POOLEY'S INTERNATIONAL DAWN TO DUSK COMPETITION 2023

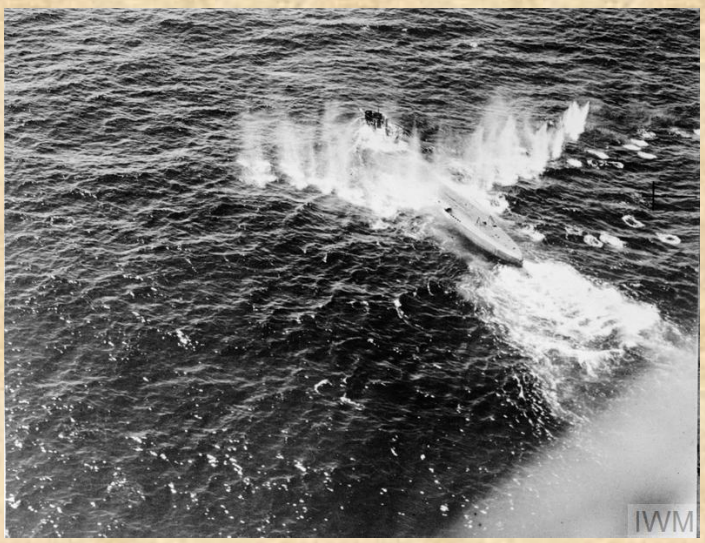
SETTING THE SCENE

Imagine yourself as the pilot of a Shorts Sunderland patrol aircraft back in 1944. You took off 13 hours ago at first light from the RAF Flying Boat station at Castle Archdale on Lower Lough Erne in Northern Ireland. Your mission today, along with your crew of 7, was to meet an Atlantic convoy and escort them through U-Boat infested waters towards the UK. The Battle of the Atlantic never stops.

SHORTS SUNDERLAND

(Courtesy of Imperial War Museum)

The winter weather on takeoff was extremely poor with low cloud, drizzle, coastal mist, and strong winds, but using all your training and the skills of your crew you located the convoy and managed to spot a lurking U-Boat nearby which you were able to attack with depth charges. You can't say if it was sunk but it did slip below the waves and no ships reported any torpedo attacks or further sightings of the 'Wolf' whilst under your escort.



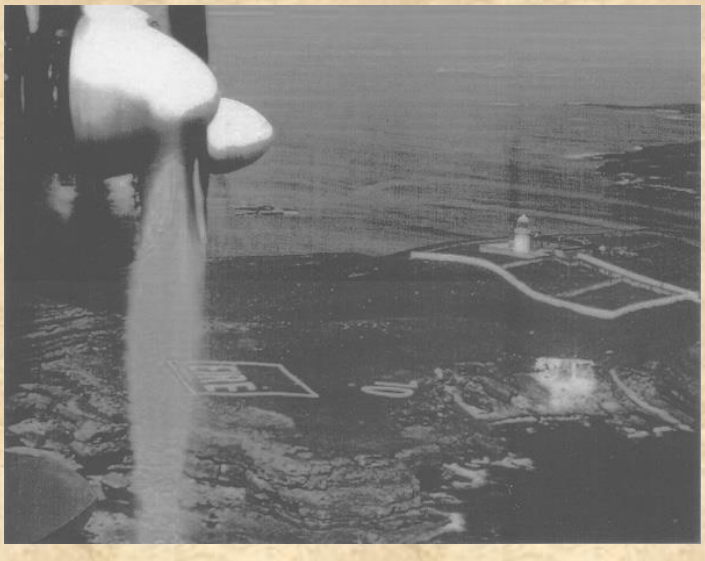
SUNDERLAND ATTACK ON A U-BOAT

(Courtesy of Imperial War Museum)

It's been a long tiring day and you're now heading back at low level above the malevolent Atlantic Ocean towards Ireland to the East, through poor visibility and heavy showers with the short daylight hours almost coming to an end. Your crew are starting to relax as the combat zone is now far behind you and you've all enjoyed a mug of hot tea from the galley made by one of the gunners. A quick transit of the 'Donegal Corridor', an agreed route to the inland seaplane bases located in County Fermanagh along the River Erne between Belleek in Northern Ireland and Ballyshannon over the neutral airspace of the Irish Free State, and you'll soon be splashing down on the relatively safe waters of Lower Lough Erne and relishing the chance of a beer in the Sergeant's Mess.

The Navigator is giving you updated position and steering information and up ahead through the drizzle you can make out the indistinct shape of a promontory jutting out into the sea. It's hard to make it out clearly but you know that Kildoney Point marks the entrance to the low-lying land between the coast and your base. Keep it to your left and all is well.

As you come abeam the landfall, something doesn't look quite right. There's a large white lighthouse for starters, so it can't be Kildoney !! Then you notice the large whitewashed stones which spell 'EIRE' along with the number '70'. You quickly pass this information to the Navigator and he looks down at his chart and informs you that you're actually over St John's Point, some 20 miles to the Northwest of where you thought you were !!



THROUGH THE MURK, YOU SEE A SIGN – 'EIRE 70'

(Courtesy of Imperial War Museum)

With invisible granite mountains not much further along your current misguided track, the Navigator screams a course correction at you and you turn on to an immediate heading of 105 degrees, back towards Kildoney. A cold sweat appears on your brow as you heave the large Sunderland around in as tight a turn as you dare at only 400' above sea level and just below the cloud base. Back on course and now going in the right direction, you think about your fellow Sunderland crew in aircraft DW110 which was also trying to get back to Lough Erne only a few short months ago in similar conditions. Alas, for the 7 crew members and 6 passengers on board that flight, there was no close shave and they were all killed when the aircraft flew into high ground in the Blue Stack Mountains of

Donegal, only about 15 miles beyond St John's Point. Your touchdown on Lower Lough Erne several minutes later may not have been your smoothest landing ever, but you have all lived to fight another day. Lest we forget.

So, what was that mysterious 'EIRE' marker and how did it help you fix your position ? We're going to find out on this Dawn to Dusk mission.

THE HISTORICAL BACKGROUND

THE IRISH FREE STATE AND THE EMERGENCY

During World War 2, or 'The Emergency' as it was called in the Irish Free State (also known by its Gaelic name of Eire, and now forming the modern-day Republic of Ireland), the Irish nation elected to remain neutral under the 1907 Hague Convention. It could not however escape the fact that geographically it was in a strategic position for operations by shipping and aircraft operated by the Germans and the Allies over the North Atlantic.

At the outbreak of war, Ireland set up a network of Coast Watching Service Look Out Posts (LOP) around its coastline from County Louth in the Northeast around to County Donegal in the Northwest. These 83 LOPs were placed at 15 to 20 mile intervals in natural vantage points and were primarily to guard against the invasion of Ireland by any of the World War 2 belligerents. They were manned by military personnel from the Coast Watching staff, usually locals who were ex-soldiers or personnel with maritime backgrounds and an expert knowledge of the local area and geography. The posts were manned by a Corporal who was in charge of between 7 and 10 'volunteers', who between them continuously observed shipping and aircraft activity, logging their details and passing their information to the Irish military Defence and Intelligence authorities in Dublin.

For the first 3 years of the war most locations only had a small standard design prefabricated concrete building to accommodate the Watch men, with room for a small fireplace, rudimentary cooking facilities, and very occasionally a small outbuilding providing sleeping quarters in more remote locations. The standard design also had 6 draughty windows facing out over the Ocean to allow observation of maritime and airborne activities. Other sites used existing structures, such as Napoleonic era Martello Towers, historic look out posts from the times when Ireland was part of the British Empire and an invasion from France by the 'Little Corporal' was expected, but now these buildings had a new purpose.

NEWLY CONSTRUCTED COAST WATCHING LOOK OUT POINT – MARCH 1940

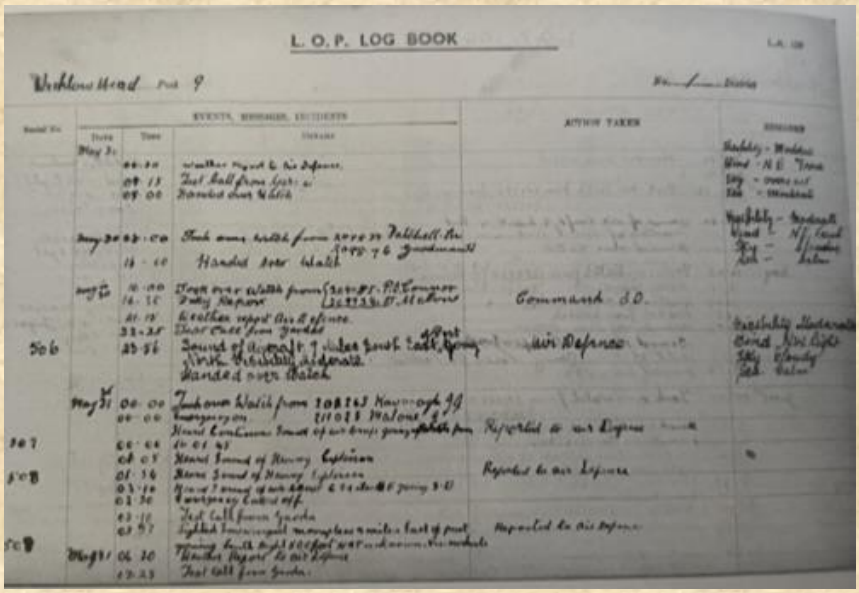
AUGHRIS HEAD LOP #67, COUNTY SLIGO

(*Courtesy of National Archives of Ireland)*

COAST WATCHING ON DUTY

CLOGHER HEAD LOP #3, COUNTY LOUGH

(*Courtesy of National Archives of Ireland)*


L. O. P. LOG BOOK

Wicklow Head No. 9

COAST WATCHING LOGBOOK ENTRIES – MAY 1941

WICKLOW HEAD LOP #9, COUNTY WICKLOW

(*Courtesy of National Archives of Ireland)*

Many Allied and German pilots of course flew over the neutral airspace above Ireland, either because they were lost, or didn't really think about the neutrality of Ireland, or were trying to get their battle damaged, unserviceable, or fuel critical aircraft to a place of safety. The Government of the Irish Free State were not happy with the high rate of incursions, suspecting that not all were innocent flights and that their country was being observed and photographed for a possible invasion, most likely by Germany, although the Allies were also not beyond suspicion of taking Ireland strategically if the War demanded it. Under the leadership of the Irish Free State Government, it was decreed that any Allied aircraft landing in Ireland would be impounded and the crew interned for the duration of the war. With the entry of the USA in to the War in late 1941, there was a particular unhappiness in some American quarters with this policy as many of their pilots were inexperienced and used Ireland as a place of safety to land, especially in bad weather when they had become 'uncertain of their position', perhaps after a long Transatlantic crossing with no high technology navigational aids available. The US Ambassador in Dublin, David Gray, also argued that as supplies of goods to Ireland were primarily coming in from the US and 'protected by air patrols from United Nations' then there should be no internments or seizures. Diplomatically, the arguments went back and forth, finally compromising with a concession that training flights would not be subject to such actions. For combat crews, the status quo remained, although US crews were instructed to insist that if force landing in Ireland then they should always state to the authorities that they were on a training flight.

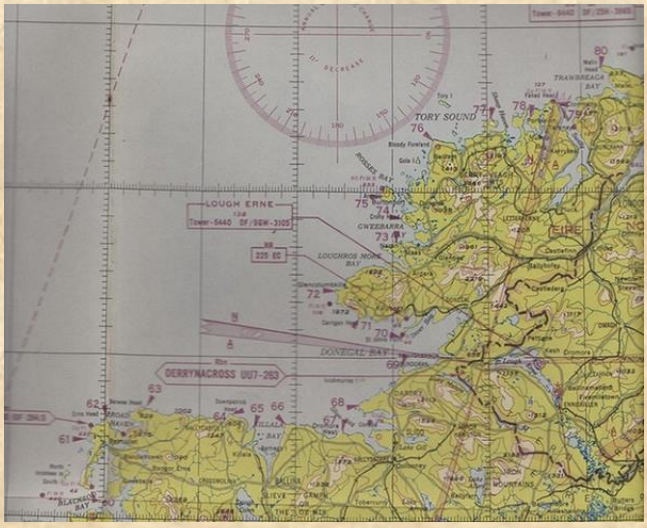
The number of flights observed by the Coast Watching continued to rise as the war progressed, particularly when large numbers of aircraft were being ferried across the Atlantic as missions ramped up by taking the War to German held territory on the European mainland, mainly by heavy bombers, and increasing the need for these aircraft to be built and ferried to operational units in the UK and beyond. In the year from Spring 1943 to Spring 1944, over 21,000 aircraft were reported near or over the Irish Free State by the LOPs around the coast. The number of flights actually crossing Irish

neutral territory also rose to 1600 in the same year, a 100% increase from the previous year. Approximately half of the 21,000 observed aircraft were positively identified and 99% of these were Allied aircraft, evenly divided between the UK and the US armed forces. Over the year, there were 40 forced landings by 'belligerent' aircraft in neutral Irish territory. In response to this increase, the Irish Defence Forces took one simple step and under the orders of General McKenna, Head of Irish Military Intelligence, construction started early in the Summer of 1943 to place large visual 'EIRE' marker signs prominently at or close to each LOP. General McKenna's hope was that the markers would 'reduce the number of aircraft landing because their crews had lost their bearings'. The marker signs policy was not formally recorded in any Irish Free State Government document but the USA claimed that their pressure exerted through diplomatic channels in Dublin was the real reason why the policy was introduced.

The markers were cheap and quick to construct, using up to 150 tons of large stones per site, which were then whitewashed. No specific order was given to the Coast Watching observers who would build the markers, and so all manner of designs appeared, having received no guidance on shape, size, or orientation. Some just used rocks and stones that were lying around, others raided local farmers dry stane walls, and others had stones brought in from quarries. Most of the markers were about 6' (2M) high and 12' (4M) long.

At the request of the US Air Force through the Dublin Ambassador, from June 1943 each EIRE marker was soon given a further addition of a marker number, which related to the nearby or adjacent LOP number, converting the markers from simple aerial markers into aerial navigation aids. Malin Head (#80) was one of the first to be given the order and they were instructed to place the whitewashed number 80 at a distance of 30' (10M) from the top centre of the 'EIRE' marker and that the numbers should be between 15' (5M) and 20' high (6M) and 2' (0.75M) wide.

At the end of June 1943, the US Air Force commander in Northern Ireland, General Hill, arranged for himself and General McKenna to fly in a US Air Force Boeing B17 Flying Fortress around the coast of the Irish Free State to inspect all the 'EIRE' markers. General Hill noted the locations and numbering systems and the US forces soon used his information to annotate operational maps with locations and codes, providing Allied aircrews with an invaluable navigational tool. General McKenna noted that the designs and locations of some were haphazard, and in some locations, such as Baltimore and Galley Head in County Cork and Lenadoon in County Sligo, the markers were actually too small and difficult to spot.



US ARMY AIR FORCES MAP SHOWING EIRE MARKER NUMBERS

NON-STANDARD EIRE MARKER DESIGN

WICKLOW HEAD LOP #9, COUNTY WICKLOW

(*Courtesy of Irish Defence Archives)*

General McKenna then issued a design order for all 'EIRE' markers to adhere to standard dimensions of 6M high and 12M long. Additionally, a large white rectangle would also be added around the word EIRE. Those not in compliance were rebuilt and all were completed by Summer 1944. In some cases, the old marker existed for a while in tandem with the new marker, for example at Cahore Point, County Wexford, and Ballagan Point, County Louth. The new markers usually took between 8 and 14 days to complete and several were subject to further inspection flights by General McKenna. He was still not happy with some of them and further work was carried out, for example at Malin Head, County Donegal, where 2 markers are reportedly still visible today, although the standard design is the only one that has been restored to its former glory and is readily spotted.

STANDARD EIRE MARKER DESIGN

HOOK HEAD LOP #16, COUNTY WEXFORD

(*Courtesy of Irish Defence Archives)*

The markers were arguably effective as the number of aircraft force landing in the Irish Free State reduced dramatically from 1943 onwards. To Ambassador Gray, it was the numbering of the markers

that was much more important than the fact that they marked the neutrality of the territory. He stated that 'Any pilot with the aid of the key map can find his location'. By any pilot he of course meant any Allied pilot as the Germans were not made aware of the existence of the markers, let alone their locations and numbering. Perhaps the Irish were not quite neutral after all.

The key map and procedures were issued to Allied pilots through a series of secret documents, for example Flying Bulletin Number 5 dating from March 1944. In addition to providing the map and details of the markings which would be seen, the crews were also instructed to use the map and to obtain a bearing from the Derrynacross radio beacon in Northern Ireland, which would allow them to plot a course to the RAF airfield at Nutts Corner near Belfast, safely in Allied territory. The system was not infallible of course, as poor visibility and darkness could hinder crews spotting a marker, and there were isolated further cases of fatal crashes on high ground or aircraft force landing in the Irish Free State. Overall though, this simple solution was seen as being effective and helped many crews avoid detention or death.

Today, approximately 30 of the EIRE markers can be found, some are in a restored condition and exactly as they would have been during the war, while others are only faintly visible and in danger of disappearing forever. The other 50 or so have long since been reclaimed, either by locals for building work, by being built upon, or simply reclaimed by nature and invisible under the abundant green turf and vegetation which characterises the 'Emerald Isle'.

NORTHERN IRELAND AND WORLD WAR 2

Meanwhile, across the border in Northern Ireland and across the Irish Sea, Britain was standing almost alone against the might of Nazi Germany. Supplies of material, food, and weapons were coming from all corners of the Commonwealth and other parts of the Globe, ensuring that Britain was able to keep fighting. The thousands of merchant ships which carried these goods, along with their hundreds of military escort vessels, passing through the German blockade which started in 1939 until the end of the war in Europe in 1945, ran a very high chance of being picked off by German military forces comprising of surface battleships, long range bombers including Focke Wulf Condors, or the scourge of the seas, the U-Boat Wolfpacks. The rate of attrition and loss of life on all sides during this Battle of the Atlantic was immense. The Allies lost over 36,000 naval personnel and over 36,000 merchant seamen, as well as 3,500 merchant ships, 175 warships and 741 RAF Coast Command aircraft. The Germans lost around 30,000 U-boat sailors with 783 U-boats and 47 other warships lost.

To help the war effort as well as protecting the Atlantic convoys, around 20 military airfields or aviation bases were constructed in Northern Ireland. These included training airfields, fighter airfields for both the RAF and the Fleet Air Arm, and maintenance facilities. Additionally, 2 seaplane/flying boat bases were also constructed on Upper Lough Earne for Coastal Command operations which provided Atlantic convoy escorts, as well as offensively hunting German Wolfpacks and other enemy shipping. The latter of course included Castle Archdale, where you took off from on your Sunderland mission and how we came to find out about the existence of the 'EIRE' marker signs and find ourselves over St John's Point, preventing ourselves from becoming another wartime casualty. More of that soon !!

Many of these Northern Irish airfields still have evidence of their history, either through continued use as civil airfields such as the former military facilities at RAF Aldergrove or RAF Eglinton, or through visual evidence of the old runways or buildings, such as the former RAF Bishops Court or RAF

Nutts Corner which are both enjoying new lives as motor racing tracks. A few, such as former RAF Maghaberry or RAF Long Kesh, are slowly disappearing under developments for other non-aviation uses or as Government facilities such as prisons, although clues are there if you look carefully. Regardless of their current status, all played an important part in our history and provide a tangible link to the past.

OUR DAWN TO DUSK COMPETITION GOAL – 'EIREBORNE !!'

Our challenge this year would primarily be to follow the Coast inspection flight of the EIRE markers undertaken by General Hill and General McKenna by flying over the positions of the Coast Watching Service LOP sites and document and photograph the remaining EIRE navigation markers found in the Republic of Ireland. Additionally, we would also have a secondary goal of overflying the World War 2 air station locations in Northern Ireland.

This would effectively be a circumnavigation of the island of Ireland in a day with a historical aviation connection, starting from and finishing at our home base of Prestwick in Scotland. Along the way, we also hope to add in some interesting history and facts about this wonderful island's coastline.

THE PLANNED DAWN TO DUSK COMPETITION ROUTE AROUND IRELAND

INSPIRATION, RESEARCH, & ROUTE PLANNING

INSPIRATION

Due to family connections, I have spent a lot of time visiting the Republic of Ireland, primarily in County Donegal, whilst in my professional Air Traffic Control career and my personal flying career I have also traversed Northern Ireland many times and visited many of the former WW2 airfields that are still in use by civil aviation there. Several years ago I undertook a family holiday driving around the coast of Ireland and along the way we unexpectedly discovered the EIRE navigation markers at Malin Head, St John's Head, and Loop Head whilst visiting the historical maritime visitor attractions at each. I knew nothing about their existence then but did some cursory research and soon discovered that there were others to be found still in existence around the spectacular Irish coastline. More recently a flying trip to take Irish friends and family on short air experience flights based me at Enniskillen (St Angelo) and reignited my interest in these historical sites as we passed over several whilst flying along the Wild Atlantic Way on the Donegal coast. After completing the Dawn to Dusk Competition last year (2022), I enjoyed it so much that it was a certainty that I needed to compete once more. Interest in the EIRE navigation markers seemed a logical choice to explore by air and they would form the basis of my idea for this year's entry.

MALIN HEAD 'EIRE' MARKER #80 FROM THE GROUND

(Family holiday snap – 2017)

RESEARCH

With the idea born, it was now time to start the research. Much of the initial digging on the subject was done online, although there was no single definitive source that could be found. The first website visited was a short article written by Ann Robinson (no, not that one !!) and gave a very short overview about how the markers came about but little detail about where they were still to be found other than a Google map with pins dropped.

EIRE for the Airmen: Guiding the Allies around the Irish Coast – Coast Monkey

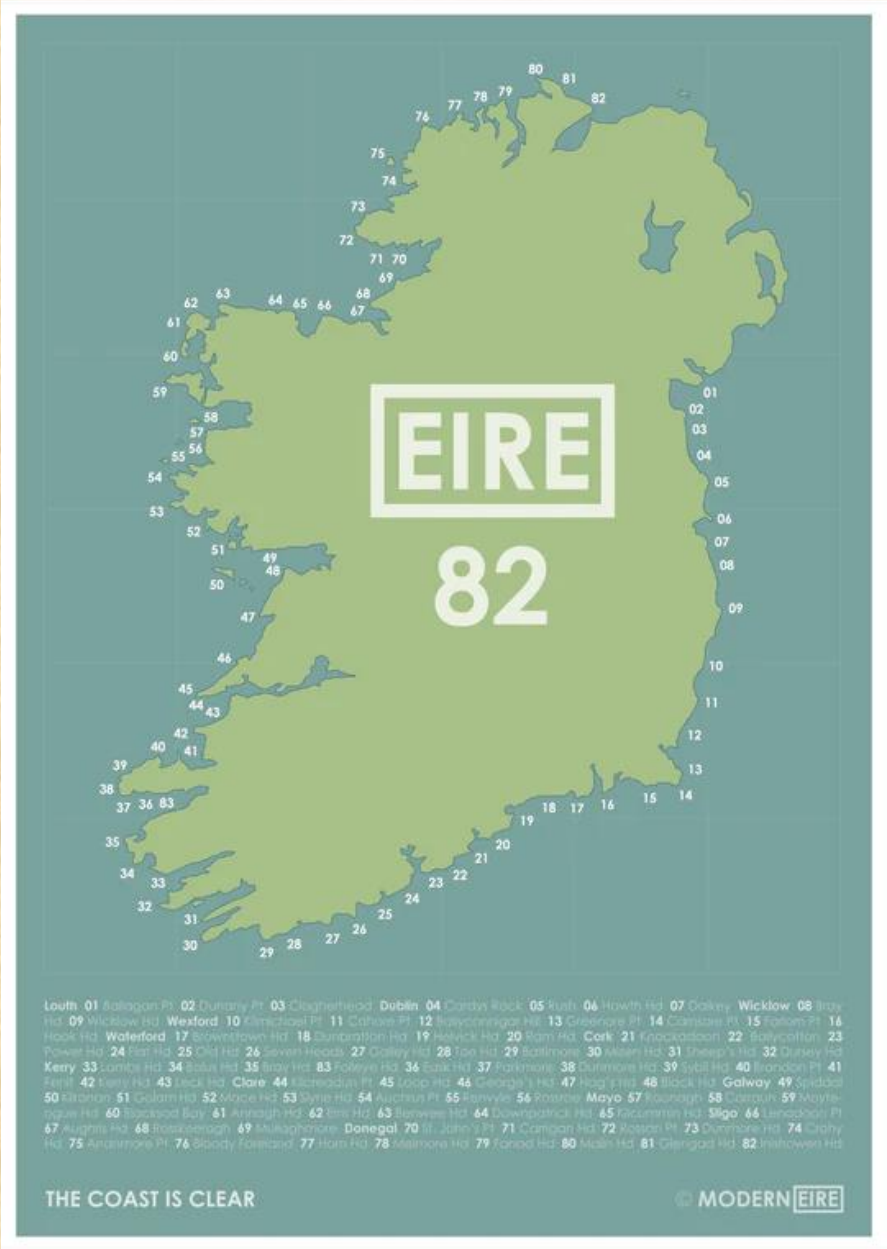
Next I visited the site of Treasa Lynch who started a project to catalogue the remaining EIRE marker signs. Initially she expected to find 12 still extant but her work has helped discover around 30 which can still be seen. Having said that, she also details that there are several today which are barely recognisable and require close proximity to see them on the ground. It's fair to say that on our airborne tour of the sites, there were several that we were unable to locate. This website doesn't seem to have been updated since 2017 but did however seem to be the most comprehensive in enabling a current list to be put together for our planning purposes.

