Kent County Scout Council

Safety Case

Microlight Flying at Old Hay Airfield 2025

1. Introduction

1.1 This document describes all critical aspects of Kent Scouts' Air Activities provision at Old Hay Aerodrome. It provides an introduction to the airfield, describes the uses to which the site is put, and makes a number of recommendations for longer term safety improvement. A Safety Case for the microlighting operation is included. It has been reviewed and updated in February 2025.

2. Scope

2.1 This document relates exclusively to the operation of Kent Scouts' microlight aircraft when operating from Old Hay Airfield, Paddock Wood, Kent. The procedures and process described in this document are not directly applicable to other sites at which the microlight may be used. Furthermore the document contains policies, procedures and practices designed to ensure the safety of the aircraft through all phases of flight and Scout personnel whilst visiting the airfield. It does not consider risks to third party users of the airfield.

2.2 By way of background, Kent Scouts have been flying microlight aircraft from Old Hay for in excess of 20 years and generally for more than 30years. Safety procedures in that respect are well established.

2.3 This Document provides information and definitions relating to the Safety Criticality Classification (para 6), the Probability of Occurrence Definitions (p7) and a Tolerability Matrix (p8). It is hoped that all hazards are identified (p9) and dealt with. However, as with the incidence of Covid, new potential hazards occur all the time. The increase in drone activity is a hazard that pilots must now be aware of. From time to time there will be maintenance or building activities at the airfield which will bring associated risks. This document must therefore be seen and understood as part of an ongoing process of hazard identification and introduction of mitigation measures for all leaders and responsible persons.

3 Airfield Description

3.1 Old Hay Airfield is situated to the east of Paddock Wood, adjacent to (and south of) the main railway line between Tonbridge and Ashford. Laddingford Aerodrome is in the immediate vicinity to the north; Headcorn lies to the east.

3.2 The airfield has three grass runways 10/28, 13/31 (rarely used) and 03/21. The two main runways are preferred for microlight operations because of their length, but the cross runway 13/31 may be used in an emergency but pilots need to be aware that it has not been maintained to the same standard.

3.3 Old Hay does not hold a CAA Aerodrome Licence, but this fact has no impact on Kent Scouts' microlight operation. It is marked on CAA Charts.

3.4 A single hangar is situated at the Western end of runway 10/28. This hangar houses a number of fixed wing aircraft including vintage machines. Another hangar is situated in the field immediately at the Eastern end of the runway. This also houses an number of aircraft which have access to the main runway. Other aircraft are also known to visit the airfield on occasion. The airfield is 'Strictly PPR', meaning prior permission is required for its use.

3.5 Access to the airfield should be obtained from Willow Lane (to the East). There is another private road to the North East known as Old Hay but this is for emergencies only. Access from the North East requires substantial airside driving to reach the hangar site where Microlight activities are based. Private vehicles will not generally be insured on the airfield.

3.6 The Airfield is jointly owned by a consortium. One of the owners, Mr Roger Ludgate, with whom Kent Scouts enjoy excellent relations, is the original founder and the main contact. Another Owner, Mr Dan Humphries has kindly read through this document as part of the review process.

3.7 Kent Scouts' Microlight is stored in the hangar. Microlight operations including passenger briefing and loading generally take place to the north of the main runway at the western end where there are a number of caravans.

4 Organisation

4.1 As a matter of best practice within aviation, it is considered appropriate to identify those individuals who have responsibilities and accountabilities for people and procedures on the airfield;

- Kent County Lead Volunteer

Accountable for the safety of Scout activities held within the County. Lead Volunteer authorisation is required for the acceptance of risks classified as 'tolerable with review'. Current practice is that the document is not physically signed by the Lead Volunteer but it is submitted to Kent County Scouts for checking and a copy maintained on file,

- Air Activities Team Leader

This post is responsible for the programme of air activities for the County. The role holds budgetary responsibilities, and he/she is responsible for ensuring that adequate remains available to support safe operations at Old Hay.

- Pilots

The Microlight Team includes experienced pilots with defined qualification. Microlight pilots are responsible for checking the aircraft prior to flight. The aircraft is given a full check (using a Handbook Checklist) at the beginning of the day (recorded on the daily log) then a brief check before each flight. The pilot is responsible for all aspects of safe operation of the aircraft in flight and on the ground. Pilots are responsible for ensuring that they hold and maintain appropriate pilot and RTF qualifications, and hold a current and valid medical certificate to support their licence. Pilots are also responsible for re-fuelling of the aircraft.

