly - Stop butt profile is maintained at 34 degrees - Calibre, muzzle velocity and muzzle energy are restricted 	2 x 2 Medium	N	

**ANNEX E TO
NSC RISK ASSESSMENT
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		<ul style="list-style-type: none"> - Witness screens are fitted to firing bay walls to provide early warning of ricochet - Requirement to report side strike/ricochet - Vertical mini mantlet in the form of a wall - Range floor maintained and free from ricochet inducing material. 			
3	Burn from ejected case or metal shard	<ul style="list-style-type: none"> - RO briefing warning of risk - Lane spacing and marking - Lane screening available at 25yd point - Eye protection recommended and mandatory for muzzle loaders. 	2 x 1 Low	N	
4	Hearing damage	<ul style="list-style-type: none"> - Range Regulations mandate hearing protection - Range is remote from habitation - RO check hearing protection before firing commences - Range is enclosed - Warning signs displayed outside of the complex 	1 x 2 Low	N	
5	Range Incursion	<ul style="list-style-type: none"> - Range enclosed by external walls - Entry behind the firing point - Range floor and target line enclosed - Range Officer duties include vigilance for range incursion - Signage and barrier on access to the bullet catcher. 	1 x 2 Low	N	
6	Firearm malfunction	<ul style="list-style-type: none"> - Range regulations - Probationary training - Misfire drills - Restricted access to firing points - RO observation and control of firing - Safety Supervisors monitoring firing - Range Control and an Armourer available to assist with firearm incidents/faults/issues. 	2 x 1	N	
7	Slip/Trip	<ul style="list-style-type: none"> - Non slip floor covering - Step edges painted - Position of firer controlled by RO - Approach to target controlled by the RO - Approach to target via ramped route 	2 x 1 Low	N	

Review Date:	24 June 2019	Review Date:	
Name:	R Wells	Name:	
Rank/Grade:	Head of Range Services	Rank/Grade:	
Signature:		Signature:	

**ANNEX F TO
NSC RISK ASSESSMENT
DATED 23 NOVEMBER 2020**

WINANS RANGE - RISK ASSOCIATED WITH THE HAZARD

Hazard Ref	Risk Associated with the Hazard	Existing Control Measures	Risk Rating	Add Control	Review Freq
1	Gunshot injury	<ul style="list-style-type: none"> - Winans Range is enclosed with access points to the rear of the firing point. - Movement with loaded firearms is only permitted during specifically designated practises and then only within constraints laid down within range regulations. - Winans Range is a NDA range - Range regulations - contain the site emergency and range procedures/restrictions. - Probationary training - . All live firing is conducted by personnel that have been certified as competent following completion of training. - Supervision of probationers – probationary members that have not completed training are supervised by qualified personnel at all times whilst on the range. - Range Officer maintains control of all movement and activity. - Shooter Competency Certification process ensures all shooters are familiar with range procedures and competent with firearms. - Range regulations restrict: <ul style="list-style-type: none"> - the calibre and type of firearm that may be used. - Placement of targets - Firing point and positions - Spectators are kept to the rear of the firing point - Each bay must be booked as a whole range and not split into lanes, all movement forward is controlled by an RO 	1 x 3 Medium	N	
1	Injury from splash back	<ul style="list-style-type: none"> - Range Regulations designate minimum engagement distances. - Members are only permitted to fire at NSC approved targets. - Bullet Catcher is inspected serviced and de-leaded regularly - Range Regulations designate minimum engagement distances. - All ricochet inducing materiel is removed or protected. - The use of hard targets is restricted to shotguns 	1 x 3 Medium	N	
2	Injury from ricochet	<ul style="list-style-type: none"> - Range construction advice does not recommend use of ricochet inducing material in range construction - Range regulations mandate the cladding of ricochet inducing material used in range construction - All ranges are inspected regularly 	2 x 2 Medium	N	