About the Coast Watching | EIRE signs of WW II (eiremarkings.org)

I also found several local news articles from around Ireland which tended to deal with individual markers either being found or restored, which helped a little in pointing me towards those we would be likely to locate. There seemed to be no single site however which had a definitive list of locations and the current status, until I resorted to the old favourite, Wikipedia, and its article on the Coast Watching Service. The information here was more concentrated on the actual LOP buildings and their status than the EIRE markings, however it did give a list of 83 locations, their names, and their latitude and longitudes plus links to online mapping locations such as Bing and Google. This would allow at least the basis of further research to identify the sites visually on mapping and plot the waypoints for our journey.

Coast Watching Service - Wikipedia

One slight problem with using online research is that you never quite know the veracity of it, and this did cause us to miss one of the official LOP sites during our flight. With no definitive list, all the information gleaned pointed to 82 LOP sites. I was aware from contacts in Donegal of some unofficial EIRE markers too to be fair, which had no associated LOP and were not given any identification numbers during the war and would also plan to fly over these as part of our flight. Unfortunately, after our flight was completed, I was then recommended a book called 'Guarding Neutral Ireland' written by Michael Kennedy and detailing the history of the Irish Coast Watching Service and Military Intelligence operations between 1939 and 1945. This comprehensive and fascinating tome records that there were in fact 83 LOP sites established, although #83 at Feaklecally on the South side of Dingle Bay was established later in the war and the number lies out of sequence in between the LOP sites at #35 Bray Head and #36 Eask. On looking back at the Wikipedia site, it is in their list and out of numerical sequence but with a classic case of confirmation bias, I didn't pick up on this and notice it. As you can see from the tourist map below which shows 83 LOPs but with the logo 'EIRE 82', I'm not the only one !!



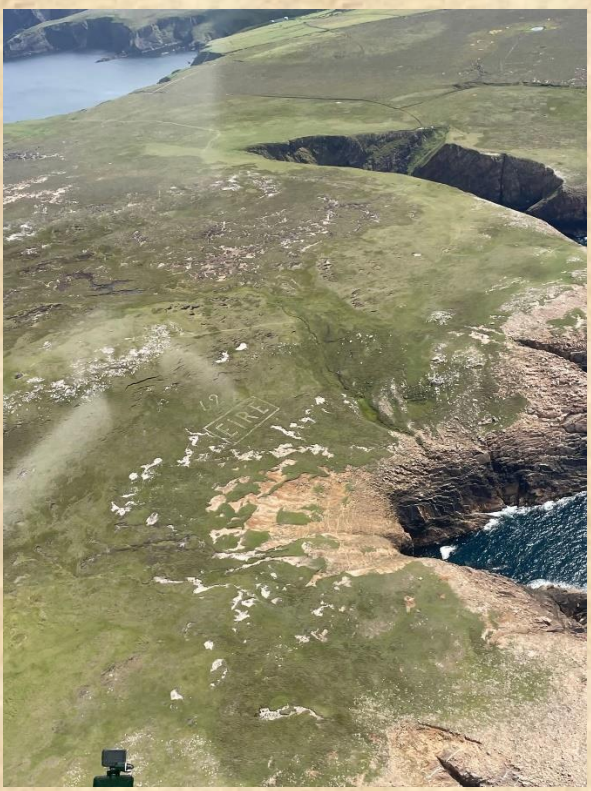
TOURIST MAP OF THE LOP's – 83 LISTED BUT CONFUSING NUMBER 82 ON MAP ?

With a working list of LOPs, the next stage was to try and find these on aerial mapping, using Google Maps predominantly. Once identified, pinpointed to the best of my knowledge, I would then use the aerial view functionality on my flight planning and navigation tool of choice, SkyDemon, to mark and save each position as a user defined waypoint. For some of the LOP sites which still have their EIRE markings, these were relatively easy to find as helpful tourists who have gone before having marked them as Points of Interest on the online mapping. This is also the case for a handful where the LOP only still remains but has been identified as something of interest. For most of the positions however, it involved examining the aerial map and trying to find evidence of either a LOP or the EIRE marking. It's fair to say that some were easier to spot than others, and that would be reflected during our flight too. A couple of examples are shown below as to how sites were identified, marked as Waypoints and then how they actually looked during the flight.

ERRIS HEAD LOP #62 & EIRE MARKER MAPPING IDENTIFICATION & WAYPOINT CREATION

Google Maps Location

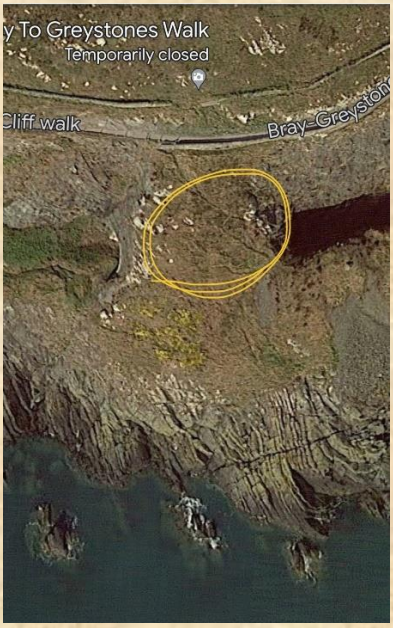
SkyDemon Waypoint

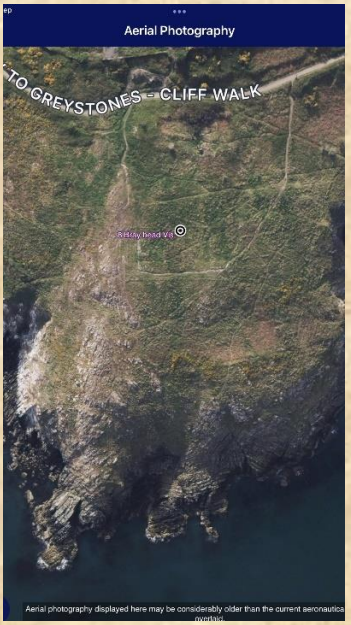


ERRIS HEAD LOP #62 & EIRE MARKER - AERIAL VIEW FROM DAWN TO DUSK FLIGHT

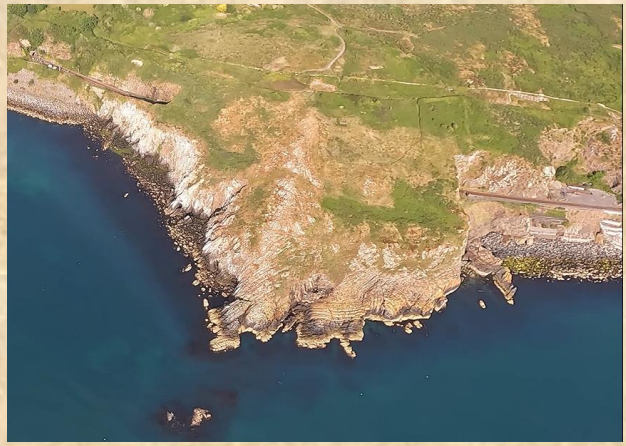
BRAY LOP #8 & EIRE MARKER MAPPING IDENTIFICATION & WAYPOINT CREATION

2018 Aerial Photo of Bray EIRE Marker After Brush Fire *(www.Eiremarkings.org)*





Google Maps Location (Approx) **SkyDemon Aerial Waypoint**



BRAY LOP 82 & EIRE MARKER AERIAL VIEW FROM DAWN TO DUSK FLIGHT

Nothing seen !!!

With the positions of the LOPs and the EIRE markers we could reasonably assume to still be visible all established and mapped, the Waypoints were then all saved in SkyDemon and the flight planning aspects of the flight could commence. In addition to being saved in the database, photos of each waypoint were also printed out and documented so that we could readily refer to them in flight for visual references in case of navigational difficulties or uncertainties.

FLIGHT PLANNING

The flight would commence and terminate at Prestwick Airport in Scotland and could either be flown around Ireland in a clockwise or anti-clockwise manner, dependent upon the forecast winds and planned airborne times plus required stops for Customs and Immigration as we left/entered the UK and the Republic of Ireland, planned fuel stops, and stops for comfort breaks and crew rest plus meals. With the LOP/EIRE Marker waypoints plus the Northern Ireland WW2 airfields all saved as User Waypoints in SkyDemon, it was relatively easy to get a visual picture of what might be the best route to take in whatever wind scenario we faced. With a Visual Flight Rules (VFR) planned fuel endurance of 4 hours and a further 30 minute reserve at a planned cruising speed of 140 Knots Indicated Airspeed (IAS), there were lots of airfield options around the coast to make the relevant stops.

Regardless of the direction flown however, our first stop would be in the Republic of Ireland to clear Customs and Immigration, which reduced the number of airfields available to those with facilities which could provide that service. Fortunately our home base at Prestwick in the UK has H24 Customs and Immigration facilities so there was no issue with our flight starting and ending there. A nominal maximum airborne time of 3 hours for any given leg was used as an initial start point, for comfort reasons if nothing else.

Going anti-clockwise, the flight would plan to fly from Prestwick Southwards along the Scottish coast to cross the North Channel of the Irish Sea around Portpatrick, as this was the shortest water crossing and also had the highest chance of shipping being present in the event of an emergency situation. On coasting in near Newtonards (formerly a RAF station in WW2), we would overfly the various former WW2 military airfields in Northern Ireland in the East, North, and South of the country with anticipated requests to Aldergrove and Belfast City Air Traffic Control for Controlled Airspace transits to allow us to make the relevant overflights in their airspace. Clearing the UK Flight Information Region around the City of Derry Airport (former RAF Eglinton), we would transit the Northern Donegal coast of the Republic of Ireland, commencing our first LOP overflight at #82 Inishowen. After 7 LOPs being overflown, we would make our first Customs & Immigration stop at Donegal (Carrickfinn) Airport, regularly voted the most scenic in the World. Thereafter we would ‘exit’ the Republic of Ireland again and overfly more LOPs plus the RAF seaplane bases on Lower Lough Erne before landing at Enniskillen (former RAF St Angelo) to pick up duty free fuel, clear UK Customs & Immigration inwards and outwards and then head back across the border to the Republic of Ireland to land at Sligo for some more Customs & Immigration clearance. A potentially beautiful scenic flight down the Wild Atlantic Way would see us to the Southwestern tip of our journey with potential stops at the Aran Islands airfields, Kerry, and Cork as required and a final stop at Waterford for a final duty free refuel and Customs & Immigration for our departure back to Prestwick, via the East coast LOPs and the Southern WW2 airfields in Northern Ireland before making the Irish Sea crossing again to the Scottish mainland.

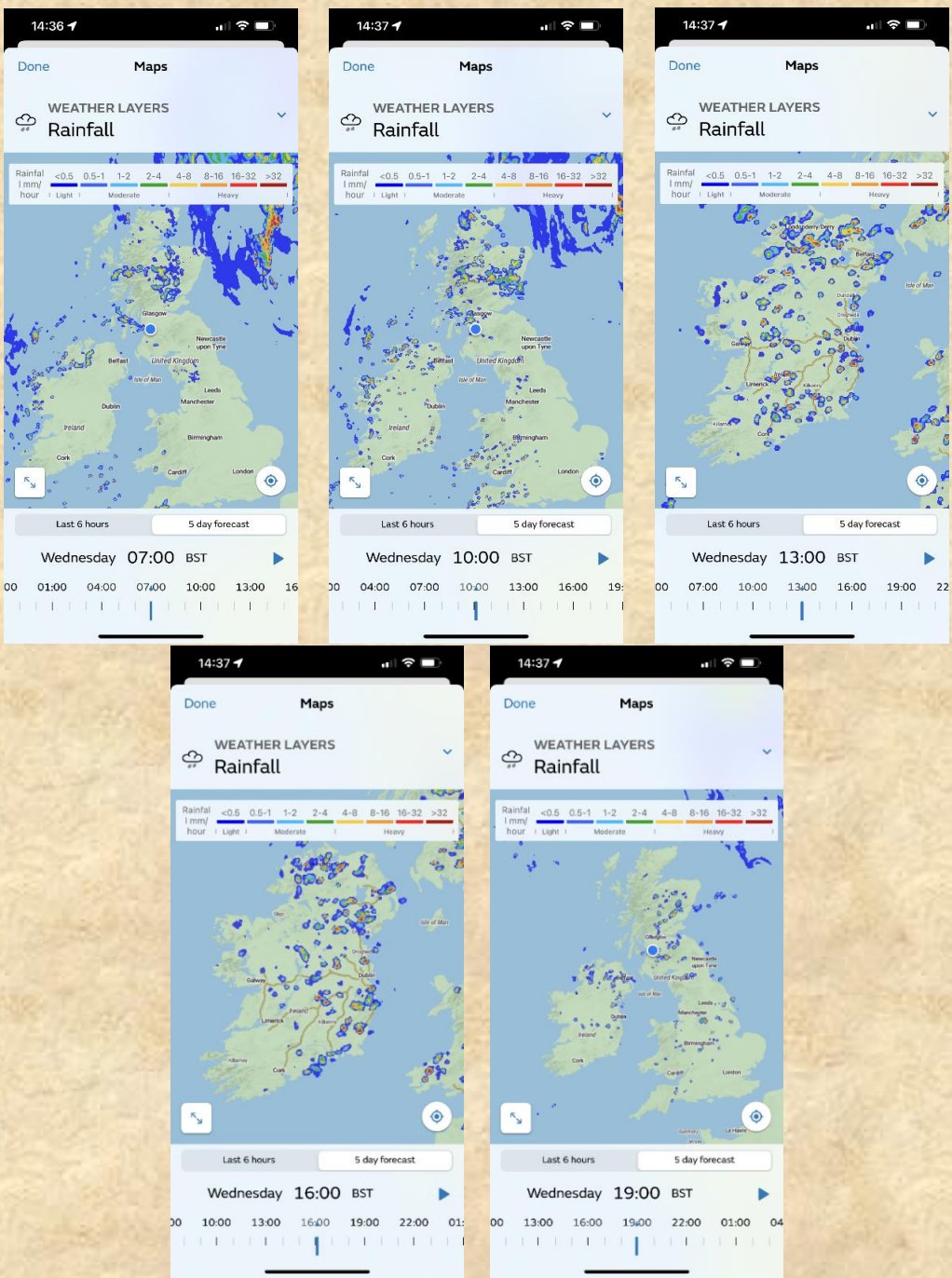
The clockwise plan was pretty similar, just in reverse, with a leg from Prestwick to Waterford for the first Customs & Immigration stop, breakfast, and a refuel, then around the South and Southwest Irish coast to land at the 3 Aran island airfields, before heading to Sligo for a duty free refuel and Customs & Immigration, a drop in to Enniskillen for Customs & Immigration (plus to allow the Duty Free fuel from Sligo) and thence to Donegal for dinner, before returning to Prestwick via the Northern Donegal coast and the remaining Northern Ireland WW2 airfields.

Both options would involve an early departure of 0700L or before, and a landing sometime around 2000L back at Prestwick (allowing for the stops) but certainly achievable for both the aircraft and the crew.

Next in the flight planning process was to check the relevant AIPs for the airfield opening hours, facilities, and fuel availability. This was supplemented by reviewing NOTAM information, which is particularly important as many of the Irish airfields are currently operating on reduced or differing hours from those in the AIP. It soon became apparent that there might be some issues if we got to some of the airfields too early in the morning as they might not be open, and similarly we wouldn't be able to leave visiting some of them too late in the afternoon as they would be closed. Donegal for example would most likely be closed for about 45 minutes before we could land if we left at our planned time and Waterford had some afternoon/evening closures that could affect the end of the trip and cause us to have later arrival back at Prestwick. Going round the other way, we'd have to watch out for early closures at Sligo and Enniskillen, although there would be the option of using Derry possibly as an alternative. A quick 'spreadsheet' on a bit of paper captured all the time windows for each potential airfield we would visit and this would allow the timings to be adjusted to ensure that we weren't caught out.

With the strategic plans formalised several weeks before the flights might take place, it was now time to pick the planned dates, including some for weather contingency. The first date selected was 16th June 2023 with a primary back up date of 21st June 2023. All we could do now was wait and see how the weather would look and make our final decisions and planning. As the 16th drew near, the weather was not looking particularly favourable, however fortune sometimes favours the brave and I decided that a clockwise profile would be best suited for our plans. The SkyDemon routes were all saved, ready for use when airborne and to also act as the source data for the submission of Flight Plans to the UK and Irish Authorities, as well as allowing the filing of General Aviation Reports (GAR) to Immigration and Police Forces on both sides of the Border. Telephone calls, backed up by email, were also made to all the airfields we would plan to use to obtain PPR, check on the latest opening and closing times and the status of their AVGAS and catering supplies as required. I also contacted the Air Traffic Control (ATC) team at Dublin to work out the best way to transit their airspace down the Coast and pass a couple of LOPs in their vicinity. A procedure to route via various Visual Reporting Points (VRP) not above 500' Above Mean Sea Level (AMSL), called the Lambay Island route, looked like it could work and would be the best chance of getting a clearance so a quick review in the Ireland AIP was required and I was comfortable with that. Everything was now in place and ready to go. The weather did have other plans though and the forecast by the Met staff did look to be accurate for the period leading up to and including the 16th, which meant the safest thing to do was cancel and aim for the weather back up on the 21st. As the decision was made at least 24 hours before the planned timings, none of the 'official' Government paperwork had yet been submitted and the Flight Plans had not been filed. A quick blanket email confirming the proposed new date was sent to the various airfields (who already knew our date options) and confirmations quickly received back that they had no issues and would look forward to seeing us on the 21st instead (we hoped so too !!).

A few days before the 21st, the forecast was for various Atlantic fronts to pass through Ireland and the UK over the next week or so, but collated information from the Weather School Flyer forecast, the UK Met Office, the BBC and RTE TV forecasts, Windy, and one or two other sources gave a confident outlook that the day we hoped to fly might just be in between the passing weather systems and offer a window of opportunity. With under 24 hours to go, a final decision review showed that there would be a front approaching from the West at our planned departure time, however we would be able to fly around the front of it and then up the back of it as it headed Eastwards over Ireland and the UK. Later in the evening there would be scattered showers around on the way home but it didn't look like we'd have too much difficulty avoiding them so it was a GO !!



A quick call was made to Waterford and they confirmed that fuel was available and they'd be open at 0845 Local(L) time the following day, which would be just after our planned arrival. Aer Aran, who operate the inter island air services on the West Coast of Ireland and also manage the Aran Island airfields at Inisheer, Inishmaan, and Inishmore also confirmed we could land at those airfields as long as it was after 1200L as the inter island Britten Norman Islander would have left by then !! Sligo were also open until 1600L and had fuel, Enniskillen confirmed they'd be closing at 1600L but would be delighted to see us if we were in by then, and Donegal confirmed they'd be open until 1700L and then closing till 1800L but open again then till 1900L so everything looked like it could work for us. Planned departure timings were then input to SkyDemon for each leg, NOTAMs checked, Flight Plans filed and online GARs submitted where needed.

The aircraft, Vans RV8 G-WEEV, has a fuel capacity of 158 Litres of either 100LL Avgas or UL91 Avgas. Normal burn is between 30-35 litres an hour and the still wind predicted fuel burns were:

Prestwick – Waterford	255NM distance	1 Hour 50 En Route	66.3L Fuel Burn
Waterford – Inisheer	303NM	2 Hours 06	74.5L
Inisheer – Inishmaan	3NM	0 Hours 03	3L
Inishmaan – Inishmore	4NM	0 Hours 03	3L
Inishmore – Sligo	152NM	1 Hour 01	35.5L
Sligo – Enniskillen	44NM	0 Hours 17	9.6L
Enniskillen – Donegal	80NM	0 Hours 34	20.8L
Donegal – Prestwick	231NM	1 Hour 31	52.7L
TOTALS	**1072NM**	**7 Hours 26**	**265.4L**

To prepare the aircraft for the flight in advance, a 25 hour maintenance check was carried out the day before the flight, oil was topped up to the normal touring capacity of 6 Quarts and the fuel was filled to the maximum capacity of 158L of 100LL Avgas. As the flight would be leaving the UK, the duty on the full fuel load could be claimed back from the UK HMRC, although at the time of writing this is still in process !! The aircraft covers were removed in advance, the cockpit was all laid out with the relevant maps, charts, and briefing materials, plus the GoPro cameras were mounted internally and externally. All little things to ensure that the pre flight checks and preparations on the day took as little time as possible !!

Planning was complete, time to fly !!

THE FLIGHT – 21ST JUNE 2021

PRE-FLIGHT

Arising at 0530L on 'The Longest Day', the weather conditions and NOTAMs were checked once more and everything was in order. The Met data showed the front approaching the West coast of Ireland as expected and the METARs and TAFs for the whole route backed up the expected conditions. Fine in the East to start, heavy showers in the West, but moving Eastwards as the morning and afternoon progressed with the West clearing nicely. There was some low cloud predicted back at Prestwick in the early evening but again this was forecast to clear by the time we arrived home.

Arriving at the aircraft, a normal pre-flight was carried out and everything was in order. Air Traffic Control confirmed that they had received the Flight Plan submitted yesterday and my fellow crew member, Kate Turner, turned up on time and ready for the trip. A quick check on the ATIS for the airfield information and start up commenced at the Prestwick Flight Centre on Apron Echo.

LEG 1 : PRESTWICK - WATERFORD

Airborne 0622Z (0722L) – Landed 0809Z (0909L)

Just after our planned departure time, taxy was requested at 0705L and approved by ATC to the holding point for a departure from Runway 30. After departure at 0722L, we turned left and followed the coast in some early morning sunshine Southbound along the Ayrshire coast, climbing to our initial cruising altitude of 3000' AMSL. Leaving Controlled Airspace, we transferred to Scottish Information and with lifejackets on (and their use fully briefed) we coasted out by Blackhead Light to cross the North Channel towards our first Waypoint of the Dawn to Dusk Competition, which would be the former Royal Air Force, and subsequently a Royal Naval Air Station, at Ballyhalbert on the County Down coast. Mid channel we changed to Belfast City Approach and they monitored us on radar for the crossing. Visibility was good over the water, with several ferries seen plying the route between Scotland and Belfast, whilst the Glide Range feature of SkyDemon also helped show that we wouldn't be out of range for land for too long in the event of an engine failure and ditching options were possible near shipping.

STENA SUPERFAST FERRY OBSERVED BETWEEN CAIRNRYAN AND BELFAST

As we neared the coast however, there was a broken layer of cloud forming up ahead of us and below with an estimated ceiling of around 1500' AMSL and a depth of around 500'. A quick call to advise ATC and we descended below the cloud to coast in just North of Ballyhalbert. Lower clouds and some showers could be seen inland, shrouding the Mourne Mountains and beyond but it looked to be clear further South down the coast. Indeed, we would be in more or less bright sunshine all the way down our route to Waterford in another 15 minutes or so.

BROKEN CLOUD AND A REFLECTED 'GLORY' AS WE APPROACH THE COAST

THE SITE OF RAF BALLYHALBERT (1941-45) AND HMS CORNCRAKE (1945-46)

Passing by RAF/RNAS Ballyhalbert, which housed fighter aircraft for training purposes during WW2 and now in use for housing and partly as a holiday caravan park, it was only a short hop to our next ex WW2 airfield, RAF/RNAS Kirkistown, which acted as a satellite airfield for Ballyhalbert. With the distance between the 2 airfields only 2.3NM, it must have made life interesting in the circuits for these busy training airfields flying high performance fighters such as Hurricanes, Spitfires, Mustangs, and Corsairs !!