- Ground Crew

The Microlight Team also includes ground crew who are responsible for briefing scout visitors on Airfield and general safety, and preparing passengers for the flights. A verbal safety brief is given and there is a written pre-flight brief for the passenger to read. All those flying wear a balaclava and helmet with intercom.

- Visiting Group Leaders

Group leaders are responsible for the behaviour of all members of their Groups whilst waiting to fly, and after taking part. Group leaders are required to familiarise themselves with POR's rules pertaining to airfield access, and to ensure adequate supervision is available for the young people and adults in their charge. Leaders are provided with written briefing information including airfield safety information.

- Visiting Members, Friends / Relatives

Visiting members are responsible for following instructions given by their leaders, members of the Air Activities team(s) and pilots at Old Hay. Under 18s flying have to provide a consent form signed by a parent or guardian.

5. Safety Assurance

5.1 This document has been prepared using Safety Requirements from the aviation industry as a basis for analysing and quantifying risk. The initial Hazard Identification was performed on 15th June 2010 by Mr R Lewis – (then) District Commissioner (Tonbridge) and has been reviewed and amended.

5.2 The Hazard identification has been reviewed by:

Paul Abel – Kent Scouts Activities volunteer lead
Jim Martin – Kent Scouts Safety Committee
Tony Prentice – Chief Pilot, Kent Scouts Microlight Team
Lee Prebble – Kent Scouts Microlight Team Member
Natascha Clear – Kent Scouts Microlight Team Member
Dan Humphries – Airfield owner and pilot
Richard Hearsey – Kent Scouts Microlight Team member and pilot

The 2025 review was undertaken by RH, LP, NC and TP

It is intended that the hazard identification will be reviewed annually and amended as Appropriate.

6. Safety Criticality Classification

Classification	Catastrophic	Hazardous	Major	Minor	No Effect
Results in one or more of the following effects	Multiple Fatalities	- Large Reduction in Safety Margins - serious injury or death of a relatively small number of participants	- A significant reduction in safety margins - Significant injury to one or more participants	- Nuisance -Minor injury or illness affecting one or more participants	No impact on safety of persons

7. Probability Of Occurrence Definitions

Probability of Occurrence classification	Extremely improbable	Extremely remote	Remote	Reasonably probable	Frequent
Qualitative definition	Should virtually never occur	Unlikely to occur when considering several years of air activities, nevertheless has to be considered as being possible.	Unlikely to occur in any activity session, but may occur several times when considering multiple activities	May occur once during any activity session	May occur once or several times during any activity session
Quantitative definition	$<10^{-9}$ per person per hour	10^{-7} to 10^{-9} per person per hour	10^{-5} to 10^{-7} per person per hour	10^{-3} to 10^{-5} per person per hour	1 to 10^{-3} per person per hour

8. Tolerability Matrix

	Extremely Improbable	Extremely remote	Remote	Reasonably Probable	Frequent
Catastrophic	LV Review	Unacceptable	Unacceptable	Unacceptable	Unacceptable
Hazardous	LV Review	LV Review	Unacceptable	Unacceptable	Unacceptable
Major	Acceptable	LV Review	LV Review	LV Review	LV Review
Minor	Acceptable	Acceptable	Acceptable	Acceptable	LV Review
No Effect	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

9. Hazard Identification

Identification Number	Description
H.1	Microlight
H.1.1	Propeller
H.1.2	Airframe
H.1.3	Instrumentation
H.1.4	Pilot
H.1.5	Fuel
H.1.6	Ballistic Rocket Propelled Parachute
H.1.7	Engine
H.2	**Other Aircraft**
H.2.1	In Flight
H.2.2	On the Ground
H.3	**Vehicles / Other Airfield Users**
H.3.1	Airside Driving
H.3.2	Power Kites
H.3.3	Radio Controlled Model Aircraft
H.4	**Medical / Environmental**
H.4.1	Hypothermia
H.4.2	Sunburn
H.4.3	Lightning
H.4.4	Malnutrition/dehydration
H.4.5	Bites and stings
H.4.6	Covid 19
H.4.7	Rabbit Holes in surface
H.4.8	Ditches and dykes
H.4.9	Trees
H.5	**Accommodation**
H.5.1	Hangar
H.5.2	Caravan

