

SGC RISK REGISTER

03.02.2022

Area	Phase	Risk Element	Event	Impact	Unmitigated		Risk	Comment	What	Action	Who	When						
					Probability	Score												
A. Flying Operations																		
1	AUTHORISATION/ SUPERVISION	Inadequate supervision of low-time pilots - Various currency, recency, safety margins, Inadequate supervision of TMG pilots/operations	Various	3	3	9	Yellow	Adequate controls in place with new procedures. Current TMG ops are somewhat unsupervised. Mix of experience between pilots.	Monitor effectiveness and report. Duty Instructor to exercise authority over TMG/SEP operations. Powered aircraft sign-out sheet to be in caravan during normal operating hours.	CFI		mid-23						
		Promulgation of operational and safety information	Various	2	4	8	Yellow	How do we communicate key info and check that our members have read and understood (closed feedback loop)	Devise a Membership Agreement to be part of membership renewal process. Members are "opted-in" to the agreement on renewal	MP to develop draft		End 1Q 23						
2 PREPARATION FOR FLIGHT																		
1	Mis-rigging - club glider	LoC	3	2	6	Yellow	Lower risk for hangared gliders though K6 and Libelle club syndicates are an issue (low experience pilots). Following rigging, an independent control check and DI book to be signed by Qualified pilot. Hotelier connection training required along with any other type-specific issues. Pilots to be able to rig and de-rig the gliders they fly.	Update airfield manual. Develop and implement a DI training programme Consider a Safety meeting for all pilots prior to new season	PD Tech team & CFI team PD & CFI & Tech teams CFI & Tech teams		End 1Q 23 develop end 1Q 23, implement by 2Q 23. Develop and implement by end 1Q 22 Develop and implement by end 1Q 23							
								2	Mis-rigging - member & visitor	LoC	3	2	6	Yellow	As above	As above		
								3	Inadequate DI	LoC	3	2	6	Yellow	Bronze pilots plus those signed off in logbooks for DI. A sense this is somewhat uncontrolled Adequate controls via DI and ABCDE checks	Develop and implement a DI training programme	Tech team & CFI team	develop end 22, implement by 1Q 23.
								4	Loose articles (batteries, weights, cushions)	LoC	3	2	6	Yellow				
3 LAUNCHING																		
3A	WINCH LAUNCH	1	Canopy or airbrakes opening during launch	LoC	3	3	9	Yellow	Person hooking-on to visually and verbally check with pilot. And confirm weak link type with pilot.	Update airfield manual appropriately.	PD	End 1Q 23						
		1	Wing drop (overall)	LoC	3	4	12	Orange	Continual instances with wing drops and no release.	Remind members of Safe Winch Launching guidelines Subject of first monthly safety theme (3 R's)	PD	Done						
		a.	Initial stage - wings not balanced		1	5	5	Green	Wing runner role is to inform pilot if large up/down force on wing. Once cable is connected, wing runner is one of three key people (pilot, wing runner, signaller) responsible for launch.	Wing runner role and training to be reviewed as part of Launch Point Control procedures. Emphasise responsibility and authority of role	CFI Team	end 1Q 23						
		b.	Initial stage - lack of recognition wing is going down		1	3	3	Green	Inexperience Seating position - level wings	Static demonstration of lowered wing. Student to do/experience an actual (safe) release on ground run. Instructors to ensure low-time pilots are properly seated (see below)	CFI Team to roll out CFI Team to roll out	end 1Q 23 end 1Q 23						
		c.	Intermediate stage - lack of release		3	4	12	Orange	Reluctance to release - perceived peer pressure Physically unable to release promptly during initial acceleration due to... unable to maintain grip on release due to incorrect seating position unable to maintain grip on release due to inappropriate cushioning release obstructed (especially S-H gliders) no secure grip on release (gloves, etc)	Consider webcam at launchpoint to show instances where wing was going down Behavioural issue - address via safety theme. Briefing cards, videos, Take time to set up and test seating position using EA cushioning Take time to set up and test seating position using EA cushioning Extension cord on release?!! Extension cord on release?!!	GM to consider before action CFI Team	end 1 Q 23						
		d.	Final stage - wing on the ground		3	4	12	Orange	Grass length is a major factor in initiating ground loop/roll	Prioritise grass cutting in launching areas. Duty Instructor to position launch point with regard to grass length.	CFI Team and Grass Cutting team	end 1Q 23						
2	Incorrect recovery from launch failure	LoC	3	1	3	3	Green	No significant issues seen with launch failures. Well-drilled training and review. Positive reinforcement. Check and test eventualities!										