RAF KIRKISTOWN (1941-45) AND HMS CORNCRAKE II (1945-52), NOW A MOTOR RACING TRACK

Two further WW2 era airfields were to be found on this part of the coast, firstly RAF Bishops Court which was used to train bomber crews and navigators during WW2 and the immediate post war period therafter. The airfield has several notable historical points, such as the visit of General Dwight D Eisenhower in 1944 when inspecting airfields and troops in the build up to D-Day, it's short lived reactivation as an airfield in 1953 to train pilots for the Korean War, and it's role as a Control & Reporting Centre (CRC) Radar station during the Cold War with supplementary provision of services to civilian aircraft as 'Ulster Radar' using Type 84, Type 80, and Type 93 long range surveillance radars. The radar site was finally closed in 1989 with the full transfer of ATC services to joint RAF/NATS facility at Atlantic House, Prestwick, and the RAF CRC at Boulmer, Northumberland. On a cultural note, the Scottish painter Aleander Galt was stationed here during WW2 and painted several murals on the walls of the Officers Mess, which can still be seen today.

Secondly, we overflew the site of former RAF Greencastle, a station which was the cause of much bad blood amongst locals. The Air Ministry took over a large area of prime agricultural land and the compensation offered to land owners was deemed derisory. The all important potato crops were also just about to be planted, highly important crops to the small family farms in the area in order to sustain them and earn them money. To add insult to injury, many households, in particular those on the sites of the proposed runways, were given only 3 days to move out and there was no obligation on the Air Ministry to find them accomodation so there were understandably a fair number of refusals to leave the land. As a result, many areas of the base were built up around the surrounding townlands. The base was handed over to the RAF in 1942 but was almost immediately handed over to the US Army Air Forces as they had entered the war in Europe. Crews were trained to operate the Boeing B17 Flying Fortress or Consolidated B24 Liberator heavy bombers and there was also a Target Towing facility for a gunnery school on the base. As an indication of the peak training throughput delivered by the base, which was between May and August 1944, in July 1944 alone a combined output of 330 heavy bomber crews was delivered from the Northern Ireland WW2 bases at Greencastle and it's sister base at Cluntoe in County Tyrone near Lough Neagh. A mind blowing figure !! After closure in 1945, the land returned to agriculture and in the 1960's the hard runways were dug up and the materials used by the local land owners to build boundary walls. No real sign of these major airfield features now remain, even from above, but many derelict buildings and hard standings are still to be found. As is a common post airfield use, a caravan site also occupies much of the old airfield.

RAF BISHOPS COURT (1943-1992), AIRFIELD THEN RADAR STATION, NOW HOUSING AND FARMING

RAF GREENCASTLE (1941-1945), NOW A CARAVAN SITE AND FARMING AREA

A short water crossing to the South of Greencastle over the Carlingford Lough took us over both the international 'land' boundary between the UK and Ireland as well as the Flight Information Region (FIR) Boundary between the Scottish and Dublin areas of responsibility. A quick call was made to Dublin Control, who acknowledged our Flight Plan and issued us with a SSR code, and we continued doing our own thing in Class G airspace down the Irish coast, passing the site of the first of our LOPs, the headland of Ballagan Point (#1). The EIRE marker for this LOP, in common with many along the Eastern coastline, has long gone, with only the outer walls of the LOP visible in a field a short way inland from the coast. Our prime mission had started and we had identified the target so it was a good start. Up ahead, there remained some low grey cloud to the West associated with the approaching front, but looking South there was good visibility and early indications of brighter weather ahead. We were making good progress with a slight headwind, showing 45 minutes elapsed time against a predicted time of 47 minutes and an actual fuel burn of 33L (including taxy and take off) against 33.5L showing on the Pilots Log (PLOG) produced by the impressive SkyDemon software.

The Eastern coast of Ireland in the Northern part is relatively flat, with small cliffs, outcrops, or sandy beaches, which would be in complete contrast to the landscape when we headed along the more exposed Southern, Western and Northern coastlines. A further ruined LOP was observed at Dunnany Point (#2) before we tracked to the promontory at Clogher Head (#3) and the familiar sight of a ruined LOP. Flying at 1000' AMSL parallel to a long sandy beach with large sand dunes behind it we flew past the site of Cardy's Rock (#3), of which no trace remains as the collapsing sand dunes have long since taken the LOP from the top and buried it somewhere far below. A pretty spot however !!

LOP #1 BALLAGAN POINT WITH LOP RUIN VISIBLE AT CENTRE ABOVE THE COAST SETTLEMENT

LOP #4 CARDY'S ROCK, LONG SINCE RECLAIMED BY THE DUNES AND NOTHING TO SEE

With 10 miles to run to the Visual Reporting Point called Skerries on the edge of the Dublin Control Zone (CTR), it was time to chip in on the busy frequency and make our request for a Lambay Island transit at not above 500' AMSL. This entails flying over the sea from Skerries to Lambay, a distance of around 3NM and then turning at Lambay to Bally Lighthouse, a further 8NM overwater at low level, before the final 6NM over the sea from the lighthouse to landfall at Dalkey. With Runway 28 in use at Dublin and a busy arrival stream, this is the most expeditious way to transit from North to South (or vice versa) as the Class C airspace in the CTR requires ATC to separate VFR aircraft from Instrument Flight Rules (IFR) aircraft. If you are unable to accept this routing and restriction then it's a long haul out to the West and around the CTR, which for our flight would mean missing some of our Waypoint objectives. With IFR traffic on the Instrument Landing System (ILS) passing above the route at around 1600' AMSL, it does of course make sense from an ATC point of view, if a little disconcerting to a single engine aircraft pilot !!

To manage the risk a little, I requested a slight detour to route inland via Rush and Howth between the overwater portion to Lambay Island, reducing the transit over the sea by at least a couple of miles. Possibly more important though was that it would allow us to overfly the LOP sites at both locations. Dublin ATC happily passed me a clearance as requested, initially to a clearance limit of Rush VRP, along with traffic information on ILS traffic, which initially flagged itself up on SkyDemon through the SkyEcho ADSB feed. The LOP at Rush (#5) no longer has the EIRE marker but the LOP utilised a Napoleonic War era Martello Tower which is still in excellent condition and was easy to spot.

LOP #5 RUSH – A SCENICALLY LOCATED MARTELLO TOWER

Serious concentration was required for this transit to ensure that not only was the Not Above 500' ATC restriction complied with, but that no drifting down towards the sea occurred, for example when being instructed to change to the Tower frequency approaching Rush or changing course over Lambay. A good lookout for sea birds as well as maintaining situational awareness of maritime traffic as possible ditching points in the event of engine failure also helped focus the mind and make it a challenging portion of the flight. Cleared onwards by Dublin Tower, we soon became visual with the inbound ILS airliner and he serenely passed around 1000' over the top of our aircraft as we flew towards Howth. Approaching Howth (#6), we were just above the level of the cliff top at our maximum altitude of 500' and this meant that we were late visually spotting the EIRE sign at almost co-altitude with the wingtip video cameras at too low an angle to capture the sign. Fortunately, Kate managed to grab a quick shot of it though as we flashed past it. Great job in the circumstances.

LOP #6 HOWTH AND EIRE MARKER – JUST VISIBLE ABOVE THE CLIFF TOP ROAD

Leaving the Dublin Tower frequency and back on to Dublin Approach, a climb was requested and approved to 1000' AMSL with another light aircraft inbound to Weston airfield cleared not below 2000' AMSL above us. Coasting in at the town of Dalkey (#7), one of the best examples of an EIRE marker was to be found on the cliff below us.

Flying over the Coast railway line near Bray (#8), including the scenic tunnels engineered by none other than Isambard Kingdom Brunel in the mid 1850's, we were on the lookout for a long-hidden EIRE marker on the clifftop between two distinctive tunnels at the LOP. The marker was rediscovered in 2018 after an extensive gorse fire cleared much of the vegetation and was reportedly restored. Unfortunately our visual and photographic evidence failed to find it on our trip and it looks to have returned to nature again. At least they know where it is now though.

LOP #7 DALKEY AND EIRE MARKER

LOP #8 BRAY AND AN ALLEGED EIRE MARKER – SHOULD HAVE GONE TO SPECSAVERS !!

From Bray, further climb was granted so we could clear the Newcastle ATZ, although nothing was seen on the ground or in the air as we slid above it. Wicklow Head (#9) was the next LOP and is still in use as an ancillary building. An unusual feature of this location is that there are 3 lighthouses situated here. The innermost lighthouse tower was built in 1781 and was a candle powered 8-sided lantern. In 1836 this tower was struck by lightning and this destroyed the interior. It was not demolished however as it could still serve a purpose as a navigation landmark during daylight hours. A smaller middle positioned lighthouse had been built around the same time so that the double lighthouse operation could be used to distinguish Wicklow Head from other single lighthouses at Hook Head to the South and Howth to the North. The single smaller lighthouse then remained in use until the modern-day outermost lighthouse at the cliff edge was built in the 19th century and this became an automated facility in 1994. The LOP lies between the middle and outermost lighthouses.

LOP #9 WICKLOW HEAD – WITH IT'S 3 LIGHTHOUSE STRUCTURES

Bright sunny skies were now the feature of our route down the Eastern coast LOPs and we passed by the LOP sites at Kilmichael Point (#10), Cahore (#11), Ballyconnigar Hill (#12), and Grenore Point (#13), before turning Westwards along the Southern coast at Carnsore Point (#14) towards Waterford. There were no EIRE markers at any of these locations and a couple no longer had the LOP structures either, so we just enjoyed the sandy beaches and coastline scenery. At Carnsore we had been airborne for 1 hour 33 minutes and burnt 59L of AVGAS against an expected elapsed time of 1 hour 37 minutes and a planned fuel burn of 59.8L at this point. Inside I was very chuffed with that level of accuracy in our planning and actuals.

On turning we were also transferred from Dublin Information to Shannon Information, who would provide us with a service until we called Waterford for landing clearance as we approached their CTR. Shannon seemed to know who we were but couldn't find our flight plan for some reason and so couldn't initially give us a SSR code, which was not really a problem to us as we were VFR and happy

to continue visually until we needed to contact Waterford. This would be our first indication that something isn't quite right with Shannon's flight planning system when it comes to VFR flights, especially as every other agency and airfield had no problems retrieving our data from the ATC systems.

The scenery was now becoming more rugged and spectacular as we passed by the sadly named Forlorn Head (#15), which is geologically unique as the outlying reef is a rare feature of the Avalonia Margin, rocks which originate from a micro continent located near the South Pole over 620 million years ago. The rocks run to Rosslare Harbour several miles to the Northeast and are found nowhere else in Ireland. Most of the rocks are Gneiss or Schist variants and are an attraction to budding geologists who visit regularly. The LOP on the other hand is dwarfed by the modern harbour industrial buildings but is to be found in use within the current Coast Guard facility.

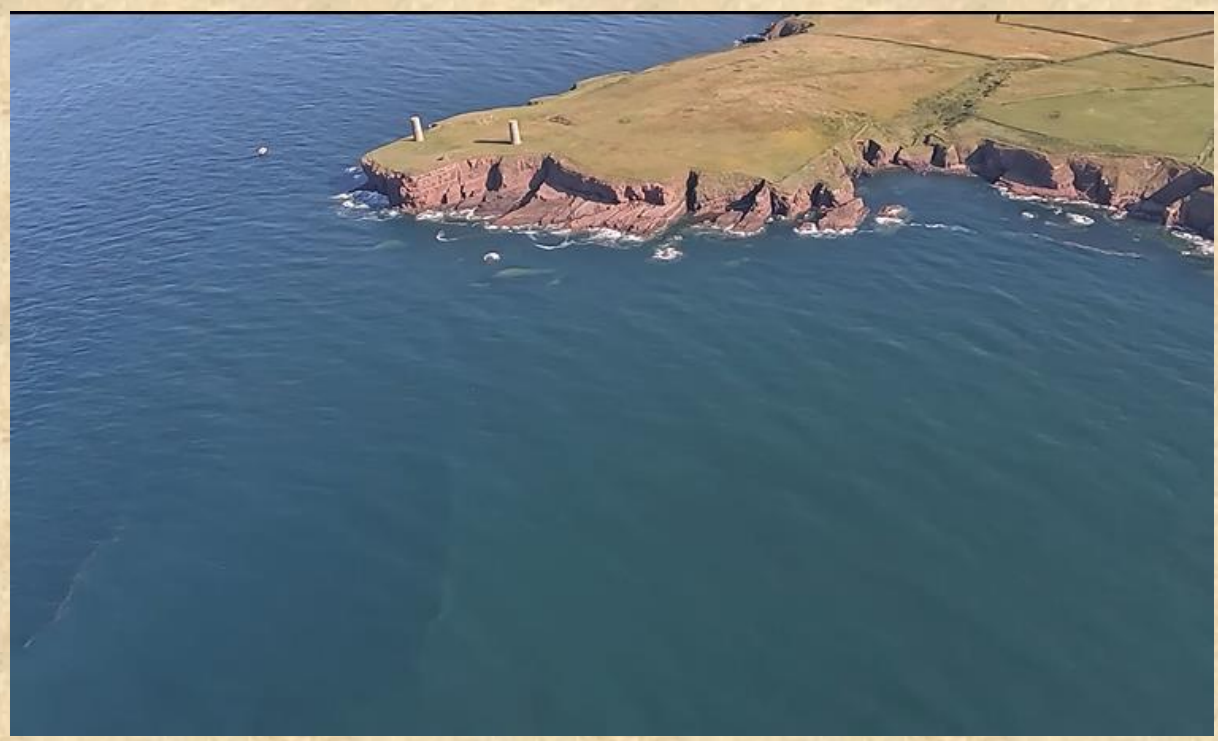
LOP #15 FORLORN HEAD – IN USE AS A COASTGUARD FACILITY BESIDE A RARE AVALONIAN REEF

Leaving Forlorn Point just as Shannon managed to sort out our Flight Plan details and issue a squawk, we were transferred to Waterford to obtain our joining clearance. Waterford gave us unrestricted clearance to fly over our next 2 LOP sites, as well as the option of choosing any runway we wished. Super helpful service !! We passed over the lighthouse at Hook Head (#16), whose EIRE marker now sadly lies under a car park, before continuing along the coast to our final LOP of this leg at Brownstone Head (#17), where in addition to the remaining WW2 post there are also 2 large pillars which were signaling towers built in 1823 for the Napoleonic war. From these towers messages could be sent quickly from ship to shore or shore to shore using pennants and flags. With no telecommunications around in those days, these signal facilities were often a lot quicker than sending messages by foot, horse, or boat. They were manned by ex-Royal Navy sailors who used their knowledge of signaling at sea along with code books to pass intelligence or essential communications. These signaling codes formed the basis of shipborne communications well towards

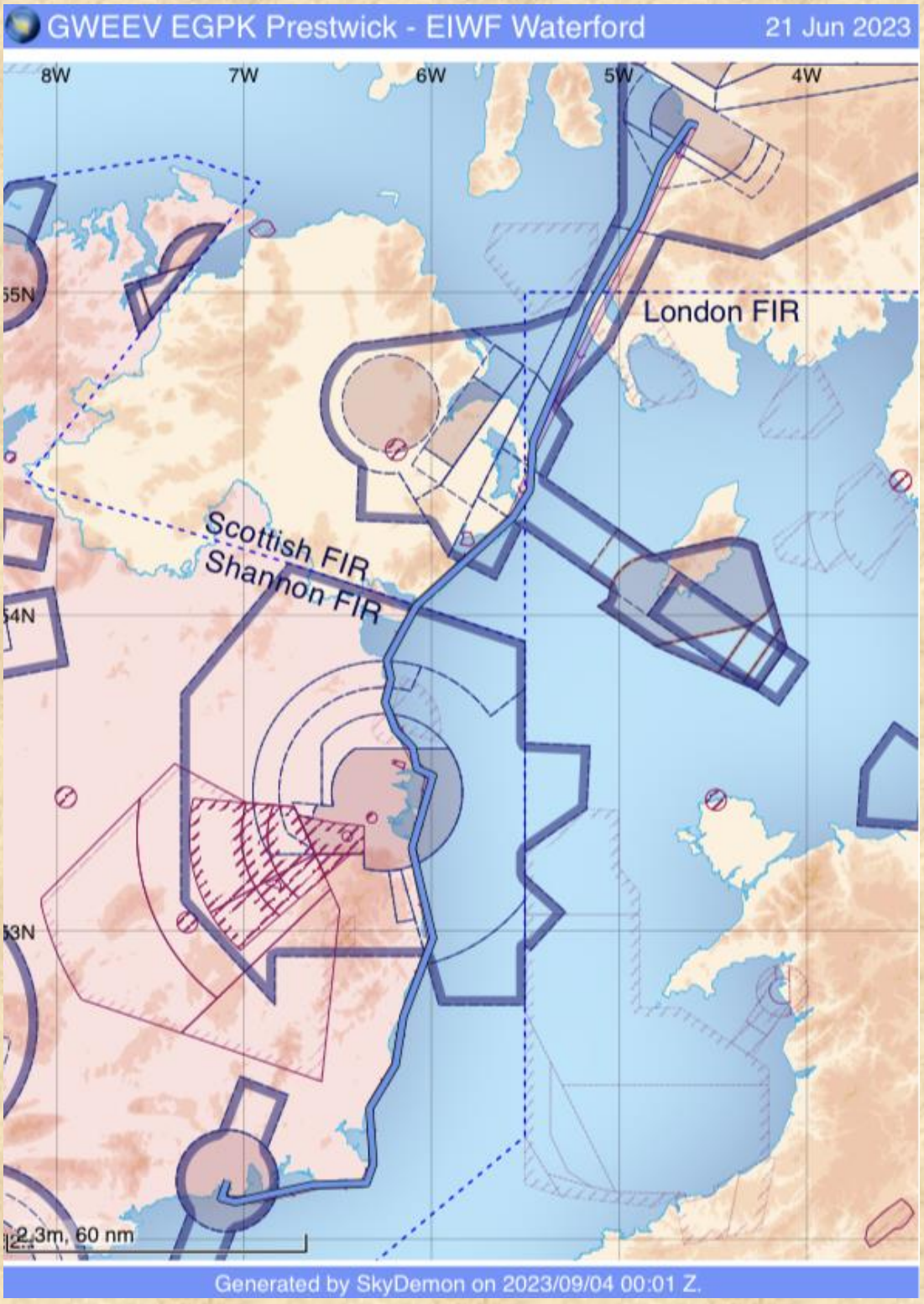
the end of the 19th century, with their invention being credited to an Irish born Admiral called Home Riggs Popham. With a final wind check which gave a 5 knot tailwind on a 1433M runway, we landed safely on Runway 03 and were welcomed to Waterford, parking close to the Fire Station, whose firemen also doubled as the refuellers, airside escorts, and terminal staff !! Time to have a break and enjoy the sunshine.

LOP #16 HOOK HEAD EIRE MARKER IN 1940'S

HOOK HEAD TODAY



LOP #17 BROWNSTONE HEAD – 2 NAPOLEONIC SIGNAL TOWERS AND A WW2 LOP



ACTUAL ROUTE FLOWN

LEG 1 STATISTICS

	DISTANCE	ELAPSED TIME	AVERAGE GROUND SPEED	FUEL BURN
PLANNED	255NM	1Hr 50Min	140Kts	66.3L
ACTUAL	263NM	1Hr 47Min	147Kts	66L

WATERFORD AIRPORT FOR CUSTOMS/IMMIGRATION, FUEL, AND REFRESHMENTS

LEG 2: WATERFORD – INISHEER

Airborne 0910Z (1010L) – Landed 1122Z (1222L)

After a short stop at friendly Waterford, where we filled back up to our full fuel load of 158L of 100LL Avgas once more by taking on board 64L at approximately £2.80 per Litre, we boarded and prepared for our next leg along the South coast of Ireland before heading North and winding our way up the Southwestern coastline for a scheduled relief stop at the Aran Islands. A call to Waterford Tower for start-up indicated more problems with data at Shannon Centre as they once again couldn't find our Flight Plan details, although Waterford had them. As Shannon were bringing in some IFR traffic to Waterford (which itself has no radar facilities available), we were cleared to taxy but told to expect a short delay whilst Shannon sorted themselves out and found us a SSR code. As we were heading out via Bunmahon VRP I offered to take a clearance not above 1000' AMSL if that would help. This was gratefully accepted and soon the clearance was given to take off, along with the elusive Shannon SSR code.

Our route took us outbound over Tramore beach, the scene of an unfortunate accident in July 1999 involving the crash of a Search & Rescue Dauphin helicopter which was trying to get back to Waterford Airport in foggy conditions around midnight. The aircraft flew into the sand dunes at around 80 Kts and resulted in the sad loss of all 4 crew on board. It was the first day of 24-hour operations for the helicopter from Waterford and the crew were operating outside normal airfield hours with no ATC available. The ground crew reported the deteriorating visibility to the crew and the pilot initially flew an ILS approach to the runway but was not visual at the decision height of 310' AMSL and carried out a missed approach. Getting low on fuel, the pilot elected to head out to sea and let down to a low level using the automated features of the aircraft so they could then visually follow a procedure called the 'Coast Procedure' over Tramore Bay and the sand dunes. The last message from the pilot was that he 'may have to land at Tramore' which the ground crew assumed would be the beach. No more was heard from the crew and the aircraft did not appear back at the airfield. The burning wreckage was sadly found by rescue workers at 2AM. There but for the grace of God we all go.

Back on our task, we quickly passed by and recorded 3 remaining cliff top LOPs at Dunbrattin Head (#18), Helvick Head (#19) and Ram Head (#20), none of which retain their EIRE markers (shown below). Having left the Waterford airspace, we were cheerfully wished well on our journey and transferred to our friends at Shannon, who at least seemed to have our details this time but did ask if we'd filed a plan. I replied that we had filed plans for all our legs in Ireland today and that Shannon seemed to be the only ones having problems with them for some reason. With the SkyDemon acknowledgements to hand I confirmed the address for Shannon that they'd gone to and this was confirmed as correct so it was a mystery as to why they weren't appearing in their system. Not a huge deal as we were VFR but I could imagine the difficulties we would have encountered if we'd been trying to fly under IFR. Our flight was in glorious sunshine with glorious scenery but far to the North the clouds in the frontal system could be seen, working their way across Ireland and towards the UK. Live rainfall radar pictures onboard confirmed the frontal system was nicely moving through the West coast too so it looked like the Met prediction was accurate. Perfect.

LOP #18 DUNBRATTIN HEAD

LOP #19 HELVICK HEAD

LOP #20 RAM HEAD

Passing Ram Head, we bid Shannon farewell once more and changed to Cork Approach as we'd require a clearance across their CTR to take in the next 7 waypoints. At our altitude of 1000' AMSL and with Runway 16 in use at Cork, no real problems were anticipated as we'd be well below the IFR climb out path for any departures. A couple of airliners and a couple of training aircraft were heard on the frequency but they all seemed to be making approaches in any case so would be well to the North of our route. Our next LOP was Knockadoon (#21), which also had a visible EIRE sign, and these would become a more frequent feature of the remaining LOPs on our journey.

LOP #21 KNOCKADOON AND EIRE MARKER

Next to come as we transited the Cork CTR were the LOP sites at Ballycotton (#22), Power Head (#23), Flat Head (#24), the spectacular Old Head of Kinsale (#25), and Seven Heads (#26). Ballycotton is still in use by the Irish Coast Guard, which seems to be a popular use for those LOPs which were located at harbours or lighthouses - recycling before it was ever a popular past time. Power Head LOP still remains, close to the Commission of Irish Lights facility, responsible for maritime signals around the coast. Built in 1870, unusually there is no lighthouse here as it was constructed purely as a Fog Signal Station, a role it carried out until 1970 when modern navigation systems deemed it no longer relevant. Flat Head also retains its LOP, perched on top of the cliff top with the tongue of rock and grass reaching out to the sea below it. A famous historical and maritime location, the Old Head of Kinsale has a 13th Century castle as well as being a known beacon/lighthouse location for thousands of years dating back to pre-Christian Ireland. The site is also the closest point to the sinking of the liner RMS Lusitania in 1915, which fell prey to a German U-Boat 11 miles out to sea. Sinking in just 18 minutes, 1,198 of the 1,959 passengers and crew on board sadly perished. The event arguably was a factor in bringing the USA in to World War 1 against Germany as many of those on board were their citizens. Hundreds of bodies were recovered, either at sea or washed up on the Irish coastline, and were recovered to Queenstown, now known as Cobh, close to Cork. Many are buried in the Queenstown cemetery and in 2015, 100 years after the barbaric sinking, a memorial was opened close to the existing Old Head lighthouse. Unfortunately the LOP on the Old Head has not lasted as well, with a Golf Club removing it in the name of development. Our final LOP in this group is Seven Heads which unusually has 2 LOPs located on the site. I've no idea why !!

