TORQUE

Official Bulletin of the Christchurch Model Aero Club Inc.

September 2025

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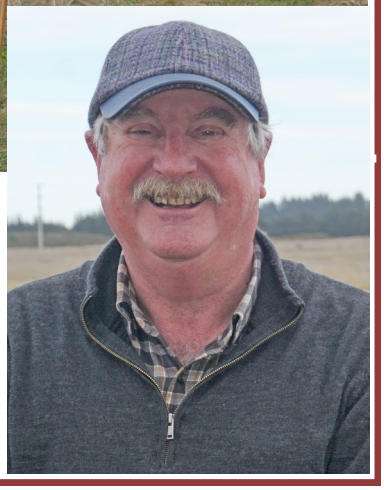
Frontispiece: Dave Griffin launches his Oz-ERes model at a recent NDC contest at the Willows

NOTE: The opinions expressed in this bulletin are not necessarily those of the CMAC committee.

Prez Sez — Well officially Spring is here and we can all look forward to some finer weather although there have been some good calm days of late.



This well contented group of rakers at the strip on Saturday saw the 24m^3 of shingle easily raked into the access track wheel ruts in just over an hour— many hands made light work. It will be interesting to see how it settles down; there may be a little more required later. Well done everybody— we will not now need to be cleaning our cars after every trip to the field.

See you at the field—happy Flying - *Grahame Hart*

Soaring News

Words and photos—Ian Harvey
Results from Allan Knox

There have been some good soaring conditions over the last month, with results being collated by Allan from the various days we flew the various NDC competitions. E_Res had a good turnout with both dedicated models like the Oz –ERes models competing against the Radians, that are at this time eligible to fly in this contest. However, Allan prevailed overall flying his Allegro. I flew on a mid-week Thursday, but crashed out after two rounds through a series of incidences. A repair in the workshop and re-setting up the model saw it fly much, much better, but my two rounds on the Saturday could not be counted as official (thus the notation in the results).

The X5J contest was a bit of a mixed bag. The timing and scoring systems are a challenge for any CD and several of us were not exactly certain how they worked. Allan did his best to try and sort out a score for each pilot that pretty well matched their flight times and landings. This contest was designed for all types of electric-launch gliders without the need for an ALES device.

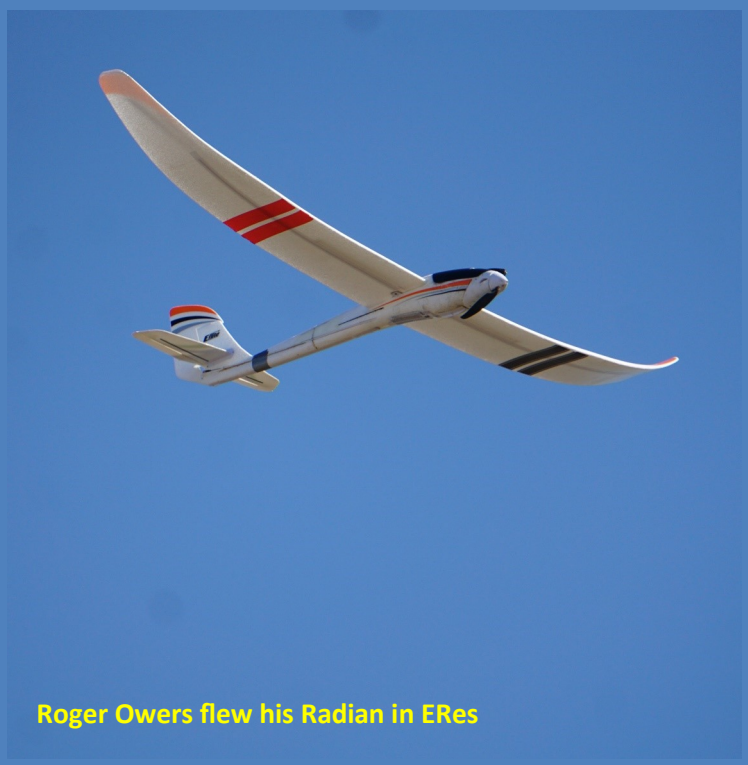
The F5K contest was a good battle between John Shaw and Peter France. John got the better of Peter when all scores totals, but Peter, using an old electric modified Blaster did well in some rounds. John's Yoda is illustrated elsewhere.