	3	Incorrect launch point procedures	LoC & Collision	3	1	3	Multiple issues; Poor communications	Consider separate ground and air frequencies to avoid stepping on comms Review radio-controlled light system directly from Ground supervisor to winch cabin Launch Point Procedures to be finalised and promulgated	CFI team & Winchmaster & Tugmaster	end 2Q 23
							Lack of awareness wrong cable wrong strop handling cables during launch "all clear" given incorrectly (esp. when tug into S field)			
	4	Impact with person or object during launch	Collision	2	1	2	Busy, distracted people (phones, etc) around launching gliders, especially at the winch launchpoint.	Introduce ABCDE check in airfield manual Consider introduction of a sterile or social zone around launchpoint caravan as part of Ground Supervisor's remit Use white boards from WoA caravan to indicate launchpoint layout and set-up	PD Gen. Mgr. Gen. Mgr.	end 1Q 23 end 1Q 23 end 1Q 23
	5	Incorrect winch operation	LoC	1	2	2	Over-acceleration(?). Only a potential issue with light gliders (K6, K8, etc.)	Review of documentation (procedures,etc.) and winch driver training records.	Winchmaster	1Q 23
	6	Mechanical failure of winch	LoC (winch)	2	1	2	Engine or runing gear failure. Guillotine failure.	As above. Plus review of Lone Worker Policy. Follow correct maintenance and operational procedures.	Winchmaster and Gen. Mgr.	mid 23
	7	Cable retrieve	Injury	1	1	1	Damage injury from cables is minimal as tow-out vehicle now stops well short of LP. Airside vehicles excluding mules, can only be driven by driving licence holders. Mules cannot be driven by unlicensed drivers in public areas.	Update Airfield Manual	P. Dolan	end 1Q 23
	8	Dropped cables/strops	Injury	2	2	4	Occasionally strop has dropped on buildings and near people	Pilots to correctly offset drift	CFI Team	TBA
3B AEROTOWING	1	Wing Drop	LoC & collision	2	3	6	Ground loop with limited damage in most instances unless collision with obstructions, cars, parked gliders. Can be an issue if launch point control is not good.	Incorporate into new launch point procedures	CFI Team	TBA
	2	Extended ground run	Collision	3	2	6	Collision with boundary, etc.	Covered in Eventualities. Runway markers. Abort point		
	3	PIO/tug upset	LoC & collision	3	4	12	Variety of causes as per Safe Aerotowing guidance. 5 incidents in last 6 months	Refresher on Safe Aerotowing. Launchpoint supervision of pilots	CFI Team & Tugmaster	End 1Q 23
	4	Mechanical failure of tug	Collision (ground)	2	3	6	Abort into S Field. S Field can be busy (wash point on NE side opposite hangars). S Field not visible from W end and vice On airfield incident Off airfield incident. Locating scene of incident?	Signalling/warning system for launches over S Field?? Move wash point? Excess vegetation removed Firefighting capability/training. Appropriate fire extinguishers? Emergency response plan and training. Annual exercise? PLB or ELT or??? For tug aircraft/pilot?	GM GM and Tugmaster	Excess vegetation removed. TBA Mid 23 Mid 23
	5	Tow rope issues	Injury	4	3	12	Crossing airfield boundaries with trailing tow rope. Approach should be 200' over boundary Footpaths near threshold of S Field landing area.	Tugmaster to advise and action if required Footpath under construction	Tugmaster	end Feb 23 end Feb 23
	6	Inadequate speed on tow	LoC	3	3	9	high performance heavy (ballasted) gliders need e.g. >65kts	take-off briefing/radio call	Tugmaster	Mid 23
4 FLYING	1	Mid-air collision	Collision/L oC	3	4	12		Pre-season theme	CFI Team	TBA
	a.	Poor lookout/scan cycle		3	3	9	Poor look-out. Instructors to block stick!	Refresher training for next season. Use FLARM as a supplement if equipped. Know how to use and ensure switched on as part of pre-take off checks. Battery issues?		
	b.	Top of Launch		3	3	9	Intersecting flight paths with circuit traffic at HKP. Too high to enter circuit	Addressed in Portmoak Operations Manual		