LOP #22 BALLYCOTTON

LOP #23 POWER HEAD

LOP #24 FLAT HEAD

LOP #26 SEVEN HEADS

LOP #25 OLD HEAD OF KINSALE – WITH RMS LUSITANIA MEMORIAL

Leaving the care of Cork ATC at Galley Head (#27) LOP, we once more came back under the wing of Shannon Information. Good news, this time they knew who we were, bad news, they still had difficulty getting a SSR code for us out of the system !! With our intentions known, we would probably lose them anyway as we proceeded at around 1000' AMSL Westwards and then Northwards along the coast but they asked us to make a call at Dingle Bay, about 30 minutes flying time from our present position. It was also time for one of our regular progress reviews, ensuring that the time on route and fuel burn looked reasonable, as well as a 15 minute FREDA check of the aircraft and its systems. We'd been airborne from Waterford for 35 minutes, against a PLOG estimate of 36 minutes so the wind data was pretty accurate. Predicted fuel burn was 27L and the Electronic Flight Information System (EFIS) was showing 26L, so again a reasonably accurate check. With everything going well, our next LOP at Toe Head (#28) was soon in view, with the EIRE marker clearly marking the way for us.

LOP #27 GALLEY HEAD

LOP #28 TOE HEAD AND EIRE MARKER

More history beckoned, something which is never far away in Ireland, and our next LOP was Baltimore (#29). Not named after the US city, the name is from the anglicised Irish Gaelic 'Baile an Ti Mhor', a romantic sounding name for the 'town of the big house'. Once a seat of the Kings from one of Irelands oldest dynasties, it was home to the Kings of Tara and Munster in times gone by. An English Puritan colony was founded here in 1605 but it's also been a lucrative centre for the above-board pilchard fishing industry as well as a less wholesome base for Pirates throughout the early 1600's. The town was so embroiled in pirate activities that not only were the local justices involved but it's also rumoured that all the womenfolk were either pirates themselves or their wives or mistresses. Any successful 'business' will have its competitors and pretty soon the operation came under pressure from the Barbary Pirates from North Africa. In 1631, the Barbary's came calling and raided the town in the infamous 'Sacking of Baltimore'. Up to 250 English settlers and Irish locals were abducted and sold in to the slave trade, with only a handful ever seeing Ireland again. Those lucky enough to escape fled to other parts of the coastline and the town was left in ruins for nearly 170 years. Prosperity soon returned but another crushing blow was delivered when many people were lost to the Irish famine. Nowadays, it's a centre for tourism with many holiday homes and outdoor activities attracting visitors. Scuba diving is also popular with many wrecks in the surrounding area, including a WW2 U-Boat, U-260, and several freight ships to explore. The Baltimore LOP and EIRE marker is still present, however it's one of the more difficult ones to see as it's on a grassy and rocky slope and overgrown. See if you can spot it in the picture !!

LOP #29 BALTIMORE AND EIRE MARKER

We were now entering the dramatic and rugged Southwest coast of Ireland, out of contact with Shannon Information due to our altitude and terrain shielding from the ATC radio sites and with only the sound of aircraft somewhere above us occasionally interrupting the radio silence, through which we could relay if required. Mountainous fingers stretched out to the sea with, I'm sure, frequent wave and wind lashed rocky cliffs, islands, and outcrops forming our vista of County Cork and in to County Kerry. It was as if we had left civilization and entered a different world. Little wonder that some of the filming for 'Star Wars - The Force Awakens' was filmed on one of the nearby islands. Turning Northwards up the Wild Atlantic coast, remnants of the poor weather hung around with some rain showers and low broken clouds off to our right hugging some of the close by mountains and hills. Visibility remained good however and apart from some very minor deviations there were no drastic measures required to avoid the rain and cloud. This was a summer's day and you could almost feel the drop in temperature as we left the bright sunshine for more normal British Isles weather conditions. Imagine then how the Coast Watching personnel must have felt manning their spartan LOPs in the depths of winter, constantly lashed by gale force winds, rain, and snow. Although not a true branch of the Irish military forces, it is little wonder that these men were held in high esteem throughout the land during the time of 'The Emergency'. Writing in an Irish Defence Force magazine in 1996, an article titled 'I Praise the Coast Watcher' stated:

''This, then, was why I praise the unsung Coast Watcher.

Because he performs a dull and necessary task with resolution and efficiency.

Because with only the immediate supervision of a Corporal, he carries out his task as thoroughly as if his Look Out Post were a large and well staffed Military Post.

Because his tour of duty is frequently performed under conditions which the ordinary serviceman cannot even imagine.

I praise him because he is unknown.

I praise him because he, truly, is our first line of defence.''

A 5NM traverse of Roaringwater Bay brings us to Mizen Head (#30), traditionally known as the most Southerly point on mainland Ireland, although it's actually not. The location gets a mention in the 2AD geographical writings of Ptolemy, where it is referred to as the Southern Headland in ancient Greek. Less likely to mirror the truth is its place in Irish folklore, when Balor, a one eyed venomous and malevolent leader of a supernatural race called the Formorians, was defeated in battle by the God called Lugh, who also happened to be his Grandson. You can kind of sympathise with Lugh when you find out that Balor was given a prophecy which foretold that a Grandson would kill him. To prevent this, Balor locked up his daughter Eithne in a tower in his lair on Tory Island so that she could not get pregnant. Being a pretty repugnant kind of a chap, Balor then stole a magical cow of abundance from a fellow called Mackineely who lived on the mainland. Mackineely finds out that the only way he can get the cow back is when Balor is dead. Aware of the prophecy, Mackineely breaks in to tower with the help of a female spirit called Birog and impregnates Eithne who gives birth to 3 sons. Balor has the babies thrown into the sea to drown but one, Lugh, survives without his knowledge and is eventually fostered by the local blacksmith, who also happens to be the child's uncle. After a chance encounter with his Grandson, a battle ensues and after being chased to Mizen Head, Balor is killed and beheaded by Lugh and the head is placed on a large rock which then shatters and forms a head shaped curve in the cliff. Unsurprisingly, many other locations in Ireland also claim to be the place where this battle played out so I guess one of them could be telling the truth.

LOP #30 MIZEN HEAD – WITH THE SHAPE OF BALOR'S HEAD IN THE CLIFF

Heading towards Bantry Bay, our next LOP is at Sheep's Head (#31) on a peninsula which features an 88KM long walking trail combining rugged hills and cliffs. Much easier to do it in a Vans RV8 I'd say. The LOP features a precariously placed EIRE marker which must have been quite a challenge to build unless you have the poise of a mountain goat.

LOP #31 SHEEP'S HEAD AND EIRE MARKER

Coming around the back of a localised shower, we traverse Bantry Bay to Dursey Island (#32). The island is unique as it's connected to the mainland by a small cable car, the only one to be found in Ireland. The island is certainly a place for those who love going 'off grid', with no shops, pubs, or restaurants. Even the Post Office has now closed. Numerous prehistoric sites can be found on the island, including burial chambers and cup and ring stone markings. More modern history tells of a monastery and graveyard, both now ruined, as well as a castle site which was destroyed during the Nine Years War with all 300 castle occupants and Dursey islanders being put to the sword. The clan who owned the castle quickly fled from County Cork to seek sanctuary in County Leitrim, but with frequent attacks on the convoy along the way, only around 35 of the 1000 people that set out made it to safety. Horrible histories abound in this part of the world indeed. The LOP for Dursey was situated in a Napoleonic signal tower on the highest part of the island, with the EIRE sign close by and still hanging on to its existence. Avoiding some low clouds and showers, it was quite difficult to locate this EIRE marker and a couple of orbits were made whilst we scanned the ground below with beady eyes. Just as we gave up and headed for our next waypoint, it flashed below us by luck. In more recent history, whether it was due to bad weather, or down to the malevolent eye of Balor seeking vengeance, a German Junkers JU88 crashed on Dursey Island in 1943, killing all on board.

From Dursey, we once more traversed a fjord like scene to Lamb's Head (#33), another location with an EIRE marker perched on the slopes of a cliff. Situated on the famous 'Ring of Kerry', the peninsula juts far out in to the Atlantic, ending in the 300' cliffs we were approaching with a small fishing harbour close by. The guidebooks seem to give very little information on this area. Wild and rugged seems to be the consensus, which matches our impressions !!

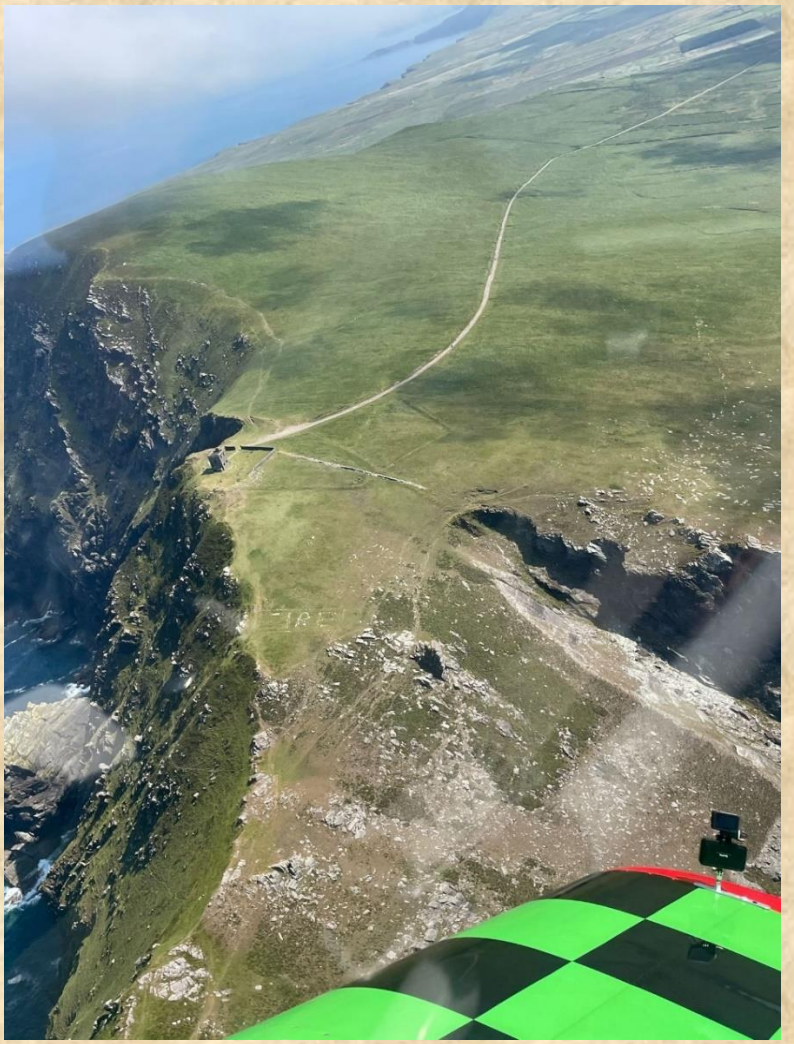
LOP #32 DURSEY ISLAND – GLOOMY !! **LOP #33 LAMB'S HEAD – RUGGED !!**

With the primeval looking rocky Skellig Islands jutting out of the Atlantic like shark's fins off to our port side, we hug the mainland coast and Bolus Mountain to skirt around the LOP on Bolus Head (#34), sited beside an old barracks block from another time. The back of the frontal weather system was still loitering just inland, with low lying puffs of cloud near the coast and more intense Cumulus forming up over the peaks. Looking Northwards up the coast, where our journey lay, showed blue skies so there were no current worries on that front, if you forgive the pun. Not visible to us, but just inland on the coast is the local road head and car park, where those wishing to walk to the barracks and take in the views and sea air can leave their vehicles. There you can also find a memorial to the crew of a US Navy Patrol Squadron (VB110) Consolidated PB4Y Liberator aircraft #63939 which crashed into the sea just off Little Skellig Island in February 1944, killing all 11 on board. None of the airmen were recovered and their names are also remembered on the memorial walls at the Cambridge American Cemetery in England. Information on the accident is sparse as the aircraft wreckage was not recovered either, but the lighthouse keepers at Great Skellig Island reported that the aircraft had hit the rocky island top, presumably then carrying on in a damaged state to its eventual resting place below the waves. The visibility was reported as 7-8 miles with a cloud base of 2300' AMSL and 20-30 Knot North Northeasterly winds. No one will ever know what happened, but as they say in Ireland – **'NA DHEAMIS DHEARMAD' – LEST WE FORGET**.

PB4Y LIBERATOR CREW FROM VB110 SQUADRON – LOST AT SEA 1944

LOP # 34 BOLUS HEAD – BARRACKS AND CLOUD BUILD UPS

Dingle Bay was to be our next water crossing but first we passed by Bray Head (#35), located on Valentia Island with the remains of a Napoleonic Watching Tower, where it's said that 'on a clear day, you can see forever'. No wonder then that Irish Coast Watching Service commandeered it for duty during WW2. The EIRE marker is just visible nearby however it is clearly suffering from the effects of 80 years exposure to the elements coming in from the Atlantic. The main claim to fame of Valentia is that near this site the first undersea Trans-Atlantic cable came ashore in 1866, a period when Valentia was the centre of the World for communications. After passing by Bray, Shannon Information could be heard coming in on the radio and so we established communications with them again, reporting operations as normal and updating them on our progress. Progress checks on timings and fuel also took place in the cockpit, with an elapsed time of 1 hour 10 minutes against an expected 1 hour 8 minutes (explained possibly by the Dursey Island orbits) and an actual fuel burn of 41L against a predicted 42L. Approximately 1 more hour to go before we could put our feet up on Inisheer for a short while, but it would be silly to wish away the time with such magnificent views from our aerial perch. At this point, had we known, we'd have set course Eastwards along the Southern shore of Dingle Bay for the out of sequence LOP #83 at Feaklecally, but we were blissfully unaware, and in any case, it apparently doesn't have an EIRE marker anymore !!

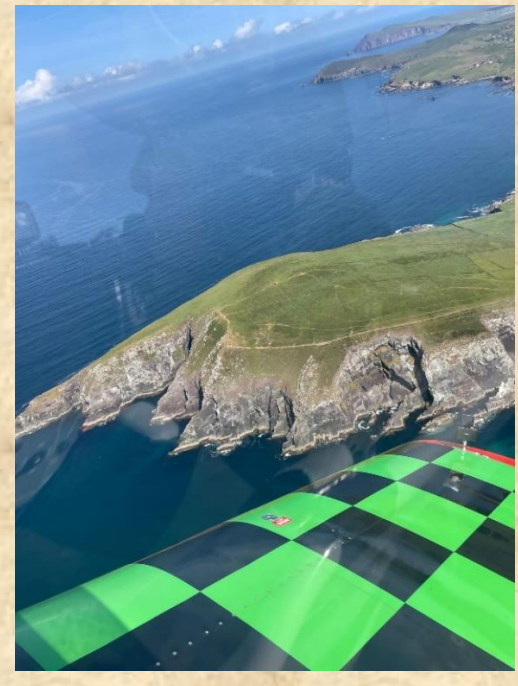


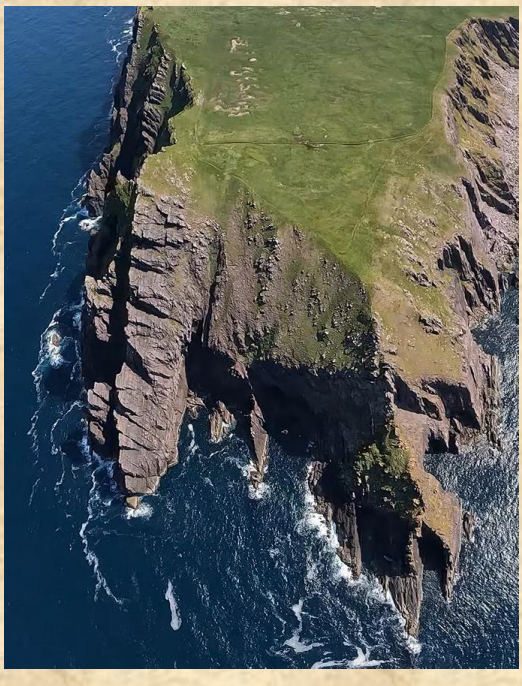
LOP #35 BRAY HEAD AND FADING EIRE MARKER

Coasting in on the North shore of Dingle Bay, we made an orbit of Eask Head (#36) for camera angle purposes before passing around the scenic and famous 30 mile long Dingle peninsula taking in the LOP sites at Parkmore (#37), Dunmore Head (#38), Sybil Head (#39), and Brandon Head (#40). The dramatic cliffs and jagged rocks jutting from the sea were breathtaking as were the views across to the nearby Blaskett Islands. You could almost smell the salty sea air in the cockpit, although for potential engine failure management purposes we really weren't flying that low !!

LOP #36 EASK HEAD

LOP #37 PARKMORE



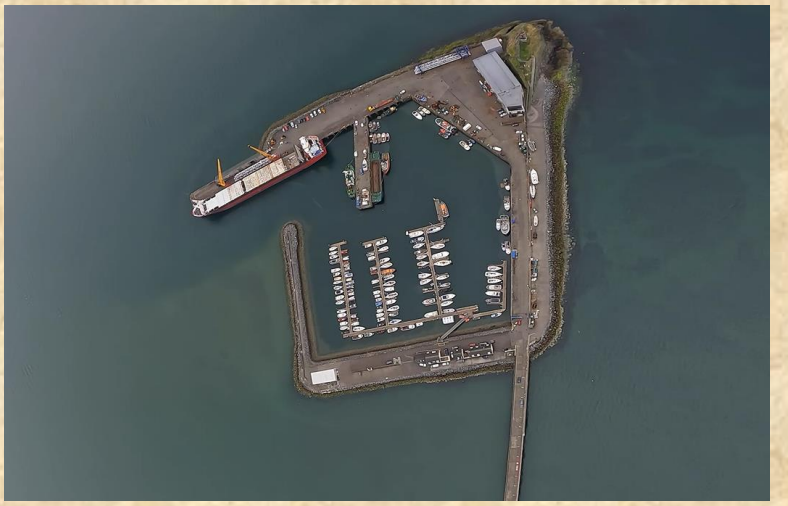


LOP #38 DUNMORE HEAD **LOP #39 SYBIL HEAD**

On our right we passed by Ireland's 8th highest mountain reaching up to 2760' AMSL, the sandstone and quartz Mount Brandon, which also forms the end of a pilgrimage route and is named after St Brendan. Since pre-historic times people have been making the long trek to the Mount, although its popularity grew in the medieval ages. On the summit, those who have made the trip are rewarded with fantastic views (for a few days a year anyway), a holy well dedicated to the great man himself, and the remains of several structures used by pilgrims over the years. A standing stone was also located at the edge of the cliff, but now gone to the valley floor below presumably, which was said to provide a cure for rheumatism and back ache if you rubbed your back on it and said the appropriate prayers to the powers above. Of more interest to us was Brandon Point (#40) located on the coast far below, another LOP ticked off our list.

From here, the next LOP was Fenit (#41) sitting on Tralee Bay, unusual for the Western series of locations in that it was not situated on a headland or high ground but in a harbour at sea level. The previously mentioned St Brendan was reportedly born a stone's throw away from it. Not surprisingly the harbour has a long maritime history, including refugee Spanish galleons from the ill-fated Armada surrendering in 1588, 19th Century emigrant ships transporting thousands of people from Ireland to the 'New World' in Canada and the US, and more recently an ill-fated attempt by Irish Nationalist Roger Casement to land arms supplied from Germany to aid the 1916 Easter Rising. Casement was landed by a German submarine just North of Fenit, whilst the gun running ship called Auld Norge never made it as far as Kerry and was scuttled by the German Captain in Cork Harbour to prevent British Forces getting their hands on the arms cache. Casement was subsequently arrested and convicted for High Treason, and shortly afterwards was executed. To add an aviation connection, the Irish Government named the Irish Air Corps airfield at Baldonnel near Dublin as Casement in honour of his part played in obtaining Irish independence. History was to repeat itself in 1984 when a gun running boat called Marita Ann was stopped by Authorities off the coast and found to be carrying arms for the Provisional Irish Republican Army. One of those arrested was Martin Ferris who served 10 years in prison but is now a Teachta Dala (TD), similar to a UK Member of Parliament, and represents Kerry in the Dail Eireann, the Irish Parliament. From Fenit and its checkered past, it was Northwards along the mainland coast again to Kerry Head (#42) and Leck Head (#43) before crossing

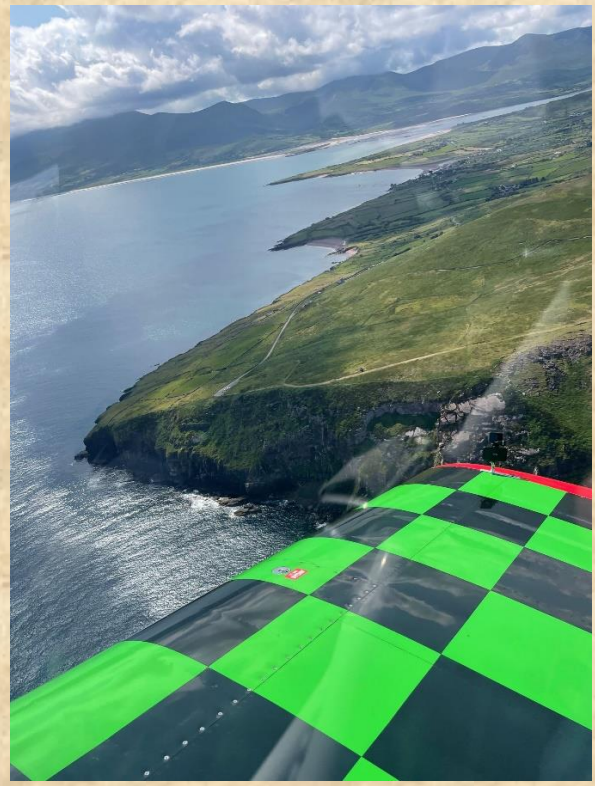
the wide River Shannon estuary to Kilcreadun Point (#44). Shannon Information double checked that we'd be staying below the Shannon Control Area (CTA) with a base of 2500' AMSL and outside the CTR, both of which we would be complying with. Happy with that knowledge, he said there was no need for us to call Shannon Approach or Tower, which had been our plan all along in any case !! With around 20 minutes to our landing at Inisheer, it was worth another elapsed time and fuel burn confidence check too. Although Inisheer and Shannon Airport were equidistant, there would be no fuel at the former if the factual figures were not favourable and we still had to reach Sligo after that for the next Avgas pick up, so having Shannon nearby as an alternate would work out if needed for contingency. Our actual elapsed time was 1 hour 41 minutes since leaving Waterford and fuel burn calculated by the EFIS was 63L, against an expected 1 hour 38 minutes and 60L. Accurate enough against the plan and working the fuel required forward for our remaining legs showed that we should have more than enough fuel and reserve on landing at Sligo. On we proceed !!