**ANNEX F TO
NSC RISK ASSESSMENT
DATED 23 NOVEMBER 2020**

		<ul style="list-style-type: none"> - Stop butt profile is maintained at 34° - Calibre, muzzle velocity and muzzle energy are restricted - Witness screens are fitted to firing bay walls to provide early warning of ricochet - Requirement to report side strike/ricochet - Vertical mini mantlet in the form of a wall - Range floor maintained and free from ricochet inducing material. 			
3	Burn from ejected case or metal shard	<ul style="list-style-type: none"> - RO briefing warning of risk - Lane spacing and marking - Eye protection recommended and mandatory for muzzle loaders. - Protective screens are available if required 	2 x 1 Low	N	
4	Hearing damage	<ul style="list-style-type: none"> - Range Regulations mandate hearing protection - Range is remote from habitation - RO check hearing protection before firing commences - Range is enclosed - Warning signs displayed outside of the complex - Range is enclosed 	1 x 2 Low	N	
5	Range Incursion	<ul style="list-style-type: none"> - Range enclosed by external walls - Entry behind the firing point - Range floor and target line enclosed - Range Officer duties include vigilance for range incursion - Signage and barrier on access to the bullet catcher. 	1 x 2 Low	N	
6	Firearm malfunction	<ul style="list-style-type: none"> - Range regulations include misfire drills - Probationary training covers firearm malfunction in some detail. - Misfire drills - Restricted access to firing points - RO observation and control of firing - Safety Supervisors monitoring firing - Rang Control and an Armourer are available to assist with firearm incidents/faults/issues. 	2 x 1	N	
7	Slip/Trip	<ul style="list-style-type: none"> - Non slip floor covering - Step edges painted - Position of firer controlled by RO - Approach to target controlled by the RO - Approach to target via ramped route - Firing point kept clear and tidy 	2 x 1 Low	N	
8	Pop Over	<ul style="list-style-type: none"> - Stop Butt is maintained to 34° - Rear wall height 7m+ - Net canopy fitted to contain shotgun slug pop overs - Calibre restriction imposed to <.44 	3 x 1 Medium	N *Note	

**ANNEX F TO
NSC RISK ASSESSMENT
DATED 23 NOVEMBER 2020**

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Review Date:	23 November 2020	Review Date:	
Name:	R Wells	Name:	
Rank/Grade:	Head of Range Services	Rank/Grade:	
Signature:		Signature:	

BUTT ZERO RISK ASSOCIATED WITH THE HAZARD

Hazard Ref	Risk Associated with the Hazard	Existing Control Measures	Risk Rating	Add Control	Review Freq
1 and 5	Gunshot injury/ Unexploded Ordnance	<ul style="list-style-type: none"> - Boundary Fencing- a 2.0m perimeter fence has been erected around the RDA (a standard security fence accounts for a small proportion of the fence line) - Signage - The RDA perimeter fence signs warn/inform the general public of the dangers from unexploded ordnance and that this is a: MILITARY FIRING RANGE – KEEP OUT. RDA boundary red flags are not flown at Bisley. The warning signs and the perimeter fence convey a clear message to the public warning of the dangers. - Movement with loaded firearms is not permitted unless conducted a part of an NRA supervised practical shooting event. - Range Clear Procedure - A track runs adjacent to the boundary fence (largely outside). This facilitates the MOD range clearance procedure and an integrity check of the perimeter fence. - Access Control – access to the RDA is controlled in consultation with the MOD. Contractors are instructed to report to Range Office to gain access to the ranges and range danger area. Where appropriate they receive a briefing or read and collect safety information. - Range regulations - contain the site emergency and range procedures/restrictions. - Probationary training - All live firing is conducted by personnel that have been certified as competent following completion of training. - Supervision of probationers – probationary members that have not completed training are supervised by qualified personnel at all times whilst on the range. - Range Officer maintains control of all movement and activity - Shooter Competency Certification process ensures all shooters are familiar with range procedures and competent with firearms. 	1 x 3 Medium		
1	Injury from splash back	<ul style="list-style-type: none"> - Range Regulations designate minimum engagement distances. - Members are only permitted to fire at NSC approved targets. - Sand stop butt is inspected serviced and de-leaded regularly. 	1 x 3 Medium		
1	Injury from military shooting at Pirbright	<ul style="list-style-type: none"> - No unauthorised movement forward of the 800yd point. - Locked gate at 800yd point - Close liaison with Pirbright Range Control - Radio comms between Control and Butt Zero. 	1x3 Medium		