Formula 500 is John Shaw's favourite contest, but unfortunately he was not able to fit a result in this month. Launching off the winch again saw some issues with broken lines, crossed lines and difficulty having to launch into the sun. As the morning progressed, the sun moved more to the west and not so in line with the NE wind. Keith did well with his almost vintage own-designed T tail model.

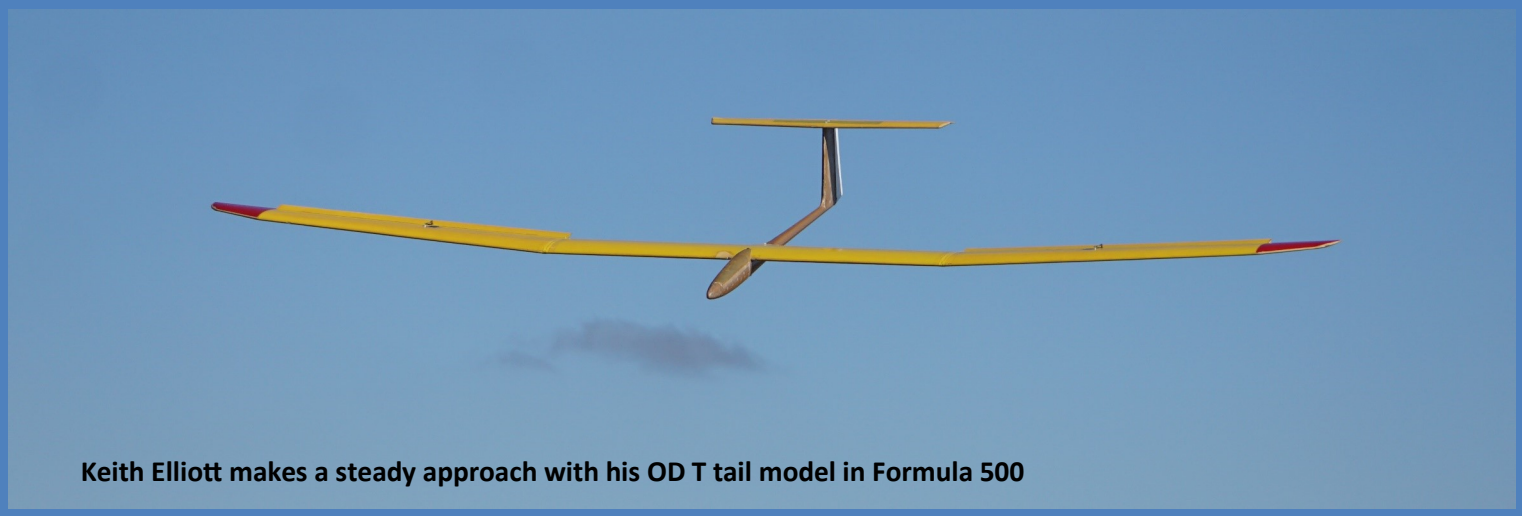
All results for the month are over the page.

Back-ground photo—Allan Knox competes for lift with the resident wild-life at the Willows with his Pike Perfect

Dave Griffin's Oz-ERes really captures the sun (and the lift)



Roger Owers flew his Radian in ERes



Keith Elliott makes a steady approach with his OD T tail model in Formula 500

Dave G. sets up the tail feathers on his Maxa

Ian H. adjusts the elevator on his Supra. This model is nearing 20 years old now, but still flies nice

Lots of Soaring Results for August

Formula 500 Class D

Date: 23 Aug		Round 1 Prescion				Round 2 Prescion				Round 1 Duration				Round 2 Duration			
Name	**TOTAL (3)**	Min	Sec	Lndg	Pt -1	Min	Sec	Lndg	Pt -2	Min	Sec	Lndg	Dt -1	Min	Sec	Lndg	Dt-2
Allan Knox	**1482**	2	2	94	484	2	3	92	477	8	1	20	499	8	1	20	499
Dave Griffin	**1478**	2	3	99	454	2	0	96	496	8	2	20	498	6	47	20	427
Keith Elliot	**1456**	1	57	85	475	2	0	80	480	8	9	20	491	8	15	20	485
Ian Harvey	**1283**	2	12	92	432	2	4	85	465	6	26	0	386	5	36	20	359