LOP # 41 FENIT

LOP #42 KERRY HEAD

LOP #44 KILCREADUN POINT



LOP #40 BRANDON HEAD

LOP #43 LECK HEAD

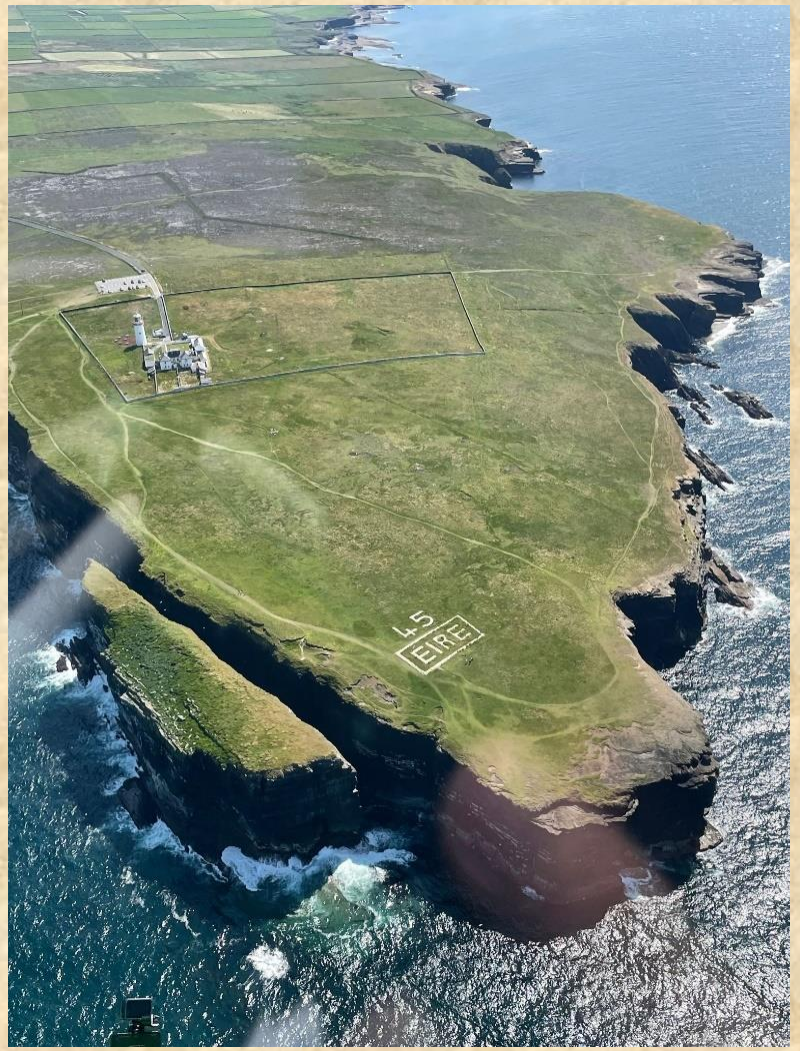
It was time for another EIRE marker and the recently restored and dazzling whitewashed symbol at Loop Head (#45) in County Clare was a good choice. The Loop Head area has earned several tourism awards, such as the EU European Destination of Excellence in 2013 and an Irish Times 'Best Place to Holiday in Ireland' in the same year, as well as being shortlisted for many others. To its credit, it prides itself in developing and promoting sustainable tourism, nominated in the World Responsible Tourism Awards, designated as one of the World's Top 100 Global Sustainable Destinations and a Gold Medal winner in the Irish Responsible Tourism Awards in 2015. Like a previous LOP location, a Star Wars film, 'The Last Jedi', was filmed in part here. Close to the EIRE marker and the ruined remains of the LOP stands the 23M high Loop Head Lighthouse looking out to sea as well as towards Connemara, a site which has been in use since 1670 although the 'modern' tower only dates from 1854. Open to the public as a successful tourist attraction since 2011, the lighthouse candle burning lamps were replaced and run on electricity since 1971, with the facility finally dispensing with lighthouse keepers in 1991when it became automated. Loop Head is also one of 3 locations in Ireland which transmits a Differential Global Position System (DGPS) signal improving the accuracy and integrity of the normal GPS signals for mariners around the coastline and beyond.

Flying over the geological formations of cliffs, sea stacks, natural bridges, and green fields, we soon came to St George's Head (#46), then passing many small bays and inlets to reach Hags Head (#47). Inisheer and the Aran Islands lay like jewels in the ocean only a few miles to port but we had a few more LOPs to crack before we could turn South again for a landing there. Heading towards the next LOP and EIRE marker at Black Head (#48), which is actually a grey granite hill and promontory, we knew that finding this one would be a bit of a challenge to spot, not only because it was reported as being barely visible but because it would be against a background of grey slabs. And so it would prove to be although we did eventually spot it after much eye straining. Across Galway Bay, our next point was Spiddall (#49), with nothing to see except where the LOP would have been, all swallowed up by dwellings, gardens and farm plots now. From Spiddall, it was a short hop back across Galway

Bay as we changed from Shannon Information to the Aran Islands common frequency on 123.00 where you prefix all your calls with the actual airfield you're operating from. There was no response from the Islander who was presumably long gone now, but one of the ground staff gave us advisory weather and airfield information. Joining overhead the airfield, we let down to the South, turning from base leg to final over the beached shipwreck of the 'Plassey', made famous in the opening titles of the irreverent Irish TV sitcom 'Father Ted'. Flying over a turquoise sea and small white sandy beach that wouldn't have looked out place in the Caribbean, we touched down safely on the 530M sloping runway and taxied to the small but compact terminal building that looked like a house. A sign declared 'Failte go dti Innis Oirr' or 'Welcome to Inisheer' when translated. We just knew it should have read 'Welcome to Craggy Island, Home of Fathers Ted, Jack, and Dougal'.

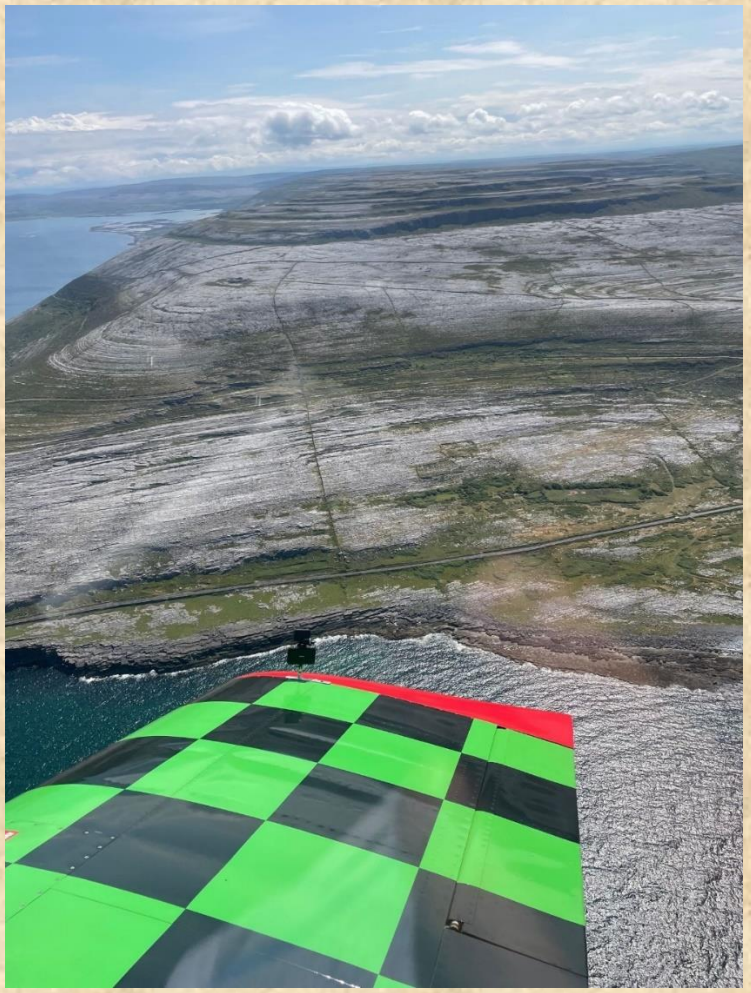
LOP #46 ST GEORGE'S HEAD

LOP #47 HAGS HEAD



LOP #45 LOOP HEAD AND EIRE MARKER – STUNNINGLY RESTORED

LOP #49 SPIDDAL



LOP #48 BLACK HEAD AND EIRE MARKER – CAN YOU SPOT IT ? THERE'S A CLUE BELOW

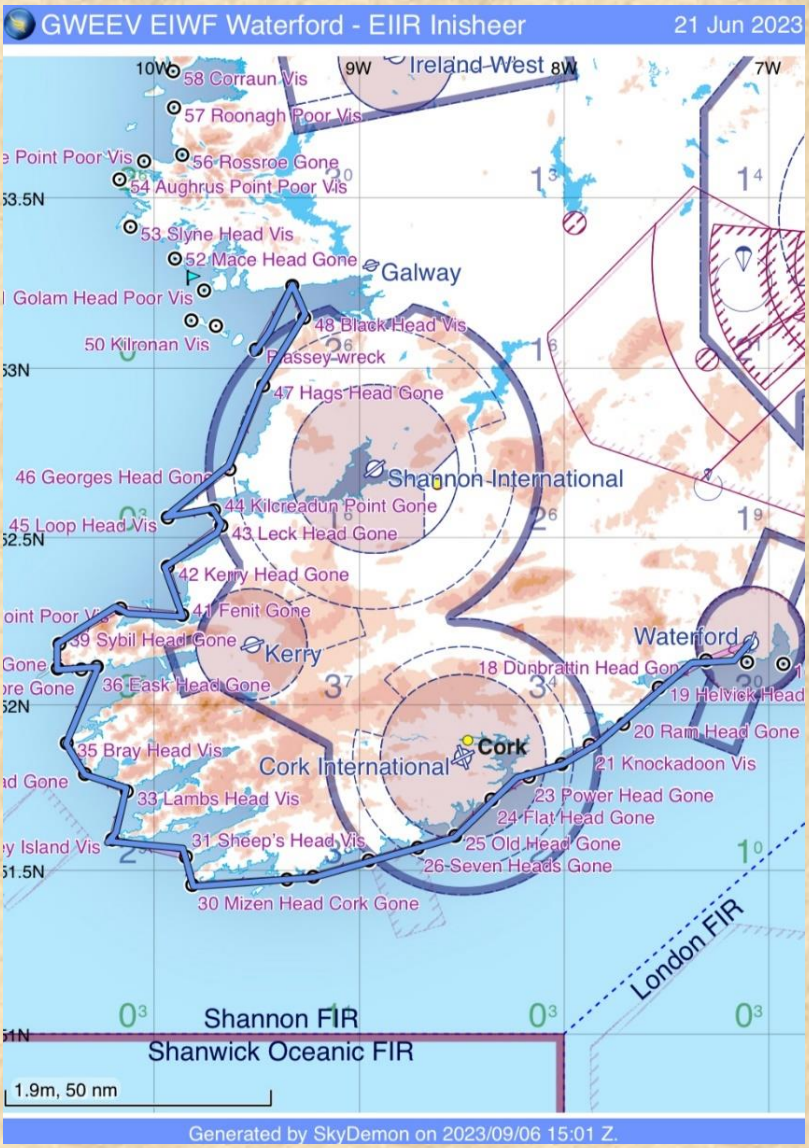
LOOK CLOSELY ABOVE THE ROAD AT THE CENTRE

BASE LEG TO FINAL FOR RUNWAY 31 AT INISHEER – THE PLASSEY WRECK IS A GREAT WAYPOINT

‘WEE VANS’ BASKING BY THE AIRPORT TERMINAL IN THE INISHEER SUNSHINE

DO YOU MIND IF I BORROW YOUR TOILET ?

WHAT A SKY !!



ACTUAL ROUTE FLOWN

LEG 2 STATISTICS

	DISTANCE	ELAPSED TIME	AVERAGE GROUND SPEED	FUEL BURN
PLANNED	303NM	2Hr 06Min	144Kts	74.5L
ACTUAL	325NM	2Hr 12Min	147Kts	80L

The actual distance flown was a little more than planned, but down to the fact that the planned route was from point to point, and on several occasions we carried out orbits to confirm LOP sightings, it's not a huge surprise. Extra fuel burn is also explained by an increase in speed for the last 15-20 minutes of the flight and thus a higher RPM setting. Although the aircraft has an endurance of 4 hours plus reserves, sometimes being a gentleman of a certain age means that the pilot cannot match that performance and needs to expedite the arrival !!

LEGS 3 & 4: INISHEER – INISHMAAN – INISHMORE

Airborne 1144Z (1244L) – Landed 1140Z (1240L) – Airborne 1205Z (1305L) – Landed 1209Z (1309L)

Apart from a comfort stop, stretching the legs, and changing out of a hot flying suit which was becoming uncomfortable in the sweltering greenhouse heat of a RV8 cockpit, there was really no mission need to land on any of the Aran Islands, however we would be:

1) flying over them anyway,
2) they are scenically stunning,
3) the people are friendly and welcoming,
4) you can learn a little Irish Gaelic, although not on the RT please,
5) they're a long way from home so being in the area gives an ideal opportunity to visit, and finally.
6) it's a great chance to get them in your log book !!

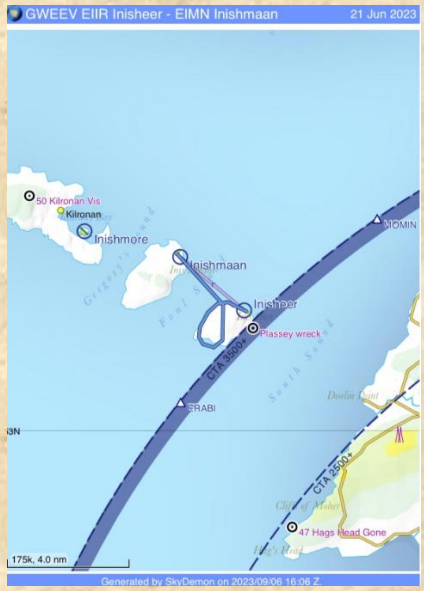
After a short break then in Inisheer, where we discovered we'd just missed the island 'tour bus', namely a deluxe covered farm cart drawn by a horse, and with one eye on the clock to meet closing times at various subsequent airfields on our route, we fired up the Lycoming and departed for nearby Inishmaan. Airborne on Runway 31, it's a theoretical 2 minute 2.7NM hop to land on Runway 33 at Inishmaan, however once airborne we doubled back for a quick orbit to view the myriad of small fields and small holdings on Inisheer, all marked out with stone boundary walls. Another cracking beach and seascape on final and another undulating 530M runway saw us pull up to slightly bigger 'house' terminal building. A quick hello to the ground staff and a chat about island life and tourism and it was time to get airborne again, but not before we'd been warned to watch out for the Inishmore islanders, who were categorized as weird. Inter-island rivalry is alive and well in this part of Ireland !!. A slightly further trip of 3.2NM but still planned at a 2 minute flight and we were airborne again using less than half the runway with a strong onshore breeze forming. One thing to notice about flights where you need to start thinking about slowing down and getting your head in to landing mode straight away means that you don't get very high, which can make sighting the runway a little difficult. So it proved in this case, as despite knowing where Inishmore Runway 32 should be, I couldn't actually see. A little dog leg or two and a bit more height soon fixed that and we positioned for another straight in. This was by far the trickiest runway at only 490M but also with a marked upslope to begin with, a crest in the middle and then an invisible downslope on the other side. Good fun and challenging though. Another short taxy and 'marshalled' to park on the grass instead of in front of the most formal airport terminals on these islands, we shut down again for another meeting with the locals. The airport manager was particularly keen to hear about the Dawn to Dusk competition and promised to visit the Pooley's website to find out more !!

‘CRAGGY ISLAND’ – INIS OIRR – EIIR

INIS MEAIN – EIMN

ARAINN OR INIS MOR - EIIM

ARAN ISLANDS ARRIVAL AND DEPARTURE



ARAN ISLANDS INTERNAL FLIGHT ROUTES

LEG 3 & 4 STATISTICS

INISHEER – INISHMAAN

	DISTANCE	ELAPSED TIME	AVERAGE GROUND SPEED	FUEL BURN
PLANNED	2.7NM	02Min	150Kts	8.4L
ACTUAL	6.7NM	06Min	71Kts	4.0L

INISHMAAN - INISHMOR

	DISTANCE	ELAPSED TIME	AVERAGE GROUND SPEED	FUEL BURN
PLANNED	3.2NM	02Min	150Kts	8.4L
ACTUAL	3.8NM	04Min	62Kts	3.0L

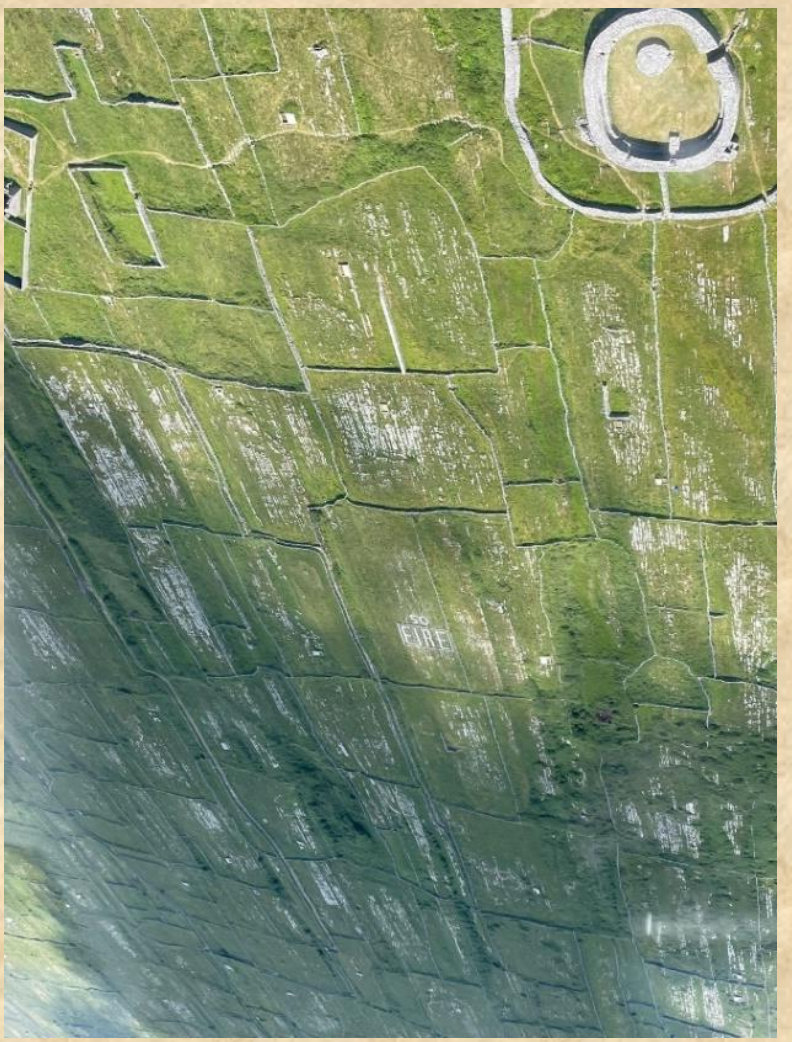
LEG 5: INISHMORE – SLIGO

Airborne 1232Z (1332L) – Landed 1345Z (1445L)

Saying goodbye with my newly found Gaelic, 'Slan go foil', we were airborne once again to continue our quest for the LOPs and EIRE markers. The Aran Islands, and in particular Inishmore, are unique in that they have 2 EIRE markers in very close proximity and that they also have the same numerical designator #50. I guess that would be confusing to any Allied crew heading over these places during 'The Emergency'. It may have been a moot point of course since there were no airfields on the islands back then and certainly nowhere to land amongst the handkerchief sized walled fields.

Departing to the Northwest, we were already aware our first EIRE marker at Kilronan (#50) was going to be a difficult one to spot, especially right after takeoff, so a short detour to the South coast of the island and a loop back North to orbit the location would be the best plan. Limestone pavements with crisscrossing cracks called 'grikes' abound this surreally landscaped island, the largest of the Aran Islands and 2nd largest island lying off the Irish coast. Fortunately, close by the marker is a large circular structure which is a wonderfully preserved fort called Dun Eochla, which would hopefully

help us get our bearings to find the EIRE marker. Dating from somewhere between 550AD-800AD, it is also the highest point on Inishmore and is made up of 2 circular stone built concentric walls. The inner wall is 5M high and 3.5M thick and was home to the local Chieftain, or Taoiseach, the latter name still being in use today for the leader of the Irish Parliament. The location of the fort is between the low-level fields to the North of the island where livestock spent the summers and the cliffs where they spent the winter. No doubt the remote location of the fort has helped with its preservation, which we can still marvel at today. A second, more modern-looking, circular building is also close by but I have no idea as to its history or function. Using both these visual 'navigational aids', a quick right-hand orbit soon confirmed the presence of the EIRE marker, which actually stood out relatively clearly against the sparse green vegetation.



LOP #50 KILRONAN AND EIRE MARKER WITH DUN EOCHLA TOP RIGHT

Heading Southwards to the coast again, we planned to take in a couple of more sights before picking up the second EIRE marker at the Western end of the island, unnamed but also with #50 visible. First, we passed by Dun Duchathair, the 'Black Fort', comprising of a limestone defensive terraced wall blocking off a cliff promontory, with the remains of early dwelling houses called Clochans sitting behind the wall and above the waves. This fort has had very little in the way of archaeological excavation as yet but is thought to probably be a contemporary of the next fort we would pass, a second semicircular prehistoric ringed fort set on the edge of the 300' cliffs and called Dun Aengus.

LIMESTONE PAVEMENTS FORM MUCH OF INISHMORE, DUN DUCHATHAIR ON BOTTOM LEFT

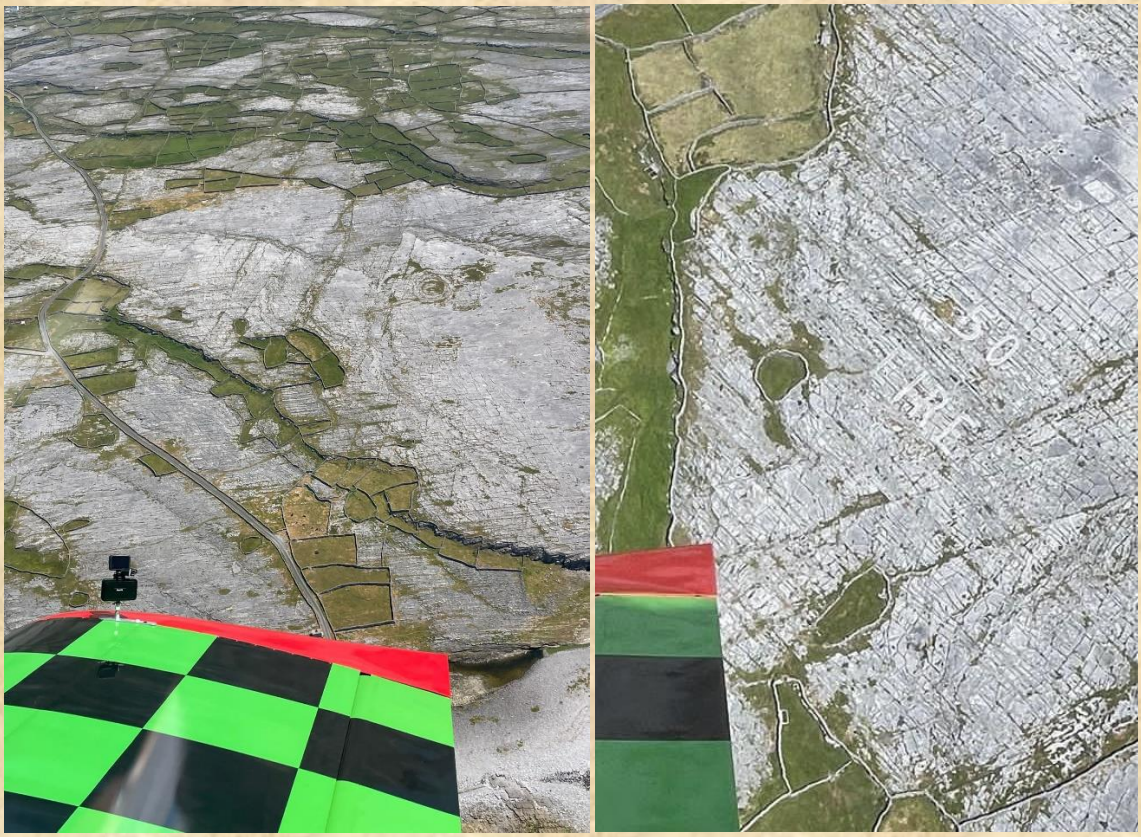
Continuing along the 100M cliffs Westwards, our next sighting features a naturally formed rectangular blowhole in the rocks below the cliff face. It is so perfectly formed that it almost looks like it is man made. Named colloquially as the Serpents Lair or The Wormhole, it has been used several times for the Red Bull World Cliff Diving series, where daredevil divers perform from a 29M high platform above the water and dive into it. Thanks, but no thanks !!

THE SERPENTS LAIR AT POLL na bPEIST

Next up is Dun Aengus, and Irish story telling legends recall that it was named after Aenghus, the leader of a people called the Fir Bolg and King of the Clan Umoir, who were one of the first races to inhabit Ireland. The fort is believed to have been most heavily populated between 1100BC and 700BC but was only used intermittently thereafter up until the medieval era. The semicircular shape is unusual and debate continues amongst scholars whether this was the original shape or whether it formed a complete circle and part of it has been lost to cliff collapses and erosion through the ages. Featuring 3 defensive walls, it also has further defensive features such as a 700BC 'Chevaux de Frise', featuring a section of upright pointed stones in front of the walls. This was placed to impede horse mounted attackers and make their approach difficult and vulnerable.

DUN AENGUS

Soon however we were at the Western tip of the island and trying hard to spot the next EIRE marker, not easy with a rocky limestone pavement land surface and a rocky man-made sign somewhere below. Again, the use of GPS to find the location, coupled with a quick check of the printed aerial photo was a great help and, on our way back Eastwards, it was spotted blending into the surface below. This was the original EIRE sign for the Aran Islands but it's easy to see why a replacement or secondary marker was called for as it would have been very difficult to spot, regardless of the weather conditions.



LOP #50 (THE ORIGINAL) AND EIRE MARKER – SOMEWHERE !!