10. Risk Assessment

Ref	Hazard	Incident	Causal Factors	Risk Class	Target Occurrence Rate	Achieved Occurrence Rate	Rationale/ Mitigations
R.1	H.1.1	Unexpected contact with rotating propeller	Misbehaviour of participants. Failure to hear / follow instructions	Hazardous	Extremely Remote	Extremely Remote	- Clearly audible 'clear prop' instruction before engine start. - Leaders are first aid qualified. - External communications with emergency services is available. - High visibility clothing is provided for all participants. - Provision of Briefing - use of nav lights and strobe to increase visibility of aircraft - Occurrences to date – NIL
R.2	H.1.1	Unexpected contact with rotating propeller: Propeller is stationary when engine running at idle due to idling clutch	Misbehaviour of participants. Failure to hear / follow instructions	Hazardous	Extremely Remote	Extremely Remote	- Clearly audible 'clear prop' instruction before engine start. - Leaders are first aid qualified. - External communications with emergency services is available. - High visibility clothing is provided for all participants. - Provision of Briefing - use of nav lights and strobe to increase visibility of aircraft _ ground crew to be briefed that propeller may start unexpected form stationary even though the engine is running. - Occurrences to date – NIL

Ref	Hazard	Incident	Causal Factors	Risk Class	Target Occurrence Rate	Achieved Occurrence Rate	Rationale/ Mitigations
R.3	H.1.2	Airframe (including undercarriage) failure during taxi, take-off, landing or rollout.	Equipment failure.	Major	Extremely Improbable	Extremely Improbable	- Check flight conducted before Scouting use. - The aircraft is inspected by approved inspector from BMAA annually - Pre-flight checks conducted before check flight. - Many Leaders hold first aid qualifications - Occurrences to date - One (a flat tyre)
R.4	H.1.2	Airframe failure in flight (below safe parachute operation level)	Equipment failure.	Hazardous	Extremely Remote	Extremely Remote	- Check flight conducted before Scouting use. - Airframe inspected by approved inspector from BMAA annually - Pre-flight checks conducted before check flight. - Many Leaders hold first aid qualifications - Occurrences to date – NIL
R.5	H.1.2	Airframe failure in flight (above safe parachute operation level)	Equipment failure.	Hazardous	Extremely Remote	Extremely Remote	- Check flight conducted before Scouting use. - Airframe inspected by approved inspector from BMAA annually - Pre-flight checks conducted before check flight. - Engine Failure at Take-off (EFTO) drills practiced by all pilots - Pyrotechnic parachute fitted to aircraft. - Many Leaders hold first aid qualifications. - Occurrences to date – NIL

Ref	Hazard	Incident	Causal Factors	Risk Class	Target Occurrence Rate	Achieved Occurrence Rate	Rationale/ Mitigations
R.6	H.1.3	Instrumentation / Comms Failure	Equipment failure.	Minor	Reasonably Probable	Reasonably Probable	- Flying only takes place in VMC - Non radio operation is well practised - Pre-flight checks conducted before check flight. - Pilots are familiar with locality - Occurrences to date – NIL
R.7	H.1.4	Pilot incapacitated during takeoff, landing, taxi or roll-out	Medical problem with pilot	Hazardous	Extremely Remote	Extremely Remote	- Pilots hold full medical certificates appropriate to their licence. - Many Leaders hold first aid qualifications - Occurrences to date – NIL
R.8	H.1.4	Pilot incapacitated during flight	Medical problem with pilot	Hazardous	Extremely Remote	Extremely Remote	- Pilots hold full medical certificates appropriate to their licence. - The aircraft is designed to descend at a survivable rate with no control input. - Many Leaders hold first aid qualifications - Occurrences to date – NIL
R.9	H.1.5	Fuel fire during re-fuelling	Fuel & ignition source.	Major	Reasonably Probable	Reasonably Probable	- Fire extinguishers are available. - Smoking is not permitted on site whilst the aircraft is being re-fuelled. - Only experienced handlers & pilots undertake refuelling. - Many Leaders hold first aid qualifications - Occurrences to date – NIL