XJ5

Date August		Round 1				Round 2				Round 3				Round 4			
Pilot	Total	Min	Sec	Lndg	t	Min	Sec	Lndg	t	Min	Sec	Lndg	t	Min	Sec	Lndg	t
John Shaw	**2522**	9	42	50	632	9	41	50	631	9	41	50	631	9	38	50	628
Dave Griffin	**2490**	9	13	50	603	9	44	50	634	9	46	45	631	9	52	30	622
Keith Elliott	**2344**	8	32	50	562	8	51	45	576	8	56	45	581	9	35	50	625
Geoff Lilly	**2297**	7	19	50	489	9	39	0	579	9	33	40	613	9	36	40	616
Allan Knox	**2286**	9	28	35	603	9	14	0	554	9	13	0	553	9	11	25	576
Peter France	**2265**	9	19	0	559	9	38	45	623	8	36	0	516	9	27	0	567
Ian Harvey	**2249**	9	18	30	588	9	6	0	546	9	14	0	554	9	21	0	561
Ken McMillan	**2117**	7	32	20	472	9	31	45	616	8	42	25	547	7	57	5	482
Roger Owers	**2111**	8	30	0	510	8	34	0	514	8	20	0	500	9	47	0	587

E Res

	Date Aug	eRES		Round 1				Round 2				Round 3				Round 4			
	Pilot	model	Total	Min	Sec	Ldng	t1	M	s	Lndg	t2	M	s	Lndg	t3	M	s	Lndg	t4
1	Allan Knox	Allegro	**1231**	4	10	45	295	3	30	50	260	5	1	45	344	5	3	35	332
2	Stu Grant	Radian	**1167**	3	36	40	236	4	55	40	335	4	40	40	320	4	36	0	276
3	John Shaw	Oz eRES	**1153**	5	0	45	345	4	26	50	316	3	46	45	271	2	56	45	221
4	Keith Elliott	Radian	**1137**	4	0	0	240	4	10	40	310	5	4	45	344	3	13	50	243
5	Dave Griffin	Oz eRES	**1114**	5	0	25	325	5	0	50	350	2	18	50	188	3	31	40	251
6	Peter France	Radian	**1002**	3	14	0	194	5	2	0	298	2	2	40	222	4	18	30	288
7	Geoff Lilly	Oz eRES	**846**	3	18	0	198	3	1	35	216	3	6	15	201	3	6	45	231
8	Roger Owers	Radian	**751**	2	42	0	162	2	20	0	140	2	22	0	142	5	8	15	307
	Ian Harvey*	Oz eRES	**970**	3	32	0	212	2	35	0	155	4	59	0	299	4	54	10	304

*Unofficial

There's been a good turnout of soaring pilots this month, both at the Strip and the soaring tree

Roger Owers gets his Radian away in ERes

F5K

Aug-25

	Task A	1 min	2 min	3 min	4 min	flt score	Score
John Shaw	Time	60	120	180	134	494	471
	height	66	67	71	65		
	penalty	-4	-5	-14		-23	
Peter France	Time	60	111	105	0	276	196
	height	76	79	77	0		
	penalty	-24	-30	-26	0	-80	

	Task B Last Flght		Score
John Shaw	Time	130	104
	height	77	
	penalty	-26	
Peter France	Time	199	179
	height	74	
	penalty	-20	

	Name	Total
1	John Shaw	**1569**
2	Peter France	**1385**

Task C Last down 3x 4 min

		Flt1		Flt2		Flt3		
John Shaw	Time	240	226	173	153	125	107	486
	height	71		74		73		
	penalty	-14		-20		-18		
Peter France	Time	142	139	168	152	240	222	513
	height	65		72		73		
	penalty	-3		-16		-18		

Task E Poker

		Flt1	Flt2	Flt3	
John Shaw	Time	240	158	158	508
	height	71	72	73	
	penalty	-14	-16	-18	
Peter France	Time	240	154	191	497
	height	80	78	78	
	penalty	-32	-28	-28	

I'm sure Allan can figure all this out for the NDC results!!!

Yoda at rest—These little F5K soarers really fly well.