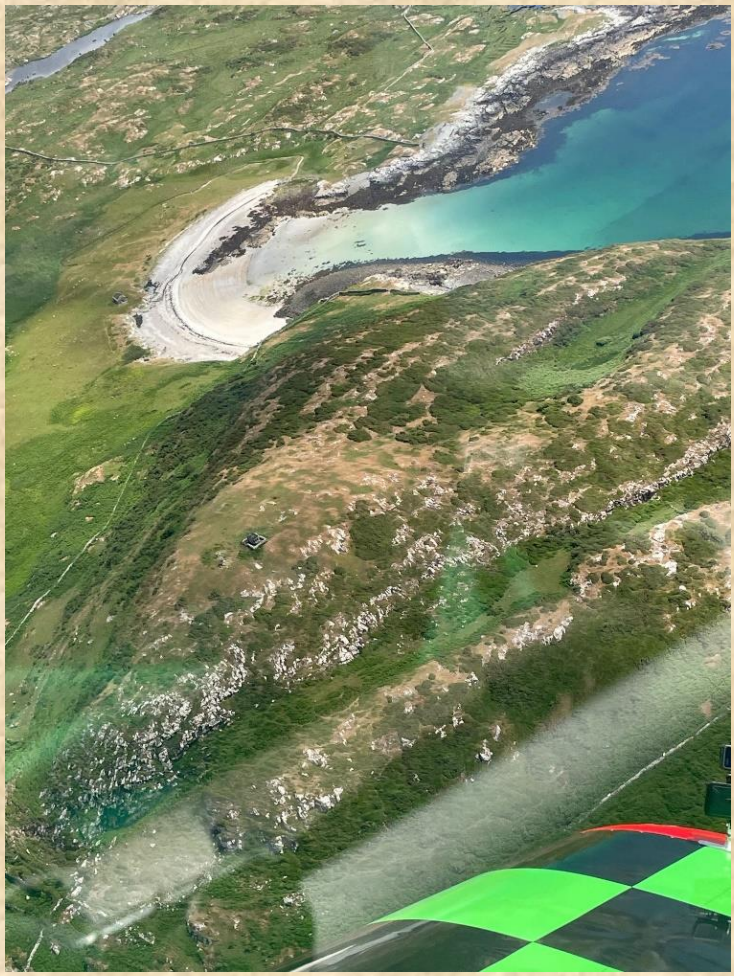
Over the sun kissed Irish waters again, we come to the tropical looking landscape of Golam Head (#51) where there is reportedly a barely visible EIRE marker. Unfortunately, prior research was no help here as I couldn't find it shown in any website photographs or maps nor on aerial photographs from mapping Apps. The best we could do was overfly the site co-ordinates and hope we spotted something, but alas it was not to be. This one had got away. (*Note: subsequent information received indicates that this marker is no longer visible, so no surprise we didn't see it.)*

LOP #51 GOLAM HEAD – TROPICAL BUT FRUITLESS

Our flight continued Northwest over glistening Connemara seas, studded with islands and white beaches, till we passed Mace Head (#52) where a wide orbit was required to try and find the location of the LOP, although there was no surviving EIRE marker. Mace Head lays claim to being one of the oldest gaseous mercury recording stations in the World, a metal which is vital to monitor as it is a potential indicator of man-made pollution levels. Mainly free of any of the man-made pollutants found in more populated parts of the World, the Mace Head Atmospheric Research Station is seen as an ideal place to study and record high quality samples and measurements on behalf of both global and European Meteorological agencies. I wonder what they'll observe in the future years.

LOP # 52 MACE HEAD – WITH ATMOSPHERIC RESEARCH STATION FAR LEFT

Across Ballyconneely Bay, our next EIRE marker was to be found on top of a small coastal hill called Slyne Head (#53). Not far from here and inland towards Clifden was the landing site of the first non-stop Transatlantic flight, made from St Johns in Newfoundland, Canada, by Alcock and Brown in a Vickers Vimy converted bomber in 1919. After encountering poor weather enroute and almost spinning through cloud into the sea until they broke cloud in a 90 degree bank at around 100' AMSL, which they managed to recover from, it must have been a relief to see the landmass of Ireland come out of the gloom after having been airborne for just short of 16 hours. Unsure of their actual position, the navigator Brown saw the Marconi radio masts at Clifden and pilot Alcock circled the aircraft looking for a landing spot. Firing flares to warn the locals, a visually suitable green field was located and the aircraft brought in for landing. Unfortunately the green field was actually a marshy area forming part of the Derrigimlagh Bog and on landing the Vimy's nose sank in to the soft ground, throwing the tail into the air. Both aviators were, however, safe and received a hero's welcome, as well as being knighted and winning a £10,000 prize set by the Daily Mail newspaper. Today, Transatlantic flight is an accepted part of daily life for many of us, but happily both the men and the significant flight they undertook are remembered by an enigmatic egg-shaped memorial as well as a wing shaped memorial close by their landing 'airfield'.



LOP #53 SLYNE HEAD AND FADED EIRE MARKER ON HILLTOP

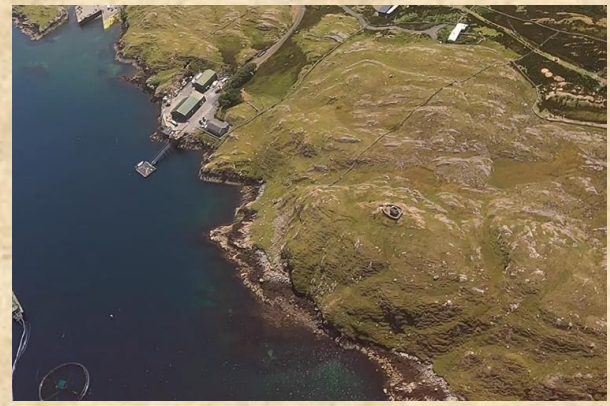
Another flight across a sparkling bay and we came to Aughrus Point (#54), which was another EIRE marker reported to be barely visible and lying in a rocky landscape close to Aughrusbeg Lough. Although staring straight at it and using the prepared aerial photograph of the waypoint, there was just no way of spotting this one. Even if you look at the zoomed in photo on the right below and can possibly just make out the formation of a letter 'R', it's not a marker that we were able to identify at the time. We did, however, fly over the site, in keeping with our objective, and no doubt if we had done it during 'The Emergency', it may have stood out a lot more.

LOP #54 AUGHRUS POINT AND A VERY VERY HARD TO SPOT EIRE MARKER

Renvyle Point (#55) was our next challenge and it certainly was, with an extremely faint semi visible EIRE marker relief showing in the green grass next to a straight gulley running down to the beach. This was another one that you wouldn't even know was there unless you had prior information.

LOP #55 RENVYLE POINT AND EIRE MARKER – BUT ONLY JUST

Further LOP sites at Rossroe (#56) and Roonagh Point (#57) revealed no EIRE signs, as expected, and our flight cruised past scenic Clare Island to port as we crossed over Clew Bay towards Achill Sound and Achill Island. Close to a ruined barracks we found the EIRE marker at Corraun (#58), on the Corraun peninsula of course. This part of County Mayo is an Irish Gaelic speaking area, forming part of the national Gaeltacht regions where it's acknowledged and nurtured as the first language. Rarely visited, the peninsula is the link between the mainland and the island of Achill, although it is almost an island itself with only a very thin land connection to the county of Mayo. It can be a wild and windswept place of course, as at least 2 warships of the Spanish Armada found out in 1558. The 'San Nicolas Prodaneli', accompanied by the 1,126 ton 'El Gran Grin', both came to grief, with the 'San Nicolas Prodaneli' sinking in Clew Bay and the 'El Gran Grin' running aground on rocks on Clare Island. The 28-gun galleon 'El Gran Grin' had a crew of 329 and around 100 of the crew safely made it ashore on Clare Island. Contemporary English accounts tell that these men were all killed on the island on the orders of a Chieftain from the O'Malley clan. There are of course other tales with other twists and viewpoints, but it's safe to say that the ship definitely sunk and that, however it happened, the crew were sadly all killed. In the 1800's there were several cargo ships, yachts, and ferries who succumbed to the treacherous conditions which are regularly found when an Atlantic storm rolls in and batters mariners into submission. For one legendary inhabitant, it's not all bad news though. In 1928 a 200-ton ketch called the 'Charles Stewart Parnell', which plied its trade as lighthouse supply ship, caught fire and sank in the area, now resting in 12M of water in a channel between 2 islands. The local rumour is a 30+ year old lobster has been living in the ship's boiler and is now too big to actually get out. Perhaps his tale is sponsored by Guinness or told as result of it ?



LOP #56 ROSSROE

LOP #57 ROONAGH POINT

LOP #58 CORRAUN AND EIRE MARKER

It was a very short water crossing from Corraun across the ¼ mile Achill Sound and across Achill Island to our next LOP and EIRE marker at Moyteogue Head (#59), which lies close to the highest peak, Croaghaun, rising to 2,257' AMSL. The LOP was originally built by British armed forces as a LOP to watch out for German ships or submarines trying to land arms for the Irish Republican Army during WW1. It was then refurbished and put in to use by the Irish Coast Watching Service during 'The Emergency'. The EIRE marker is around the opposite side of Keem Bay, above some cliffs. Achill itself is well known for its wilderness qualities and indeed around 87% of the land comprises peat bogs. The history of the island is partly religious and partly less savoury, with evidence of neolithic settlements as well as religious orders including a monastery and an unassociated Mission complex which served to feed the starving during the Great Famine in the 1850's. Slightly less altruistic is the ruined castle of Grace O'Malley, built in the 15th century by the O'Malley Clan who once ruled the island. The Clan were mainly seafaring traders, but after the death of her father, Grace soon carved a reputation as a fearless leader and warrior, famous not only as a sea captain but also as a successful pirate. She is said to have met Queen Elizabeth 1 at Greenwich Palace in 1593 whilst pleading for the release of some family members who had been taken captive by an English Governor. She must have been convincing as they were soon released and compensation paid.

From Achill, we next crossed Blacksod Bay to the lighthouse at Blacksod Pier. This is not a LOP on our list but the location still played a large part in WW2 history, associated with the D-Day invasions in June 1944. As we've already mentioned, Ireland maintained a position of neutrality during WW2, however there remained in place an agreement from the time of Ireland's independence for the provision of weather data. The D-Day landings were planned to take place on 5th June 1944, however Ted and Maureen Sweeney, who were the lighthouse keepers at Blacksod, passed a report about approaching bad weather fronts, causing General Eisenhower and his Allied planners to reassess their plans and delay the invasion until the 6th of June, when conditions would be more favourable. Maureen recently celebrated her 100th birthday and was honoured by the US House of Representatives in 2021 in recognition of her role in changing the course of the war.

A tight orbit overhead the lighthouse to pay our respects to Maureen, and it was off next to Blacksod Bay (#60), where we quickly spotted our next EIRE marker.

EIRE MARKER #59 MOYTEOGUE HEAD

LOP #60 BLACKSOD AND EIRE MARKER

BLACKSOD LIGHTHOUSE – D-DAY WEATHER STATION

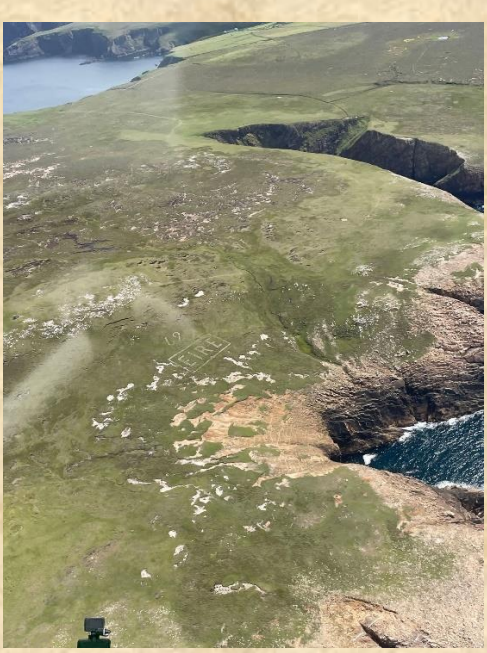
Following the coast Northwards up the County Mayo coast, the landscape became a lot flatter with sea cliffs giving way to white sandy beaches and crystal-clear waters. I suspect the water wasn't as warm as the pictures might suggest. Annagh Head (#61) was another LOP with a reportedly difficult to see EIRE marker and another we had to fly over but not locate. Sliding past Eagle Island, offshore to port and lying close to the Continental shelf, we could see the lighthouse above the horizon. Originally 2 towers were built, and although rising to almost 60M in height, they were still not immune from the wrath of the Atlantic. In 1836, a storm lifted a large rock from the cliffs and smashed a window 27M up the Westernmost lighthouse tower. Several years later, a rogue wave washed the East tower, smashing 23 panes in the light room and washing several of the lamps down the stairs, as well as damaging many of the light reflector lens beyond repair. So much water from the wave had entered and washed down the stairs that the keepers sent to repair the damage were unable to open the door due to the pressure. Eventually they had to drill holes in the door to allow it to drain away. By 1911, one of the towers had been totally destroyed in severe storms, with the surviving tower now a fully automatic operation.

LOP #61 ANNAGH HEAD AND AN INVISBLE EIRE MARKER

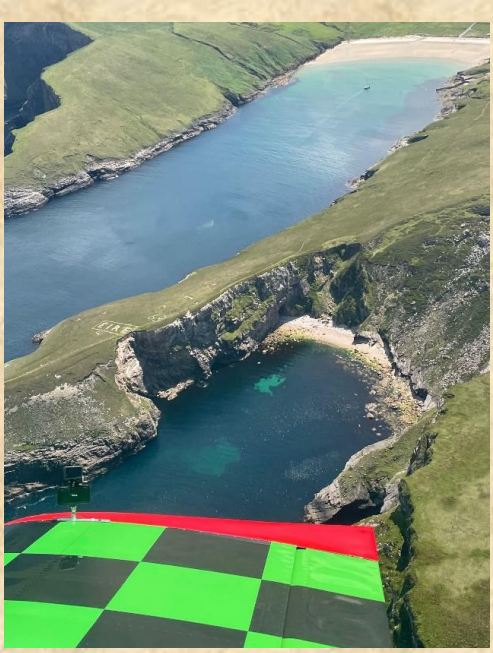
Erris Head (#62) was our next LOP and this turning point took us back on to Easterly track and towards our next stopping point at Sligo where we would grab some fuel. Our timings and fuel burn checks showed 50 minutes airborne and 30L, against an expected 43 minutes and 31L. There had been a few more orbits though along the way. Most important however was our ETA for Sligo, which was calculated as 1445L, giving us ample time to refuel, stretch our legs and get on our way to Enniskillen to arrive before they closed at 1600L.

Meanwhile the headlands of Northern Mayo and County Sligo stretched ahead of us and showed us the way to the East. Benwee (#63) and Downpatrick (#64) LOPs were easy to spot with their EIRE markers, the white stones showing up well in contrast with the grass covered plateaus on which they stood. Downpatrick is particularly interesting as it has a 63M high sea stack just offshore called Dun Briste (the Broken Fort). Prior to 1393, it was attached to the land but high seas and a violent storm (which is becoming a familiar scenario along this coastline) separated it. The people living on the now separated 'land' had to be rescued by ships ropes. Another familiar scenario of course is the differing tale in local legend !! It is said that a Druid chief called Crom Dubh lived there but could not be persuaded by the travelling St Patrick to convert to Christianity. In an uncharacteristic act by a

'man of God', St Patrick struck the ground with his staff and the stack was separated from the mainland. Crom Dubh still refused to succumb to St Patrick's demands and eventually died from starvation. Also visible close to the EIRE marker on Downpatrick can be seen a large dark circle on the top of the cliff. This is a spectacular blow hole with a subterranean channel leading in from the sea. Local history tells the story of 25 men, Irish and French soldiers forming part of the 1798 Rebellion, who lost their lives taking refuge on a ledge at the bottom of the blow hole when the tide came in and washed them off their unsafe perch.



LOP #62 ERRIS HEAD AND EIRE MARKER



LOP #63 BENWEE AND EIRE MARKER

LOP #64 DOWNPATRICK HEAD AND EIRE MARKER

Our final 3 LOPS on this leg of our mission had 2 without EIRE markers, unfortunately, but we still managed to enjoy the scenery, whilst the 3rd had a very faint marker. After leaving Downpatrick, we were approaching 25NM from Sligo Airport, a position Shannon Information had asked us to report passing. After making the call, we were instructed to contact Sligo ATC, who cleared us to enter their Class C airspace with an instruction to join downwind Righthand for Runway 28 and report when entering the CTA. Kilcummin Head (#65) was the first LOP, followed by Lenadoon Point (#66) which also was conveniently located on the CTA boundary, so we made our ATC report there as requested. Lenadoon was inland from the coast a little and made use of another Napoleonic era signaling Tower. Our final LOP before landing was Aughris Head (#67), with a faintly discernable EIRE marker showing in green, albeit within a green field.

LOP #65 KILCUMMIN HEAD

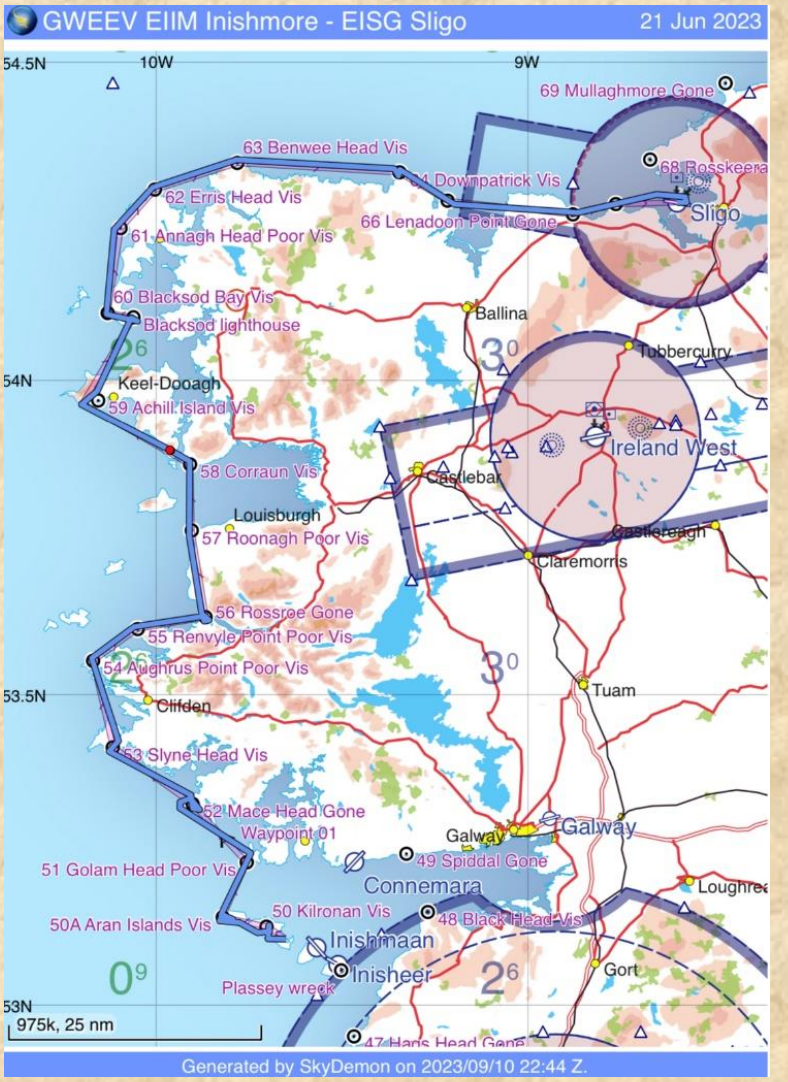
LOP #67 AUGHRIS HEAD AND FAINT EIRE MARKER

LOP #66 LENADOON

From Aughris Head, we tracked across Sligo Bay to position on the downwind leg and curved in over the sand banks to make our touchdown at 1445L as predicted. Taxying in, we seemed to be the only aircraft around and we parked up near the Fire Station as, like Waterford, the fire crews also acted in a multitude of jobs at the Airport, including refueling. After a bit of craic, such as explaining what we were doing on our trip, we uploaded 127L of AVGAS, at a rate of £3 per litre, a bit more expensive than most places in the UK. My tactical plan was to offset this by 'exporting' the fuel on our next leg to Enniskillen in Northern Ireland and so at least escape paying the duty, but when settling the bill, the Sligo staff told me that the Irish Airports no longer do this. In fact, he wasn't even sure if the Irish Customs & Excise Service had a Duty-Free procedure anymore and I'd have to follow this up with the Irish Authorities when I got back to the UK. 20/20 hindsight is a wonderful thing, and had I have known about this situation, I'd have forgone the fuel top up and uplifted at Enniskillen instead as I'd be going from there to Donegal Airport and so eligible for UK HMRC Duty Free rulings. Enniskillen are, going by past experience, wonderful at this and they take the Duty amount off before you pay, keeping it all nice and simple, as well as kinder on your wallet. Lesson learned, I guess.

FINAL APPROACH TO RUNWAY 28 AT SLIGO

'WEE VANS' AWAITING SOME AVGAS FROM THE FIREMEN AT SLIGO (EISG)



ACTUAL ROUTE FLOWN

LEG 5 STATISTICS

	DISTANCE	ELAPSED TIME	AVERAGE GROUND SPEED	FUEL BURN
PLANNED	152NM	1Hr 01Min	152Kts	40.5L
ACTUAL	177NM	1Hr 13Min	146Kts	40L

LEG 6 SLIGO – ENNISKILLEN (ST ANGELO*)*

Airborne 1417Z (1517L) – Landed 1436Z (1536L)

Before departing from Sligo, there were a few things to consider and possibly reassess in our planning. The weather for the rest of our route across to Enniskillen, then up to Donegal Airport and round the remainder of the LOPs was looking favourable still, with scattered cloud and lots of blue skies forecast. Updated actuals and forecasts from Northern Ireland airports in the vicinity of Belfast were not looking so good however with rain, showers, and low cloud all in progress and expected to continue for a while yet. This was just the tail end of the front we'd circumnavigated successfully all day and taking perhaps a bit longer to push through East than it was thought. Currently, it wasn't a huge problem, as we'd still have several hours before we'd be looking to fly through that airspace and ultimately on towards home at Prestwick, which was looking quite miserable in the METAR with a

cloud base of 500'-800' in drizzle, although forecast to improve later. Timings with regards to airport operating times was our next concern as Enniskillen would close at 1600L for the day and Donegal at 1700L. One option was to simply overfly Enniskillen as this would meet part of our secondary objective of flying over Allied WW2 air stations in Northern Ireland and we knew that with no Duty-Free benefit, landing was no longer essential. Having used Enniskillen airport in the past and received an excellent service, I however decided to give them my continued custom, even if only a quick visit to say hello and pay a landing fee to help towards their operating costs. If we didn't hang around too long at Sligo, we could stick to the current plan and make it there and to Donegal Airport before closure times. It would also save us the hassle of refiling the Flight Plan(s) again to reflect missing out a landing in Enniskillen, particularly as I'd already submitted revised plans to reflect our tardy timings compared to our original plan for the day. We were currently about 1 hour adrift of where we originally thought we'd be, but that's just classic aviating reality in my experience!! And finally, of course, there would also be changes required to the GAR submissions on both sides of the Border which could cause some angst and tension with the Authorities.

So with all the factors considered, we got airborne from Sligo after only about 30 minutes on the ground, which was needed for both aircraft and crew to get themselves ready to fly again. Airborne from RW28, we were cleared to route as we wished in the CTA and to report when clearing the airspace. There were only 2 LOPs on this short leg, both North of Sligo and on the Atlantic coast, before we'd turn East and track down the low-lying Belleek Corridor towards Lower Lough Erne and the former RAF base at St Angelo, now called Enniskillen. Levelling out at 1000' AMSL after a right turn out, we were almost immediately over Rosskeeragh (#68), where the only evidence of Coast Watching use was the collapsed walls of the LOP. Small patchwork fields lay to starboard, with the mountains of Benbulben brooding over the land. The beautiful long sandy beach at Streedagh, near Grange, was our natural navigation feature to follow, as the fishing village of Mullaghmore (#69) and its LOP became visible on the horizon. Recent press reports suggest that local historians have found the covered up remains of the Mullaghmore EIRE marker and there are reports that it will be restored as a tourist attraction. To date however, that hasn't progressed much and sighting anything meaningful from the air wasn't possible on this flight.