5 LANDING	c. Ridge Flying		3	3	9	Yellow	Poor ridge discipline by members and visitors	Raise FlySafe entry. Instructors have to raise level of enforcement Flashers on club gliders Ground based instruction including simulator? Include in daily briefing	TO?	TBA
	d. Thermalling		3	3	9	Yellow	Poor thermal etiquette (incorrect joining techniques) and thermalling skills (shallow bank, not centred leading to intersecting circlces) Pilots used to ridge flying - less experienced at thermalling and turning with 40 deg bank	Plenty of info on correct thermalling technique and etiquette. Pre-season briefing/theme? Bronze training should address "steep" turns and thermal technique. Specific flight to assess thermal location, entry, climb, and leaving?	CFI Team	TBA
	e. Circuit		3	3	9	Yellow	Mirror circuits present risks Curving approaches Tug-glider collision	Flexible circuits a part of morning briefing. Lookout on base leg. Radio. SW run landings across N field present additional risk. Non-standard - discourage - how? Emphasise radio procedure as aid to situational awareness. Noted that radios in club a/c not great.	CFI Team	TBA
	f. Collision with para/hang gliders	Collision	3	2	6	Yellow	Unusual flight characteristics/behaviours	Stewart Reid to brief		
	g. Collision with GA traffic	Collision	3	2	6	Yellow	Lack of awareness of operations at Portmoak Edinburgh/Scot info/Cntrl awareness of gliding activity Leuchars? Visual and electronic conspicuity of airfield.. ADS-B beacon trial?? Light beacon / white lining airfield PilotAware? Formal identification of intense gliding areas Member awareness of local GA activity	Visit and briefing? Claification of NATS understanding of FL100 Notam Scottish Info to broadcast messages re glider activity Review research systems/options CAA/BGA/SkyDemon Local airfield frequencies programmed in gliders	CFI to action Sant? CFI to action Sant? CFI to action Sant? Dominic N. TBA CFI Team/ Ken Hen	
	h. Collisions with UAV traffic	Collision	2	2	4	Green	Potentially growing issue	Monitor via BGA/CAA	CFI Team	
	2 Fire in electrically powered glider									
	a. airborne	Injury/ damage to a/c	3	2	6	Yellow	BRS vs personal parachutes!	Address issues with owners	Safety Officer	
	b. on ground	Property damage	2	2	4	Green	Special rescue equipment required to deal with batteries and BRS. Airfield grass fires	Low risk at Portmoak? Prioritise grass cutting around launch point	GM GM	
	1 Undershoot	Injury/ damage to a/c	3	3	9	Yellow	Poor circuit planning and/or mis-judged approach especially with low experience pilots Strong wind/mis-judged approach Issue with airbrakes (frozen or otherwise inoperable)	Appropriate supervision and monitoring of low-time pilots. Check flights required following any shallowing approaches by junior pilots. Briefing essential for all pilots particularly visitors. Appropriate supervision of pilots with little high wind experience. Offer high wind check flight. Check brakes before entering circuit on days when icing may be an issue? Practice side-slip approaches and landings?	CFI Team	TBA
2 Ballooned landings	Injury/ damage to a/c	2	4	8	Yellow		Simulator training to be scheduled with instructors. Briefing notes to be compiled	CFI Team	TBA	
3 Field landing accidents	Injury/ damage to a/c	3	4	12	Orange	Statistically high risk. Two accidents in 2022 with SGC gliders. Is the initial training in field landings adequate? Formal sign-off? Use of simulator and Dimona for initial and refresher training? Spot landings, precision landings as part of Bronze & CCE. Gerry M talk on practicing at Portmoak. Consider practice landouts at Balado, etc.	CFI team to develop recommendations on initial training and subsequent refreshing of pilots in field landings.	CFI Team	TBA	

						More experienced pilots? Club vs private gliders? Bi-annual / recency checks do not address field landing.					
6	GROUND OPERATIONS										
	1	Collision with people when manoeuvring gliders around launch point	Injury/damage	1	2	2	Green	Busy launchpoint, tends to be dis-organised and uncontrolled with many distracted people.	Perennial issue. Launch point layout to be addressed in new procedures	CFI Team	TBA
	2	Powered a/c taxiing past launch point hits parked a/c or persons	Injury/damage	3	2	6	Yellow		Layout and operation of launchpoint needs to allow for tugs and motor gliders taxiing with adequate clearance and safety. Gliders need to be parked up correctly. Consider wing-tip walkers to escort powered a/c through launch point Pilots of powered aircraft should know how to shut-down engine immediately if some one appears to be walking towards the prop.	Instructor meeting. Launch point procedures.	
	3	Vehicle accidents	Injury/damage	1	2	2	Green		Mule discipline - drivers not looking back or responding to verbal instructions including STOP! Airfield damaged by aggressive driving on soft surface Mule visibility - consider hi-vis markings etc.		
7	LACK OF FITNESS TO FLY										
		Physical and mental fitness - chronic or acute	LoC	2	2	4	Green		Difficult issue to address at an individual level. Current issue Driving licence is a threshold a fitness-to-fly and not an automatic "pass". Protocol for discussion / review with pilots "of concern". Not an age issue necessarily. A few individuals only. SGA/BGA guidance? Annual checks provide opportunity for review	TBA	TBA
8	MEDICAL INCIDENT										
		Full range of potential injuries/illnesses	Injury	1 - 3	2 - 4	6	Green		De-fib device is available. First aid training. Refresher FA training?		

B. Maintenance Operations

Workshop HSE practices with SGC employees* present

Welding practices	Injury & Fire
Lifting gear (cranes, hoists, winches, strops, etc.)	Injury
Grinding wheels	Injury
Rotating machinery	Injury
Diesel storage	Fire & Environm

Fire hazard

ires. Workshop control and procedures?

Tag and inspect kit

Proper PPE
Guards
Spillage and fire risk

* employees or members (no distinction in law?)

LPG filling/rotating machinery hazards