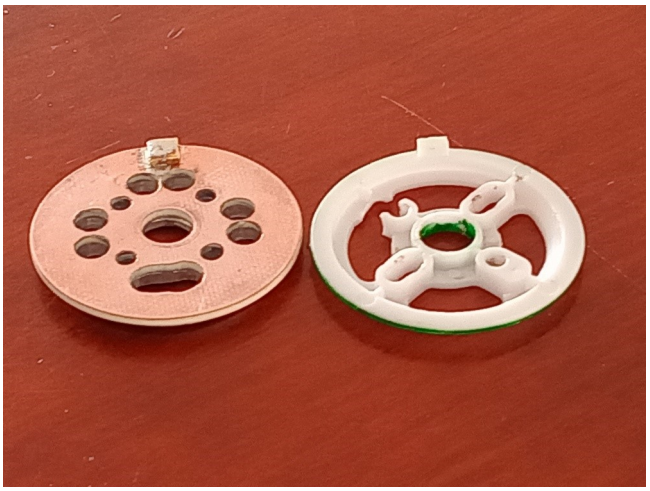
John Shaw gets Yoda away for another of the many tasks required in the NDC F5K event

The Cardboard Engineer

John Dew

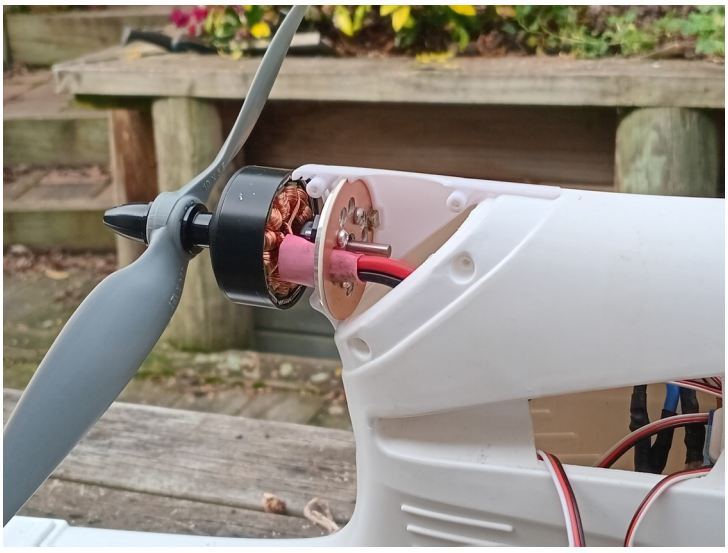
Thank you for your patience. Last month I left you hanging over a cliff, riven by uncertainty - how could a damaged motor mount possibly be replicated with real life materials? Now, please read on.

You will probably be familiar with the printed circuit boards that are found inside today's electronic gizmos. If you were to examine one, you would find a host of tiny components soldered onto a thin base board. Unless you are an electronics engineer, you may not be so familiar with the starting point of the bare circuit board, which is a thin sheet of either phenolic resin (for cheaper products) or fibreglass for more demanding applications. A layer of copper foil is bonded onto one or both sides. It just so happens that this blank fibreglass circuit board makes an excellent building material. It is normally 1.6mm thick, seriously tough, and can be sawn, drilled, filed, machined, glued and painted. The copper layer is usually irrelevant, or it can be etched away with ferric chloride. But in my case it was exactly what I needed.



I turned a 42mm disc from blank circuit board, and a smaller disc from 2mm aluminium. After bonding them together, I drilled the motor mounting holes and other openings. You might possibly recall that the biggest problem was to create a small key on the periphery of the disc. But now it was a doddle to make a brass key, about 4mm square, and solder it onto the copper foil. I don't know what glue is used to bond the foil to the fibreglass, but that key is there for keeps.

The best part of the job came in fitting the new mount into the nacelle housing. It seated with a soft, satisfying "click". The plane has now been back in the air at full power with no sign of problems.



The Ranger's heavy landing had damaged the motor mount, and also deformed the 2.5mm sheet aluminium undercarriage. This bit should be easy, I thought, but after removing the u/c and studying it, the job became a lot less easy. The right hand wheel had contacted terra firma hard enough to bend the leg upwards. No problem. But there was a catch. The leg was also twisted.

This latter came about because the Ranger's wheels are mounted way too far aft. Since it is a high-level pusher, early takeoff attempts just resulted in nose overs. My fix was to add plates to the u/c to bring the wheels forward by 50mm. By the law of unintended consequences, this also meant that in a heavy landing the sideways force on a wheel could twist that leg. Exactly.