**ANNEX G TO
NRA RISK ASSESSMENT
DATED 24 JUNE 2019**

2	Simultaneous Shooting in Echelon on Stickledown	<ul style="list-style-type: none"> - 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 - For CNC use Stickledown Range is split into Stickledown A & B this permits the use of Butt Zero and remaining Stickledown targets simultaneously subject to safety separation constraints. BRON 2015/1A refers. - Live firing Boards are deployed to indicate safety demarcation lines 	2 x 2 Medium		
3	Injury from ricochet	<ul style="list-style-type: none"> - Range regulations do not permit ricochet inducing material in range construction - Range regulations mandate the cladding of ricochet inducing material used in range construction - All ranges are inspected regularly - Stop butt profile is maintained at 34° - Raised targetry reducing the possibility of ground strike - Calibre, muzzle velocity and muzzle energy are restricted - Butt Zero fires into a Full Danger Area safety template - Movement on the Range is controlled during shooting hours. - Calibre, muzzle velocity and muzzle energy are restricted. 	2 x 2 Medium	N	
3	Injury from ricochet originating from elsewhere	<ul style="list-style-type: none"> - Ricochet risk from Melville into Butt Zero A (Butt Zero) - Ballistic tiles present vertical mini mantlet - Intermediate targetry removed - Melville Stop Butt is maintained and de-leaded regularly - RO responsibility for control, observation and reporting. 			
3	Burn from ejected case or metal shard	<ul style="list-style-type: none"> - Range design - Shooter separation is controlled by the RO. 	2 x 1 Low	N	
4	Hearing damage	<ul style="list-style-type: none"> - Range Regulations mandate hearing protection - Range is remote from habitation - RO check hearing protection before firing commences - Signage displayed at appropriate places 	1 x 2 Low	N	
6	Range Incursion	<ul style="list-style-type: none"> - RDA is enclosed by a security fence - Ranges Live signs are displayed on the main access route - Live firing times published on the NRA website and Range Regulations - Klaxon sounds commencement and cease of shooting - Danger Live Fire signs are deployed daily iaw safety plot - RO is responsible for observing range 	1 x 2 Low	N	

**ANNEX G TO
NRA RISK ASSESSMENT
DATED 24 JUNE 2019**

		<ul style="list-style-type: none"> - Firing not permitted during fog - Emergency Stop procedure is in place and instructed on all courses - Range floor forward of 800yds is fenced and gate locked - Movement forward of 800yds is coordinated with Pirbright Range Control - Danger Live Fire signs are deployed daily iaw safety plot 			
7	Firearm malfunction	<ul style="list-style-type: none"> - Range regulations include misfire drills - Probationary training covers firearm malfunction in some detail - Misfire drills - Restricted access to firing points - RO observation and control of firing - Safety Supervisors monitoring firing - Armourer available to assist with firearm faults/issues. 	2 x 1	N	
8	Falling from height, incl. open trenches, gallery roofs and other buildings	<ul style="list-style-type: none"> - Authorised users are aware of the hazards associated with the range design and construction - Maintenance personnel are briefed during induction and familiarised with the ranges - Warning signs displayed as appropriate 	2 x 1 Low		
9	Fire	<ul style="list-style-type: none"> - The use of tracer and pyrotechnics is not permitted within the Bisley complex. - Open fires are not permitted. - The undergrowth and trees on the RDA perimeter tracks and the perimeter fence are cleared periodically by the military. This provides a fire break and clear access for fire service vehicles where appropriate. - Annual mowing of fire breaks within the RDA - Fire service personnel have access to both the Pirbright & Bisley range complexes to fight heath fires. Their area of operation is limited to the purpose-built range facilities which have been subject to EOC. Their limit of exploitation is no further north of the butts/target lines on the ranges. - Fire breaks within the RDA are mowed regularly 	2 x 1 Low		
10	Unexploded Ordnance	<ul style="list-style-type: none"> - All NRA Range staff receive an annual military debris brief from MoD Range Safety Staff. - Access restricted and controlled collaboratively via Pirbright and Bisley Range Control. - All persons not engaged in official business entering the RDA are mandated to book on and off the area via Longmoor Ops Room - All ground penetration in the range danger area must be approved by the Head of Range Services 			

**ANNEX G TO
NRA RISK ASSESSMENT
DATED 24 JUNE 2019**

11	Damage to aircraft	<ul style="list-style-type: none"> - The RDA incorporates Air Danger Area designated EGD 133 & 133A with an ADH at 1200ft (amsl), increasing to 2400ft (amsl - EGD 133 only). - Quadrant Elevation is limited to 150 mils - Air sentries (Range Officers) appointed when deemed necessary and must be alert to unauthorised air traffic during live firing. - Firearms are to be in the shoulder levelled at the target prior to be made ready 	2 x 1 Low		
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Review Date:	23 November 2020	Review Date:	
Name:	R Wells	Name:	
Rank/Grade:	Head of Range Services	Rank/Grade:	
Signature:		Signature:	