Mullaghmore has had a turbulent history. Originally owned by the Temple family in the 17th to 19th centuries, in the 1800's the family head, the 3rd Viscount Palmerston, built a baronial style castle called Cassieblawn close to the village, as well as constructing a harbour. Palmerston was mostly an absentee landlord, leaving the running of the estate to local middle men or agents. These agents had a free hand in decision making it seemed, and in the 1850's-1860's, they attempted to make the estate profitable by carrying out assisted emigration, initially as a result of the Great Famine, but continuing long after it had gone. In 1862, 60 people were selected for emigration to North America, including 24 young girls and 20 young men, as well as some families who were struggling to survive. Earlier, in 1847, Palmerston arranged for 9 vessels carrying over 2000 people to sail from Sligo to New Brunswick in Canada, these tenants having been evicted and 'shovelled out' of his estate. Arriving in Canada, destitute and half naked, the city of St Johns suddenly had to provide care for a great number of the evicted tenants and the city fathers sent a scathing letter to Palmerston expressing regret and fury that he and his agents 'should have exposed such a numerous and distressed portion of his tenantry to the severity and privation of a New Brunswick winter, unprovided with the common means of support, with broken down constitutions and almost in a state of nudity, without regard to humanity or even common decency.' Many did not make it unfortunately and their graves can be found at the old quarantine station at Grosse Ile near Quebec.

Classieblawn gained later fame as the preferred retreat of Lord Louis Mountbatten. In 1979, when sailing from the harbour on a fishing trip, the IRA detonated a bomb on board, killing him, his grandson and his grandson's paternal grandmother, as well as a local teenager.

Nowadays Mullaghmore is gaining a more peaceful reputation as a big wave surfing location, with waves of up to 15 metres high occurring on occasion, primarily in the month of March.

LOP #68 ROSSKEERAGH

LOP #69 MULLAGHMORE HEAD

LOP #69 EIRE MARKER (1947)

Courtesy of Irish Air Corps

LOCATION OF LOP #69 EIRE MARKER

Courtesy of Sligo Community Archaeology Project

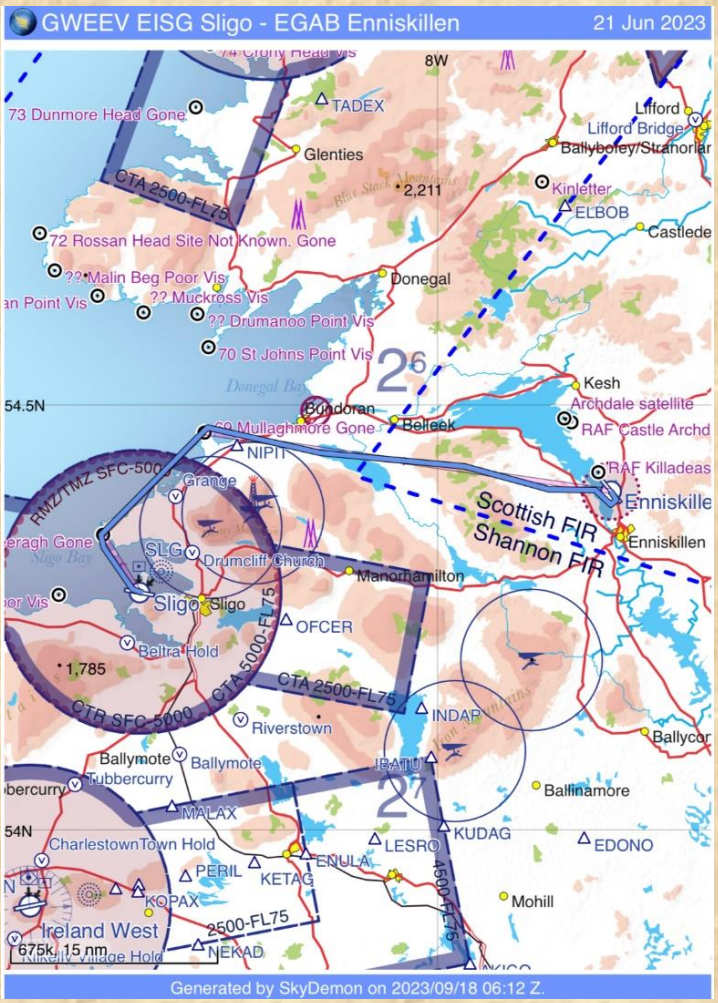
LOP #69 EIRE MARKER STONE LOCATION (UNEXCAVATED)

Courtesy of Sligo Community Archaeology Project

Now briefly in contact with Shannon Information again, who seemed to have at least sorted out our Flight Plan and SSR code allocation woes at long last, we headed for the Belleek Corridor, a route flown throughout the war by Allied aircrews heading out from the seaplane bases on Lower Lough Erne towards the Atlantic, or on their return, as per our initial scene setting story. To try and keep our timing schedule without any more slippage, we would fly abeam and parallel to the Corridor on a more direct route to Enniskillen, which would give us an overview of the terrain and the area over which the Allied crews would have operated. Also known more formally as the Donegal Corridor, permission was granted by the Irish Free State Government to the Allies from 1941 onwards to follow a 4 mile stretch of the River Erne, which flowed out of Lower Lough Erne, through Belleek and onwards to the Atlantic Ocean at Ballyshannon. A memorial plaque, remembering the corridor and those who lost their lives in nearby air crashes, can be found in the main street of the town close to the famous Belleek Pottery Factory. The Corridor was instrumental in the sinking of the German battleship 'Bismarck' as a Consolidated Catalina flying boat from No 209 Squadron RAF, based at Killedeas, flew through the corridor on patrol in 1941 and pinpointed the location of the ship, which led to its eventual destruction and sinking. Throughout the war period, flying boats from Lough Erne sank 9 confirmed U-Boats and damaged many others which had to return to their bases in France or Norway for extensive repairs. Such victories were not without great cost of course, with 320 men being killed over 41 fatal missions flown from Lough Erne. Further memorial plaques commemorating their sacrifices have been unveiled in both County Donegal and County Fermanagh.

Passing over the Shannon/Scottish Flight Information Region (FIR) boundary, we bid farewell to Shannon once more and contacted Enniskillen for joining instructions which gave RW32 in use. We positioned downwind left hand over the Lough and then flew a curved approach on to final at the former WW2 RAF fighter station, passing close by St Michaels Church which sits on a small hill overlooking the airfield. Used occasionally by B17 Flying Fortress aircraft, it must have been quite a breathtaking site watching them fly a curved approach with their starboard wingtip almost kissing the church steeple.

RAF ST ANGELO (ENNISKILLEN) (1940 – PRESENT DAY)



ACTUAL ROUTE FLOWN

LEG 6 STATISTICS

	DISTANCE	ELAPSED TIME	AVERAGE GROUND SPEED	FUEL BURN
PLANNED	44NM	17Min	155Kts	17L
ACTUAL	47NM	19Min	150Kts	14L

LEG 7: ENNISKILLEN (ST ANGELO) – DONEGAL AIRPORT

Airborne 1455Z (1555L) – Landed 1519Z (1619L)

A quick stop and a chat with the always helpful Enniskillen staff and they confirmed that our amended Flight Plan to Donegal was in the system. They also said that for future reference, although they have a NOTAM'ed closure time, they are still quite happy to apply a bit of flexibility if you get in touch, so getting Duty Free fuel here would have been an option after all. Nice to know. Confirmation was also given that Donegal Airport had been in touch and suggested we might wish to arrive a little bit before they were due to close as they were expecting an IFR arrival from Glasgow and we'd have to hold outside their airspace until it landed, due to their non radar environment and the application of Class C separation rules, which could result in us going past their planned closure time and having to go somewhere else. Our next planned leg was to overfly the seaplane bases on Lower Lough Erne, fly down the Belleek Corridor and then over the LOPs which were to the South and Southwest of Donegal Airport. The planned elapsed time for this route was 34 minutes, so would be getting tight with the IFR arrival ETA assuming our planned 1600L departure time from Enniskillen was accurate. A quick check on SkyDemon showed that taking in the seaplane bases after departure and then flying direct to Donegal would only take about 20 minutes. We could then park up, grab a bite to eat, take a stroll to the beautiful Carrickfinn beach, and then fly all the remaining LOPs on our mission after departing from Donegal when they reopened. Flight time and fuel burn would be more than acceptable, and we would still have a good bit of daylight left, as it was 'The Longest Day' after all. With everything checked and agreed, we confirmed we'd switch to Plan B for this leg and the next. Rejigging the leg out of Donegal on SkyDemon could wait until we got there, now it was time to jump in and get the aircraft moving before Enniskillen closed !!

Departing to the North on RW 32 and along the Eastern shore of Lower Lough Erne, it was only a few minutes before we reached the site of RAF Killedeas, one of the former RAF flying boat bases on the Lough. It was originally commissioned and constructed for the US Navy in 1942 but was never taken up by them and instead transferred directly to the RAF. Killedeas had a small village of Nissen Huts, housing the 2800 personnel who were stationed there. The base had a limited operational history, and as previously mentioned, it launched the Catalina which spotted the Bismark. Its main role however was as a training and maintenance base. Here, pilots would join No 131 Operational Training Unit (OTU) and carry out 72 hours of training on either Catalinas or Sunderlands before joining an operational squadron. Training during the war years was not without danger and several aircraft operating from Killedeas came to grief on the Lough or on the surrounding terrain, with sadly quite a few fatalities. In nearby Irvinestown, many of those who paid the ultimate price for our freedom now rest in peace within the cemetery. As the war drew to a close, Killedeas became the Coast Command Flying Instructors School and operated until 1947. Now used by the Lough Erne Yacht Club, the slipway and large hard standing where Catalinas and Sunderlands would have been pulled out of the water for maintenance is still clearly visible.

RAF KILLEDEAS FLYING BOAT STATION (1941- 1947) WITH WW2 SLIPWAY AND HARD STANDINGS

RAF KILLEDEAS – RAF No 131 OTU CATALINA BASE IN 1942

Photo courtesy of Seawings

WARTIME CATALINA OPERATIONS AT RAF KILLEDEAS

Photos courtesy of Seawings

Several miles further North we overflew the site of RAF Castle Archdale, the second seaplane base on the Lough, and the starting point for our own Sunderland mission which so nearly came to a tragic end. Originally called RAF Lough Erne, the first operational squadron arrived in 1941, No 201 Squadron RAF operating Sunderland aircraft. The large manor house and stables at Castle Archdale, built in the 1770's, were requisitioned by the RAF and put to use as the Officers Mess and the Flying Control office. Other ranks were accommodated in temporary and permanent buildings within the woods of the estate. At least 6 squadrons operated from the base at various times during WW2, including 2 Royal Canadian Air Force (RCAF) squadrons. In addition to Sunderlands, Short Lerwick and Catalina aircraft were also operated from Castle Archdale. After WW2, the base continued to operate Sunderland aircraft with No 230 Squadron until late 1946, with other units sporadically using the base until it finally closed in 1957. Today the site is used as a caravan park and a country park, including a small museum dedicated to the base history within the old stable block from the estate. The manor house was not occupied after WW2 and slowly deteriorated until it was finally demolished in 1959. Other reminders of the past can still be found on the site, including the hard standings where the flying boats were parked when out of the water, as well as the remains of ammunition and fuel dumps, and a unique flying boat dock built in 1945 to accommodate the new Short Shetland flying boats. This dock was never used as the end of the war saw the Shetland programme halted before any came into service. The dock is believed to be the only one of its kind to remain in the World. As with Killedeas, several crews made the ultimate sacrifice and now lie at rest in Irvinestown Cemetery. For some, however, there was no recovery possible, and they lie in rest in the waters of Lower Lough Erne. Various memorial markers to these crews lie at appropriate points on the edge of the Lough.

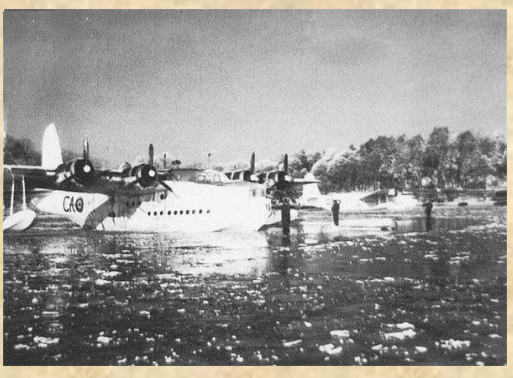
RAF CASTLE ARCHDALE FLYING BOAT STATION (1940-1957) WITH SLIPWAYS AND HARD STANDINGS

RAF CASTLE ARCHDALE DURING WW2

Photo courtesy of Seawings

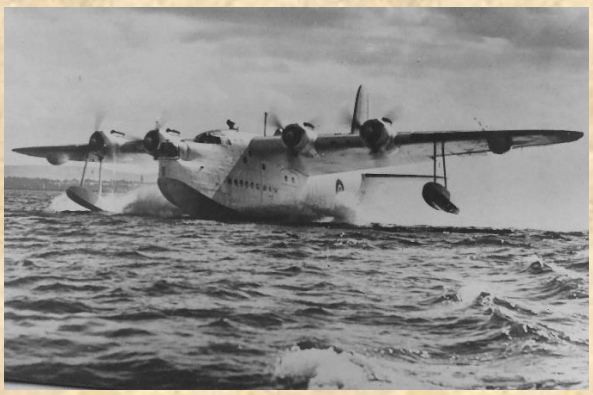
FLYING BOAT MAINTENANCE FACILITIES AT RAF CASTLE ARCHDALE IN 1942

Photos courtesy of Seawings



WINTER OPERATIONS AT RAF CASTLE ARCHDALE

Photo courtesy of Seawings



WATERBORNE OPERATIONS ON LOWER LOUGH ERNE DURING WW2

Photos courtesy of Seawings

CASTLE ARCHDALE HOUSE – DEMOLISHED IN 1959

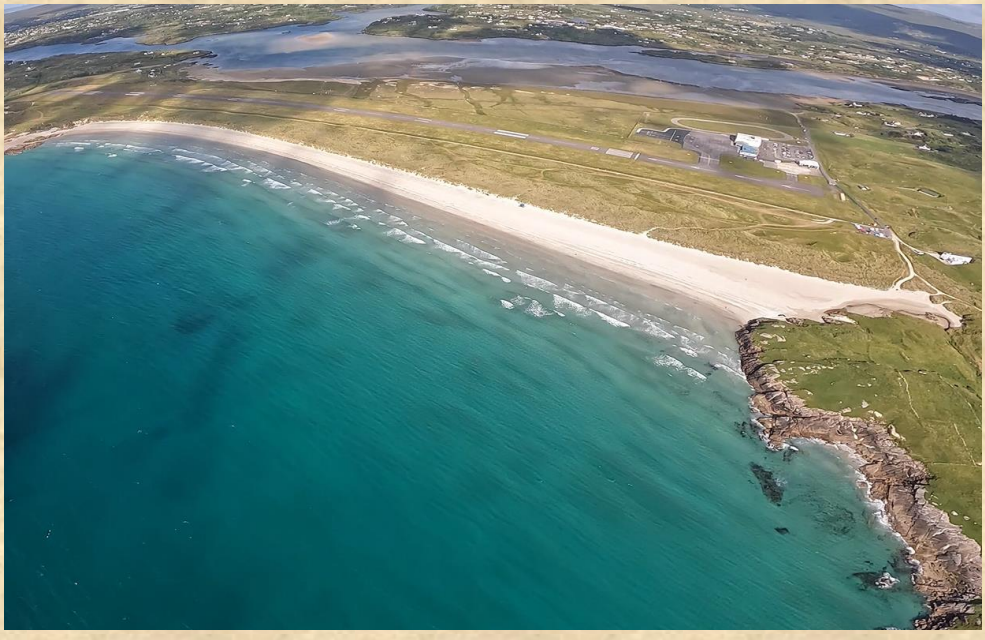
Photo courtesy of Seawings

WAR GRAVE MARKER ON SHORE OF LOWER LOUGH ERNE

Photo courtesy of Seawings

Leaving the memories of the Coastal Command operations from the Lough behind with unconditional respect, a direct track was taken towards Donegal Airport, crossing the FIR boundary close to Lough Derg with its imposing abbey set on an island. A religious retreat for over 1000 years called the Sanctuary or Purgatory of St Patrick, those who so wish can visit the abbey for a period of time between 1 and 3 days, making a pilgrimage which contemplates life and their faith in silence, whilst barefoot, and surviving only on tea and black toast. Faith, hope, and love will guide those who attend the purgatory pilgrimage according to retreat organisation. For us however, it was our cue to contact our good friends at Shannon Information once more, who quickly gave us a SSR code and asked us to call them when changing frequency to Donegal Tower. Our transit took us over the Blue Stack Mountains, scene of the Sunderland aircraft crash mentioned at the beginning of this report, which was inbound to Castle Archdale. Several other aircraft also sadly met their end in these mountains. Bidding Shannon farewell, for now at least, we called Donegal ATC who cleared us to enter their Class C CTR via the VRP at Loughanure and join downwind lefthand for RW21. The nearby mountains, small white rural houses, expansive peat bogs, white sandy beaches, and sparkling turquoise water up ahead certainly gave an indication of why Aerfort Dhun na nGall (Donegal Airport) has regularly been crowned the 'World's Most Scenic Airport'. Soon we were safely down and parked by the small but adequate airport terminal building. The friendly staff came out to meet us and were keen to hear all about our trip.

Leaving airside for a while, we settled our modest landing fee at the airline check in desk and then tucked into some good pizza from the small restaurant/ gift shop, as well as stocking up on a few souvenirs. Suitably refueled and with an hour or so before the airport would reopen for our departure, it would have been rude not to take the short walk down to the magnificent Carrickfinn Beach and chill out in the fresh salty sea air. The beautiful summer flowers were out in bloom on the *machair*, the low lying grassy plain adjoining the sand dunes, adding to the idyllic charm of this location. In the not too far distance to the East, Mount Errigal, the highest peak in Donegal, visibly rises up on the horizon to 2,464' AMSL, adding to the scenic vista. A quick walk down to the Atlantic Ocean and a relaxing time amongst the dunes was a perfect way to take some crew rest.



DONEGAL AIRPORT (EIDL)

WEE VANS MOTLEY CREW AT DONEGAL

THE MACHAIR AND MOUNT ERRIGAL

'CARIBBEAN' CARRICKFINN BEACH

LIFE'S A BEACH !!

MOUNT ERRIGAL

ACTUAL ROUTE FLOWN

LEG 7 STATISTICS

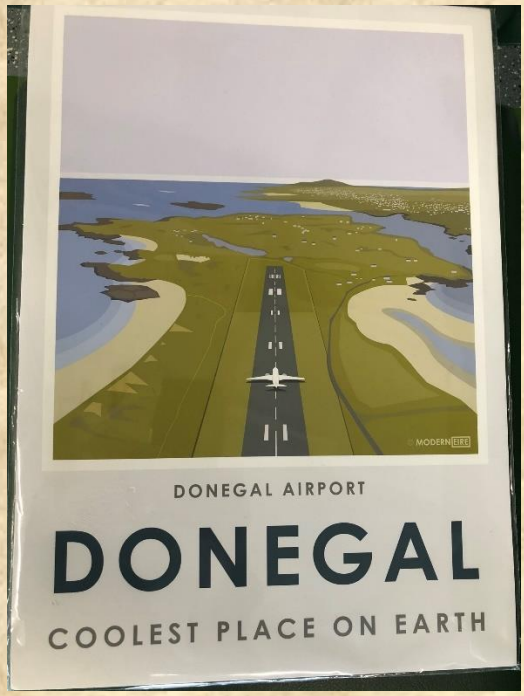
	DISTANCE	ELAPSED TIME	AVERAGE GROUND SPEED	FUEL BURN
PLANNED	46NM	21Min	131Kts	16L
ACTUAL	51NM	24Min	126Kts	17L

LEG 8: DONEGAL AIRPORT - PRESTWICK

Airborne 1718Z (1818L) – Landed 1907Z (2007L)

Arriving back at the airport to 'check in' for our flight, our revised route was input in to SkyDemon. We would fly North initially to take in a LOP about 10NM away before tracking back South over the airport and overflying the LOPs in Southern Donegal. From there, we'd head East initially for a slight detour to have a look at the progress on a house I'm having built on family land near Ballybofey, before we would strike Northwards to regain our original route and cover the remaining LOPs on the North Donegal coastline. The intention was to then take in the remaining Northern Irish airfields before crossing the North Channel back towards Prestwick, however looking at the latest met information, the back end of the frontal system seemed to have slowed up somewhat with low cloud and rain showers in the vicinity of the Western end of Northern Ireland and the Belfast area. Additionally, Prestwick was also showing a very low cloud base with drizzle, which might also ruin our plans to get home, although airfields out to the West of Prestwick such as Islay and Campbeltown were showing very good conditions. Hopefully the front would perform as forecast, but we'd have to wait and see, and possibly adjust the plan tactically to cope with any unsuitable conditions we would encounter. Our GAR and Flight Plan submissions remained valid, as we were now back on our original timings, having anticipated our rest stop and meal break at Donegal at the planning stage. A cheerful security officer apologised for us having to go through the full security screening process, as any other passenger would have to, but it was no hardship and we were quickly escorted airside by another friendly staff member. The Donegal Airport Public Relations representative also popped across to take some photos and to have a chat about our mission, it would seemingly make some good social media content for the Airport, which we were happy to assist with of course.

SOME PAPARRAZZI SHOTS, COURTESY OF DONEGAL AIRPORT



NO ARGUMENT HERE !!

With start up clearance requested and issued, we advised the controller that we'd like to route Northwards to leave the CTR to the North of the VRP at Derrybeg before turning Southwards again to route via the VRP at Owey Hold and overflying Arannmore Island to exit the CTR at Crohy Head. With a clearance to fly as we wished and report turning back South, we got airborne from RW21 and turned right towards the magnificent beach we'd been relaxing on earlier.

In the turn after takeoff we passed by the small beach at Ballymanus Bay, a location where World War 2 came horrifically to the neutral people of Ireland and shattered a Donegal community. On the 10th of May 1943, an unexploded maritime anti-shipping mine washed up in the bay, attracting the interest of the old and the young alike in the local village. Two local youths waded out to the mine and attached ropes and tried to bring it in to shore, however they were not strong enough. Nothing happens in a small Irish community without everyone soon finding out about it and as a result more boys, youths, and men steadily arrived at the beach. The local officers of the Garda Siochana (the Irish Police Force) were also made aware and would normally be expected to quickly secure a cordon around any unexploded munitions to ensure public safety. For reasons unknown, this was not carried out. Meanwhile the crowd managed to haul the mine to the shore and were proceeding to drag it along the beach. The intentions of this action can only be guessed at, but it's a moot point as it is believed that one of the prongs of the mine struck a rock whilst being dragged along the shore, instantly detonating the device. Eighteen men and boys between the ages of 13 and 34 years old were instantly killed, with another dying of their injuries in hospital shortly afterwards. Four more suffered injuries. In the local village over 40 houses were damaged by the blast. My late elderly cousin who lives around 50 miles away as the crow flies clearly remembers hearing the muffled blast at the time, an indication of the size of the mine and the resultant explosion. To this day, local politicians and family members have sought an apology from the Irish Government as there were clear breaches of protocol and procedure by the Garda at the time, as well as later suppression of facts and a refusal to hold a public enquiry by Government officials. Eighty years later and the wait for closure sadly goes on.

There was no time to dwell in the past though as we had 16 more LOP sites to find, as well as 10 WW2 RAF bases. Soon we came to Bloody Foreland (#76), but we initially weren't sure exactly where it was located so carried out a wide lazy orbit over the shore before we finally located it. It was not entirely visible, but luckily we were able to use a small parking space on a track to help us visually locate it. The preflight research and mapping aide memoirs came in handy once again !! Bloody Foreland, or Cnoc Fola (The Hill of Blood) in the locally spoken Gaelic language, may seem to hide some turbulent and violent past but factually it is derived from the illumination of the shore and hills behind by the evening setting sun, which gives the area a deep red hue. In autumn months, the presence of heavy bracken foliage in the area also enhances the deep russet colouring when the sun sets. Of course being Ireland, there are also some myths and legends to be expected. In contrast to a previous tale of the demise of the evil warlord Balor which took place in the far South of Ireland near Mizen Head, which you read about earlier, the local legend here in Donegal is that this is where Balor of the Evil Eye was slain by his grandson, Lugh Lamh Fhada, on the slopes of Cnoc Fola. The tide of blood which flowed down the hillside from Balor's evil eye gave the place its name. You can take your pick as to which version you prefer.