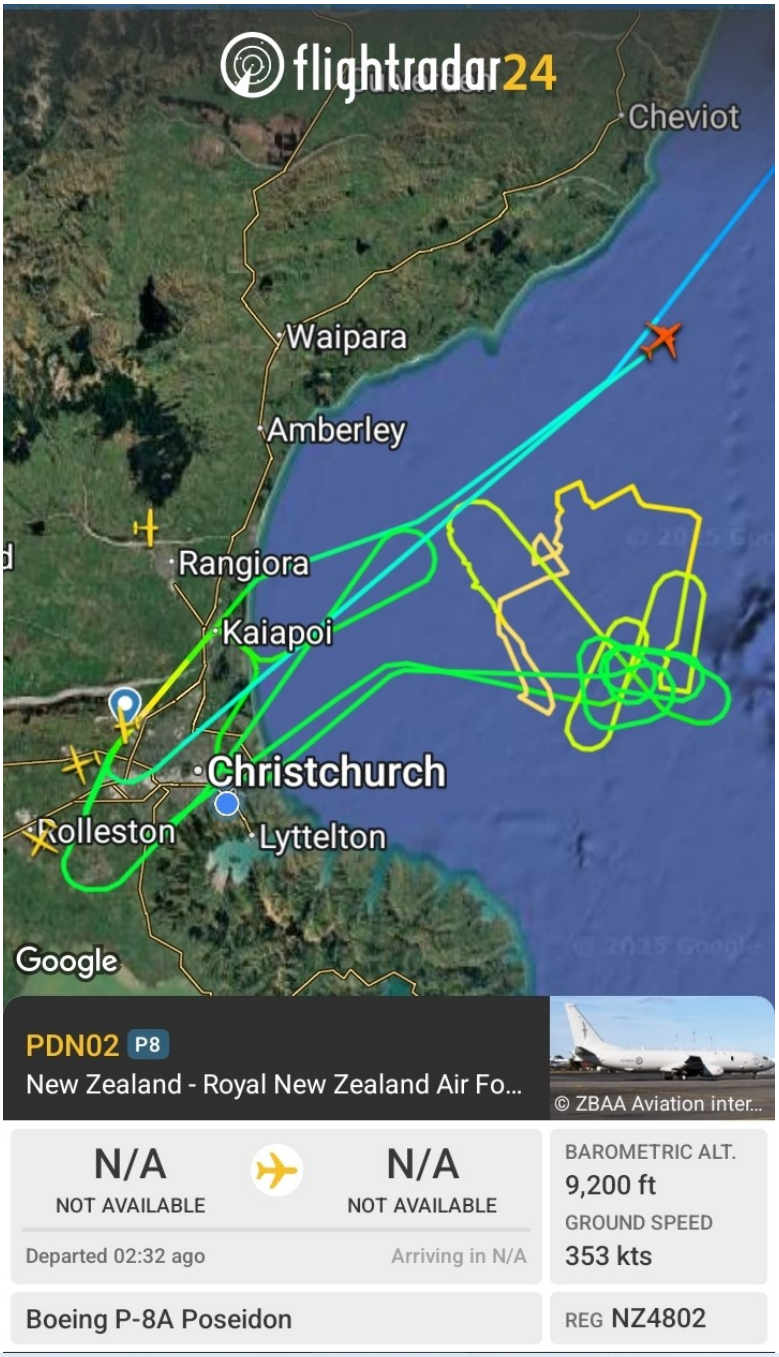
For some reason, the approach to straightening the leg totally fazed me. After much mulling, I rang a friend and described the problem. We chatted for a bit, and then as soon as I put the phone down, I realized very clearly that the problem was in fact two separate problems. So, I first clamped pieces of wood onto the leg and rotated them forcefully to remove the twist. Then I used a rubber hammer to straighten the bend. Piece of cake.

Some while later I was talking to my daughter, and I observed that to teach something, you first have to understand it. But conversely, in order to understand something, it sometimes helps to explain it to somebody else. "Oh yes," she said, "Douglas says they often do that at Tait. It's called 'talking to the cardboard engineer.'" Folk wisdom, apparently, and it works.