Ref	Hazard	Incident	Causal Factors	Risk Class	Target Occurrence Rate	Achieved Occurrence Rate	Rationale/ Mitigations
R.10	H.1.6	Accidental Discharge of rocket on the ground	Possible damage by pilot or passenger boarding or exiting aircraft	Major	Extremely Remote	Extremely Remote	- Preflight briefing to Identify handle location - safety pin in place at all times on ground - Aircraft parked with rocket side facing away from assembly area - Occurrences to date – NIL
R.11	H.1.7	Engine failure due to single ignition failure during taxi, take-off, flight, landing or rollout. Or any other engine related failure.	Equipment failure.	Major	Extremely Improbable	Extremely Improbable	- Check flight conducted before Scouting use. - The aircraft is inspected by approved inspector from BMAA annually - Pre-flight engine checks conducted before check flight. Engine Failure at Take-off (EFTO) drills practiced by all pilots - Many Leaders hold first aid qualifications - Occurrences to date – None known
R.12	H.2.1	Airprox	Pilot or navigation error.	Minor	Reasonably Probable	Reasonably Probable	- Aircraft flies Visual Flight Rules (VFR). - UK rules of the air are published. - Pilots are licensed - CAP32 requires reporting - Safetycom radio procedures are used by home based and visiting pilots to provide situational awareness and contribute to safety. - Occurrences to date – Two (Reports No. 2018112 and 2021149 - drone)

Ref	Hazard	Incident	Causal Factors	Risk Class	Target Occurrence Rate	Achieved Occurrence Rate	Rationale/ Mitigations
R.13	H.2.1	Mid Air Collision	Pilot or navigation error.	Hazardous	Extremely Remote	Extremely Remote	- Aircraft flies VFR. - UK rules of the air are published. - Pilots are licensed - CAP32 requires reporting - Safetycom radio procedures are used by home based and visiting pilots to provide situational awareness and contribute to safety. - use of nav lights and strobe to increase visibility of aircraft - Occurrences to date – NIL
R.14	H.2.1 H.2.2	Collision during take-off or landing	Pilot or navigation error.	Hazardous	Remote	Remote	- Aircraft flies VFR. - ensure good use of radio - UK rules of the air are published. - Pilots are licensed - CAP32 requires Reporting - Safetycom radio procedures are used by home based and visiting pilots to provide situational awareness and contribute to safety. - use of nav lights and strobe to increase visibility of aircraft - Occurrences to date – NIL

Ref	Hazard	Incident	Causal Factors	Risk Class	Target Occurrence Rate	Achieved Occurrence Rate	Rationale/ Mitigations
R.15	H.2.2	Collision with other aircraft during taxi.	Pilot or navigation error.	Major	Reasonably Probable	Reasonably Probable	- Aircraft flies VFR. - ensure good use of radio - UK rules of the air are published. - Pilots are licensed - CAP32 requires reporting. - Safetycom radio procedures are used by home based and visiting pilots to provide situational awareness and contribute to safety. - use of nav lights and strobe to increase visibility of aircraft - Occurrences to date – NIL (Note one occurrence at Old Hay took place in January 2007, but this did not involve Scout activities)
R.16	H.3.1	Vehicle and Microlight Collide	Driver or Pilot Error	Major	Extremely Improbable	Extremely Improbable	- Pilots are licensed and experienced. - Airfield access is signed. Hazard warning lights / beacons are in use. - Briefing pack explains airside driving requirements. - pilots aware of location of roads - use of nav lights and strobe to increase visibility of aircraft - Occurrences to date – NIL

Ref	Hazard	Incident	Causal Factors	Risk Class	Target Occurrence Rate	Achieved Occurrence Rate	Rationale/ Mitigations
R.17	H.3.1	Vehicle and Pedestrian collide	Driver Error / Pedestrian behaviour	Major	Extremely Improbable	Extremely Improbable	- Airfield access is signed. Hazard warning lights / beacons are in use. - Briefing pack explains airside driving requirements. - Participants are supervised. - Airside driving speeds are low due to the grass surface. - Many leaders are first aid qualified. - Pedestrians required to wear hi-vis - Occurrences to date – NIL
R.18	H.3.2	Powerkite and microlight collide	Pilot / Operator error	Hazardous	Extremely Improbable	Extremely Improbable	- Powerkites use an agreed and coordinated area of the airfield - Powerkites limited flying - Ground-Ground radio communication with kite supervisors is available. - Many Leaders hold first aid qualifications - Occurrences since 2004 – NIL
R.19	H.3.2	Pedestrian or operator trauma arising from power kite use	Operator error	Major	Extremely Improbable	Remote	- Powerkites use an agreed and coordinated area of the airfield - Ground-Ground radio communication with kite supervisors is available. - Medical consent required for participants. - Many Leaders hold first aid qualifications - Occurrences to date – One. In 2010 a participant with a pre-existing injury to the collarbone caused further damage to himself whilst power kiting.