A Wombling RNZAF Poseidon

We live on the lower slopes of the Cashmere hills, and while we can see planes coming and going at the airport, it is not often that one passes overhead. So my curiosity was piqued recently when I heard a jet somewhere above. On checking FlightRadar24 I discovered that it was one of the RNZAF's new P-8A Poseidon aircraft - basically a beefed-up Boeing 737 equipped with a shed load of avionics. It had come from the North Island and had made a couple of circuits around Christchurch. I checked a little while later to see if it had headed off north again, but no, it had been wombling around Pegasus Bay in what mathematicians would call a drunken walk. I assume that this was some sort of simulated search mission. Eventually it returned to beat up the airport (well, at 500 feet) and then set a course for home. If you are forced to earn a living by flying a 737, some mornings might be quite fun.

John Dew



Free Flight Report *from Lynn Rodway*

Some not so bad weather enabled the FF community to get a bit of NDC activity completed. FF is very much determined by wind so we were lucky to catch a couple of suitable days.

CLG

Allan 60, 60, 25, 60, 29, 30 = 264
Lynn 32, 41, 60, 36, 38, 30 = 237
John 21, 18, 19, 31, 25, 19 = 133

HLG

Allan 37, 24, 20, 35, 19, 15 = 150

Kennedy Precision

Geoff 79, 110, 62 = 251
John 74, 79, 82 = 235
Lynn 41, 0, 73 = 114

Open Power

Lynn 97, 114, 144 = 355

Club RC Tomboy

This was a carry-over from the previous month and competitor numbers were down. A cool westerly breeze shifted to the south bringing some lift which Geoff manged to catch under some black clouds. Stu was having some trimming problems with his first flight and decided to call it quits. John had engine problems.

Geoff 554, 676, 806* = 2036
Lynn 541*, 503, 650 = 1694
John 391* = 391
Stu 272 = 272

20 points awarded as a bonus for a spot landing indicated by *

Cheers; Lynn

OK, my dear, last night you did the dishes, and today, you brought in and folded the washing. So, what flying event is on this coming weekend?

Above and right are photos of Geoff Pullen's Midwest 65 inch wing span Super Stearman (scratch built from kit)

One day he reckons he will get the courage to fly it.

Geoff also sent the above cartoon, the caption of which I have modified slightly to reflect our members' oft time predicament. Ed.

Powered flight Sunday mornings out at the strip have been well attended with a good variety of models being flown, especially when a BBQ is on.. Photo by Anne Leitch via Simon Rees

NDC Contests for September 2025

Sep/25	147	VINT	FF Small Nostalgia/Vintage Power Duration
Sep/25	148	VINT	FF Classic Power Duration
Sep/25	149	VINT	RC Vintage 1/2A Texaco
Sep/25	150	VINT	RC Vintage A Texaco
Sep/25	151	VINT	RC Sport Cabin IC Texaco
Sep/25	152	VINT	RC Sport Cabin E Texaco
Sep/25	253	FF	FAI F1B Rubber
Sep/25	254	FF	FAI F1A Glider
Sep/25	255	FF	FAI F1D Indoor Rubber
Sep/25	256	FF	Indoor Hand Launch Glider
Sep/25	430	SOAR	ALES 200 Class M (Scoring per 3.13.7)
Sep/25	431	SOAR	ALES Radian Class P
Sep/25	432	SOAR	Thermal J (2,4,6,8,10)
Sep/25	515	PYLON	Q500 Sport
Sep-25	516	PYLON	FAI F3R

Editorial:

I offered recently to have a go at up-dating the CMAC Operating Procedures, and discovered that there were some anomalies from the CAA rules, Model Flying NZ general contest rules and the Soaring SIG rules and guidelines in relation to how and where one is permitted to fly a model aircraft. So a final draft will not be made until we get a reply and possible ruling from the MFNZ Prime Person – Behram Bajan. Problems occur when powered model aircraft are advised to fly in a prerequisite area of the flying site and in an agreed pattern, whereas, gliders need to utilise as much of the flying site as possible to search-out and fly in areas of lifting air – ie thermals. CAA rules state that one can fly anywhere so long as it is not in a controlled zone (but OK with clearance from authorities or in a shielded situation), not above 400ft and not above people (unless one has their permission). Of course, one cannot fly from private properties unless one has the permission of the owner. Model flying permanent danger areas (DAs – as we have at the CMAC site at the Willows) have been designated by CAA in certain locations and NOTAMs (notices to airmen) can be obtained for flying models above 400ft at published times and dates in any other suitable locations.

A shout –out to Ken McMillan, who spent a recent Saturday morning retrieving winch-lines—Thanks mate!