Ref	Hazard	Incident	Causal Factors	Risk Class	Target Occurrence Rate	Achieved Occurrence Rate	Rationale/ Mitigations
R.20	H.3.3	Microlight and model collide	Pilot / Operator error	Hazardous	Remote	Remote	Radio controlled flying takes place to the east and south of the airfield and occasionally within. - participants are aware of general aviation on airfield. - ensure good use of radio - RC model clubs use a Spotter. - Occurrences to date – NI
R.21	H.3.3	Pedestrian or operator trauma arising from model flying	Operator error	Major	Extremely Improbable	Remote	Radio controlled flying takes place to the east and south of the airfield and occasionally within. - participants are aware of general aviation on airfield. RC model clubs use a Spotter. - Occurrences to date – NIL
R.22	H.4.1	Participant suffers from hypothermia	Inclement Weather. Inappropriate clothing. Absence of supervision.	Major	Extremely Improbable	Extremely Improbable	- Activities only take place in good weather. - Flight suits are provided in a range of sizes, and are inspected annually. - Groups are briefed on clothing - Flights are short. - Many Leaders hold first aid qualifications - Occurrences to date – NIL
R.23	H.4.2	Participant(s) suffer from sunburn	Hot weather. Inappropriate clothing. Absence of supervision	Minor	Reasonably Probable	Remote	- Groups closely supervised - Many Leaders hold first aid qualifications - Shaded areas are available - Occurrences to date – NIL

Ref	Hazard	Incident	Causal Factors	Risk Class	Target Occurrence Rate	Achieved Occurrence Rate	Rationale/ Mitigations
R.24	H.4.3	Participant(s) struck by lightning	Inclement Weather.	Major	Extremely Improbable	Extremely Improbable	- Activities only take place in good weather. - Many Leaders hold first aid qualifications - Occurrences to date – NIL
R.25	H.4.4	Participant(s) pass out due to lack of food or water	No access to food or drink	Minor	Reasonably Probable	Probable	- Groups are advised that food and drink is not available at Old Hay. - Emergency food and drink supplies are available on site. - Many Leaders hold first aid qualifications - Occurrences to date – NIL
R.26	H.4.5	Participant(s) experience insect bites or stings which require medical treatment.	Insects or poisonous plants / animals	Major	Extremely Improbable	Extremely Improbable	- Allergies are pre-notified. - First aid facilities are available on site. - External communications are available - Many Leaders hold first aid qualifications - Occurrences to date – NIL
R.27	H.4.6	People in general	Transmission of infection through close proximity	Major	Reasonably Probable	Unknown	The risks of spreading the disease are well documented. A separate assessment has been undertaken and is appended - Occurrences to date – NIL
R.28	H.4.7	Participant(s) experience injury which requires medical treatment	Rabbit holes or ground conditions	Major	Remote	Remote	- First aid facilities are available on site. - External communications are available - Many Leaders hold first aid qualifications - Occurrences to date – NIL
R.29	H.4.8	Participant(s) experience injury which requires medical treatment	Participants entering a ditch	Major	Remote	Remote	Risk of drowning or Weils disease - Participants to Be advised risks - Occurrences to date – NIL

Ref	Hazard	Incident	Causal Factors	Risk Class	Target Occurrence Rate	Achieved Occurrence Rate	Rationale/ Mitigations
R.30	H 4.9	Participant(s) experience injury which requires medical treatment	Aircraft collision with a tree on take of or landing	Hazardous	Extremely Remote	Extremely Remote	Pilots are familiar with locality - Occurrences to date - NIL
R.31	H.4.9	Participant(s) experience injury which requires medical treatment	Wind effects due to trees	Hazardous	Extremely Remote	Extremely Remote	Pilots are familiar with locality - Observance of cross-wind Limits, particularly with Southern winds - Occurrences to date – NIL
R.32	H.4.9	Participant(s) experience injury which requires medical treatment	Injury from falling trees or branches	Major	Remote	Remote	Many older trees at and around the airfield. - participants to be made aware - general inspection of area - Occurrences to date – NIL
R.33	H.5.1	Participant(s) injured by aircraft or materials in the hangar	Unauthorised visit to hangar. Participant behaviour	Major	Extremely Improbable	Extremely Improbable	- Unsupervised hangar visits are not permitted. - Young people are supervised - Many Leaders hold first aid qualifications - Occurrences to date – NIL
R.34	H.5.2	Participant(s) injured by fire or equipment in the caravan	Fire or failure of equipment	Major	Remote	Remote	Normal caution in Use of caravan equipment. - Occurrences to date – NIL