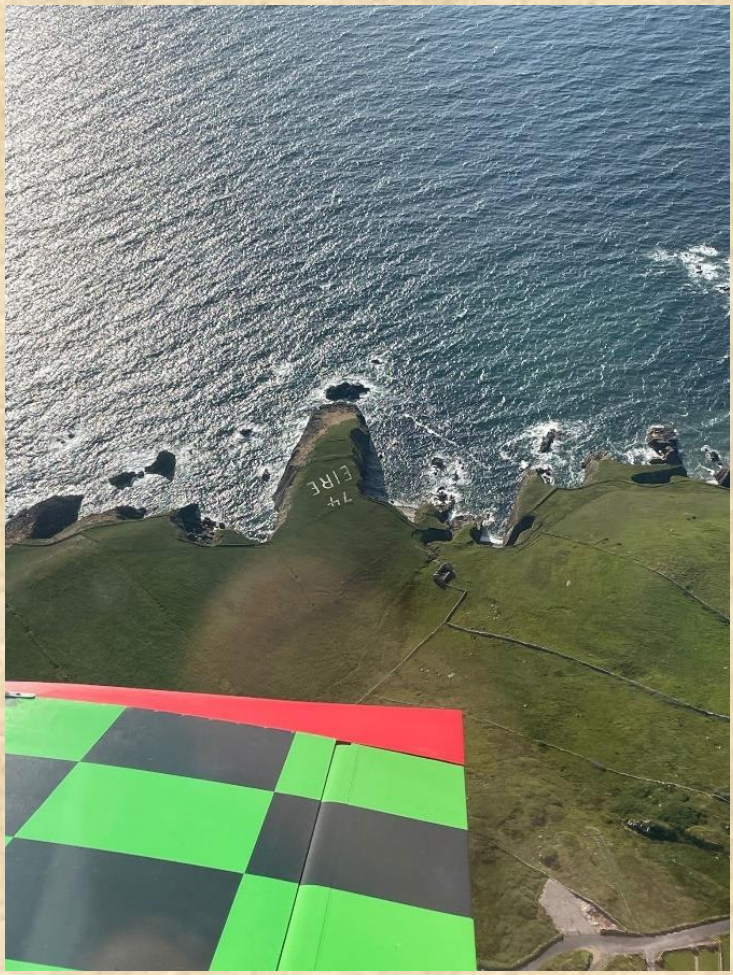
LOP #76 BLOODY FORELAND AND EIRE MARKER

Continuing Southwards, having advised Donegal Tower as requested, we headed towards the island of Arannmore. This is the largest inhabited island in County Donegal, with 478 residents recorded in 2022. The island had a relatively large fishing industry up until the 1980's when modern fishing boats and harbours elsewhere took over their livelihood. Today tourism, including residential Irish language schools, is the main 'industry' to be found here. After experiencing a steady and consistent decline in the population over recent years, steps have been taken to entice people to make their home here, with campaigns targeting the USA and Australia. With the advent of the Russian invasion

of Ukraine, the island has also welcomed and built up a small population of Ukrainian refugees as a result. Over the Western cliffs of Arannmore we orbit to assimilate the ground features with our preprinted LOP map and easily find the LOP at Torneady Point (#75). Only a short distance away on the grassy plateau we sight the EIRE marker and bank overhead towards our next waypoint at Crohy Head (#74). That's 12 numbered EIRE markers to go, plus 2 which were unofficially constructed during 'The Emergency'. So far the weather was looking excellent to complete at least the primary goal of passing over the LOPs, with bright sunshine and reasonable winds from the West.

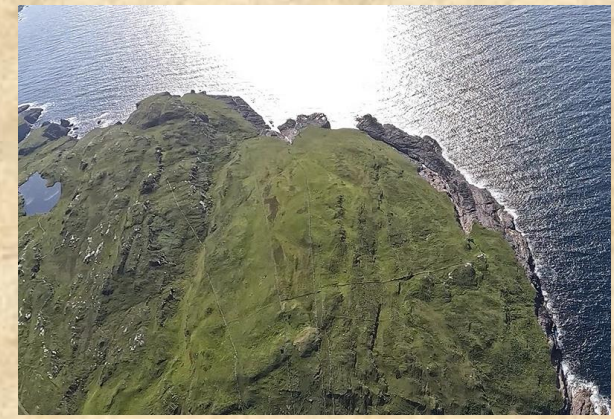
Crossing landfall over the mainland again just to the North of Ceann na Cruaiche (Crohy Head in the local Gaelic language), we need to remember that we've reversed direction from the original flight plan and instead of the LOPs being on the right when we were flying offshore, we'd now need to be flying onshore to achieve the same flight profiles for the onboard starboard wing mounted GoPro cameras which we hoped would visually capture and document our mission, as well as fitting with our mental picture of where the LOPs and EIRE markers were likely to be seen. With that in mind, we pass over the land East of Crohy Head and spot the very clear EIRE marker with its allocated number '74' standing out brightly on a grassy topped cliff promontory. Just to the right of the marker, we also spot the sea arches of Crohy Head, close to the cliff and rising to around 150' above the sea. They are locally known as 'The Breeches' with the tallest being the arch of the Bristi Stack. Nearby we also spot another Napoleonic Signal Tower. Now leaving the Donegal CTR, there's nothing further they can assist us with so we change to Shannon Information for the rest of our flight within their FIR. At our LOP spotting altitude of 1000' AMSL and with mountainous terrain nearby, we unsurprisingly can't make contact with them, so we continue transmitting our allocated SSR code and monitor their frequency, making blind reports as required. As we are within Class G airspace for the remainder of our flight over the Republic of Ireland, this is not a huge issue as no ATC clearance is required. What we do need to remember though is that we ensure that Shannon are aware when we leave their FIR so that they can 'close' our Flight Plan within their airspace and not start any overdue action in their area. We can do this by either establishing contact later in the flight, when clear of the terrain shielding, or by getting contact with another ATC agency such as an airfield or Scottish Information when we cross the FIR boundary and asking them to let Shannon know we are operating normally and clear of their area.

LOP #75 TORNEADY POINT AND EIRE MARKER

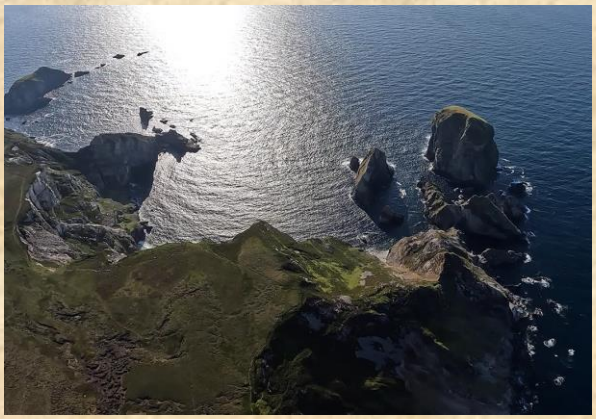


LOP #74 CROHY HEAD

Crossing the estuary of the Gweebarra River, we pass the magnificent 2KM long beach and sand dunes of Portnoo, to our port strangely enough, rated as one of the finest beaches in Donegal. Out to starboard, we pass the remains of the LOP at Dunmore Head (#73), one of the few sites we would fly over in County Donegal where the EIRE marker is no longer present. Crossing headlands, bays, and sun dappled seascapes, we pass by Rossan Head (#72). There are no remains of anything to be found here and the exact site location remains unknown to myself and other researchers. We pass by a point where our best guess is that it would have been and can sadly do no more. The site does at least have one claim to fame as its name is given to the M4 Weather Buoy located 45NM to the West of it out in the Atlantic Ocean. In October 2020, this buoy recorded one of the largest waves ever known in Irish waters, with a staggering measured height of 28.1M (69'), which occurred during Storm Franklin.



LOP #73 DUNMORE HEAD

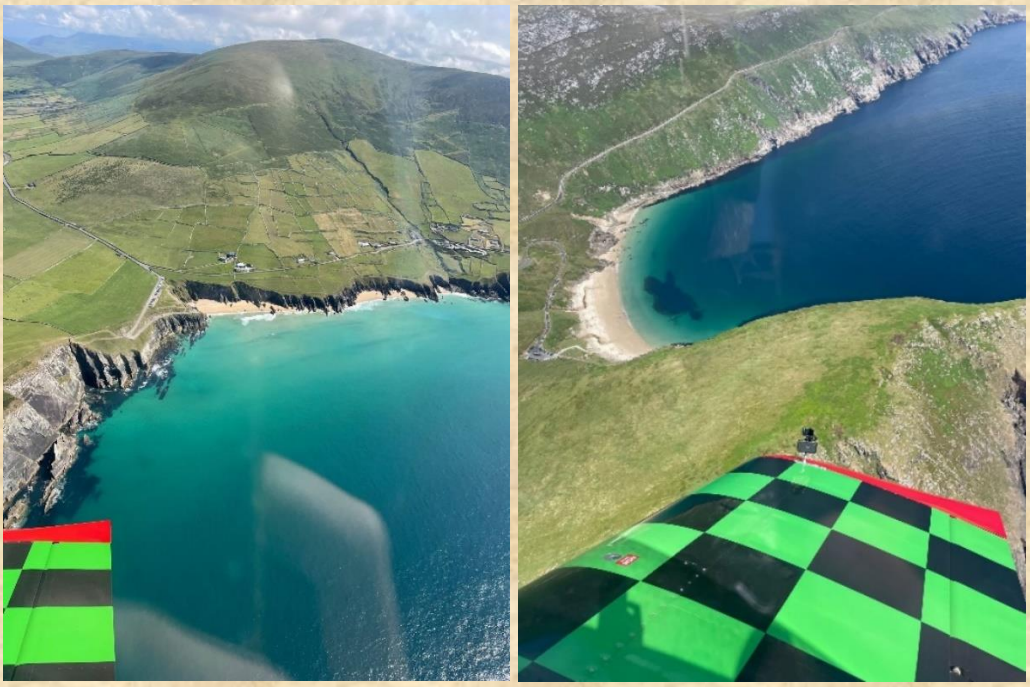


LOP #72 ROSSAN HEAD

M4 WEATHER BUOY IN CALMER SEAS THAN OCTOBER 2020

Photo courtesy of the Marine Institute

Rounding the Westernmost point of the Slieve League peninsula, we fly over the horseshoe shaped beach at the village of Malin Beg. Enclosed by cliffs on 3 sides the Silver Strand, as it's popularly known, is a 174 step descent from the village, which also means it's a 174 step climb back to your car afterwards !! In addition to attracting children, dogs, parents, and grandparents, the sheltered crystal clear waters also make it a mecca for scuba divers. Just past the bay and heading along the cliff line, we come across one of several EIRE markers seen during the flight which are not associated with any LOP and are not given any official number. It is thought that these were originally constructed by enthusiastic locals who were keen to assist with the defence of their country, whilst another version is that they were officially constructed but then deemed unsuitable due to their visibility and abandoned, but the truth is we don't really know why they were built.



MALIN BEG AND SILVER STRAND BEACH

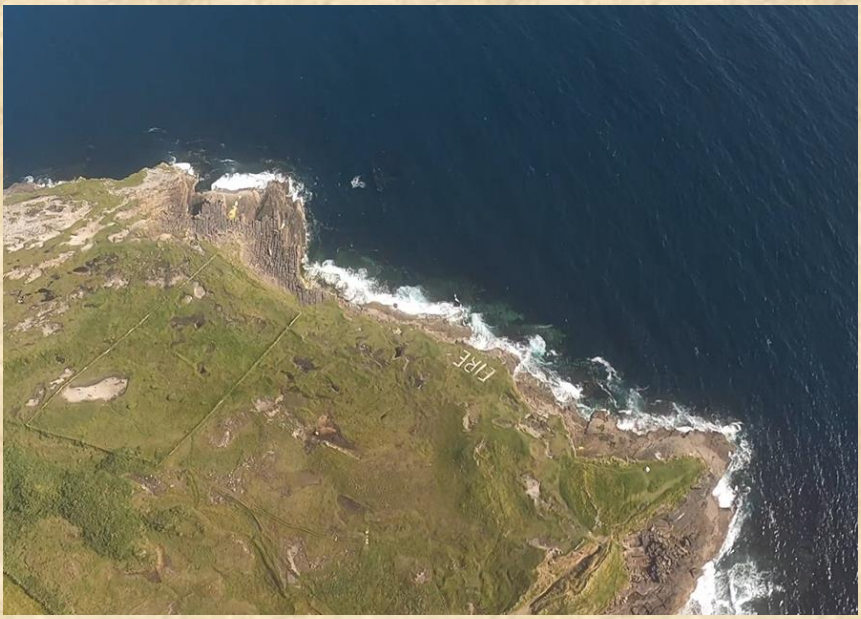
UNOFFICIAL EIRE MARKER AT MALIN BEG

Continuing Eastwards along the coast, the impressive multi coloured cliffs of Slieve League (or in Gaelic, Sliabh Laig, meaning Hill of the Pillars) rise 1500' above the turbulent Atlantic waters, before eventually morphing in to the summit of the mountain, reaching a height of 1972' AMSL. These are some of the highest sea cliffs in all Europe and have been formed over the last 10,000 years, dating from the Dalradian period and consist of bedded Slieve Toohey Quartzite formations with gneiss also present at the base of the cliffs. At the Eastern edge of the cliffs can be found a wisely fenced off path looking across the seascape from Bunglass Point. Car park access to the viewpoint, and indeed to the track up to the mountain for those energetic enough, is provided just a short distance away at Carrigan Point (#71) and this is where our next EIRE marker is to be partly found, etched in to the peaty grass right beside it. With such an accessible position, it is to be hoped that one day some

restoration work can be done to this EIRE marker to bring it back to all its glory, telling tourists and visitors the story of these archaeological structures and their place in WW2 history. Now the stronghold of freely wandering sure footed flocks of black faced sheep, nearby are the remains of the WW2 LOP and another Napoleonic Signal Tower, both of which still cling on to their ruinous and precipitous existence high above the Atlantic.

LOP #71 CARRIGAN POINT AND EIRE MARKER AT BOTTOM RIGHT OF CAR PARK

Close to the small fishing village of Muckross, our next unofficial EIRE marker is encountered high above the waves at Muckross Head. The cliffs are heavily used today by those who want to climb sea cliffs, with over 60 recognised climbing pitches recorded. Crossing Fintragh Bay, at whose head is the location of yet another superlative sandy beach with dunes behind it, on our port side the peak of Largysillagh, part of Fintragh Mountain, rises steadily from the sea to around 1600' AMSL.



UNOFFICIAL EIRE MARKER AT MUCKROSS

On Fintragh Mountain, the second last fatal crash of the War in Europe took place only 2 months before Victory Europe Day. In the early hours of the 14th of March 1945, officers of the Garda Siochana in the nearby fishing port of Killybegs reported seeing a low flying aircraft heading North at low altitude, with a searchlight being operated below its wing. Approximately 15 to 30 minutes later, the Irish Free State Army reported that an aircraft had crashed on the mountain. Rescue teams from the Local Defence Force (LDF) and the Local Security Force (LSF), plus assorted local men, were put together and a search commenced with still burning and smoldering wreckage being located on the hillside at 0530L. It was confirmed that there were no survivors on board the aircraft. A nearby farmer reported that he heard the loud noise of an aircraft flying extremely low over his house at around 0230 that night and had got out of bed to investigate. He saw 2 flashes of light on the mist covered mountain immediately afterwards. A military party from the Irish Free State Army camp at Finner, which is close to the Belleek Corridor, arrived later during the morning to guard the crash scene. Meanwhile a team from the Irish Free State Army Ordnance Corps attended to make safe any unexpended ammunition, which included 2 unexploded depth charges and hundreds of rounds of machine gun ammunition. Medical teams from Finner then arrived to recover the crew remains and transport them in coffins to their base, where a local doctor prepared death certificates for each man who had been tragically killed in the line of duty. After providing the British authorities with information about the casualties, the Irish Free State forces arranged for the bodies and all personal effects to be handed over to British representatives the following day at the border post at Belleek, providing them with a full military escort on their journey. Twelve men died on board the aircraft, a Short Sunderland Mk III, serial ML743, which was operating from RAF Castle Archdale with No. 201 Squadron RAF. The aircraft had been paid for by public subscription, raised by the citizens of Poole in Dorset. The aircraft had been tasked on anti-submarine patrol and after departing at 0203L from Lower Lough Erne had been expected to follow the Belleek Corridor out to Donegal Bay and then to the Atlantic Ocean patrol area. Why it ended up flying almost 90 degrees off track remains a mystery. The official accident report records the following information:

"*(a) The aircraft left Lough Erne on a very dark night, cloud base around 1000' carrying full ops load which included 2050 gallons of petrol. After Flying Control had acknowledged the "airborne" call over R/T nothing further was heard from the aircraft by either R/T or W/T.*

Witnesses in Killybegs saw the aircraft approaching from a South Easterly direction, with navigation, and apparently landing lights on. 2nd witness saw a/c alter course, still showing Nav. and landing light, and within 2 minutes heard the a/c crash. The evidence shows that the mountain top where the crash took place was covered in mist or cloud. The a/c completely disintegrated and was badly burnt, all 12 members of the crew being killed.

(b) The cause of the accident must remain obscure. From the evidence it would appear that the aircraft was under the control of the Pilot rather than the Navigator at the time immediately preceding the crash. The use of the landing light seems to indicate that the pilot was trying to pinpoint himself (or make a forced landing). In the opinion of this court the pilot and navigator did not know where they were - which presupposes that their S.E was u/s or not being used. The fact that the a/c was on a course of 240 degrees when it crashed may indicate that the pilot realised that he was too far North, and was turning back towards the S.W.

The crew consisted of 10 British servicemen, 1 Australian, and 1 Canadian. The pilot received his initial pilot training in 1942 and had 705 hours flying time recorded at the time of the accident, a relatively high level of experience. As an aircraft captain on flying boats, he had been responsible for sinking one U-Boat (U-297) in 1944 and seriously damaging another in early 1945. Four of the crew were repatriated to mainland Britain for local burial, whilst the remaining 8 were buried together in Irvinestown, near Castle Archdale. A very sad and untimely end for them all.

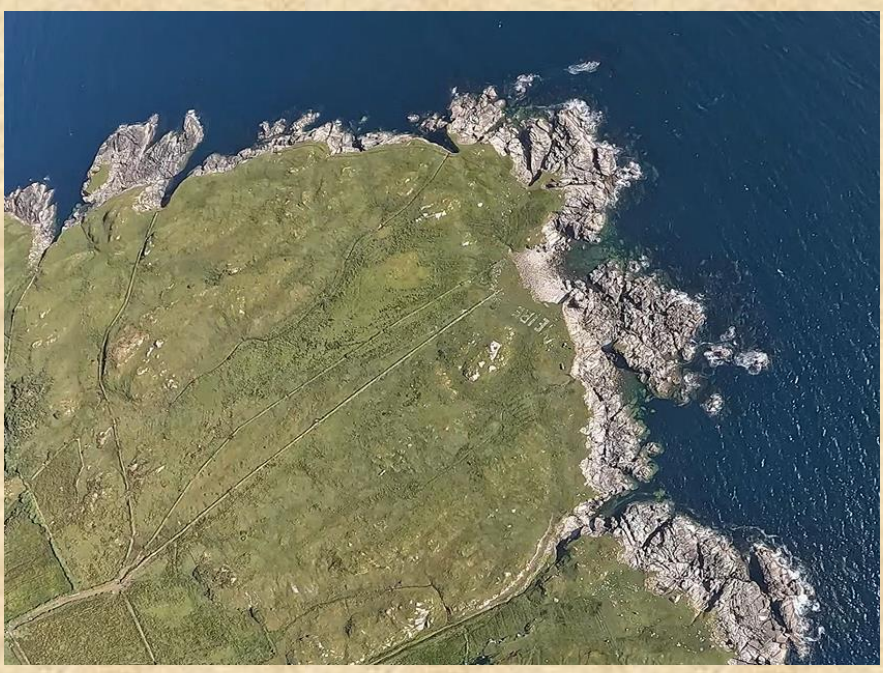
The aircraft wreckage was not recovered from the hillside by the Irish or British authorities as it had mostly been destroyed in an intense post-crash fire. Today parts of it can still be found at the site, including the shattered Bristol Pegasus engines.

THE CREW OF SUNDERLAND ML743

Photo courtesy of WW2IrishAviation

Of course this crash highlights one of the pitfalls of the EIRE marker system, its ineffectiveness at night or poor weather conditions. If it couldn't be seen, then it was of no use, but it was still better than nothing. Perhaps in daylight and with a slightly different track, they may have passed close to and sighted one of the EIRE markers nearby at either Drumanoo or at St John's Point (#70), as we had during our Sunderland 'trip'. Such a sighting may have allowed the crew to reassess their position and track and make a safe correction.

Our next waypoint is Drumanoo, an unofficial EIRE marker site which sits on the headland that marks the Northern shore of McSwyne's Bay and forms the entrance to the deepwater port of Killybegs a few miles away, which Sunderland ML743 flew over on that dark and cloudy night in 1945.



UNOFFICIAL EIRE MARKER AT DRUMANOO POINT

Heading now towards the Southern edge of the bay, we see the long-fingered peninsula reaching out towards St John's Point, a place with history reaching back through the ages, including neolithic tombs, the early Celtic Cross of Killaghtee (dating from AD589), McSwyne's Castle, and a lighthouse tower dating from 1852. Today, in addition to holiday accommodation opportunities at the still functioning automatic lighthouse, beach activities are to be had at the small sandy Coral Beach (known as Trabane in Gaelic), as well as exceptional scuba diving in waters known to divers as Europe's answer to the Great Barrier Reef, which offers a 30M sheer face hosting abundant fish life and colourful anemones. Kelp forests and a wreck can also be explored, although you may have to share that experience with inquisitive seals. Our interest however is the EIRE marker situated close to the lighthouse enclosure and we orbit overhead to get a good view. The marker here was expertly restored to its WW2 state by volunteers from Dunkineely Community over a two-year period starting in 2016 and is a common side visit for tourists who are visiting the lighthouse area. It's one of the best markers we have seen so far, so a big 'well done' to the local community team for their hard work and vision in carrying out the restoration.

LOP #70 ST JOHNS POINT AND EIRE MARKER

With St John's point captured in our portfolio, we had completed all the LOPs which we aimed to originally overfly on our leg between Enniskillen and Donegal airports, so all that was left were those on the Northern Donegal coastline and the remaining Northern Ireland WW2 airfields. With sufficient fuel and daylight left, a small diversion was carried out for personal reasons as we continued heading East over Donegal Town and through the U-shaped valley at Barnes Gap on the Southern edge of the Blue Stack mountains, aiming to overfly Lough Trusk near the 'Twin Towns' of Ballybofey and Stranorlar, the site of a new modest house I'm having built on inherited family land. With a few orbits to view the progress and to wave to my neighbours completed, a direct track was taken up to the next LOP at Horn Head (#77), lying 29NM to the North of our current position.

KINLETTER, ALTHOUGH NOT TAKEN FROM 'WEE VANS' !!

Climbing to 3000' AMSL on this leg, we soon established contact with Shannon Information and passed them a position report and information on the remainder of our task within their Area of Responsibility. They had no traffic known to affect us and asked for a position report at Horn Head, which of course we would oblige. Before that though, we took in the vistas of the flat farmland and bogs to the East and the rough mountainous terrain to the West whilst relaxing a little on the straight-line flight with no requirements for spotting targets on the ground. With 10NM to run to the next target LOP, we reported to Shannon that we would be descending to low level again and they requested our ETA for the FIR boundary. With this duly passed, they advised that we should report passing the boundary and that in the event of a loss of communications with Shannon due to our low level, we should call either Scottish Information or Eglinton ATC when clear of their airspace. This was acknowledged and so we descended to 1000' AMSL running in to the next waypoint. Just before reaching Horn Head, it was time for a regular status check of timing and fuel, although this time we would also add in a weather check for the route ahead. Time enroute so far was 53 minutes against a planned 47 minutes, with the excess accounted for by numerous orbits over my house build I'm sure !! Fuel burn was 34L against a predicted 33.1L so the flight was more efficient than the SkyDemon theoretical calculation, which I admit has a generous taxy and take off element within it and errs towards safety. Weatherwise, looking along the Northern coastline visually confirmed that conditions were very suitable with good VMC stretching along the coast towards the rest of the LOPs we needed to overfly, whilst access to internet data provided updates to the various METARs and TAFs for Eglinton, Belfast, Belfast City, and Prestwick. Eglinton was suitable with good visibility and a cloud base of around 1400', but the reports from the rest of the airfields ahead confirmed that the slow-moving frontal system was still hanging around with low cloud bases, rain, drizzle, and reduced visibility. The plan for now would be to complete the LOPs and then assess the situation to see if we would attempt to navigate to the secondary part of the mission over Northern Ireland. Options we had were to complete the flight as planned in its entirety or attempt a more limited number of Northern Ireland airfields by getting as far as weather would allow before breaking off and remaining in good VMC to return early to Prestwick, or aborting the Northern Ireland portion of the mission entirely and returning more directly to Prestwick. A further decision would of course have to be made later about returning to Prestwick, as the current METAR was well below limits and the TAF improvement time had moved to the right, with clearance forecast around 30 minutes before our ETA there. We could look at that in due course and there were various scenarios for a safe end to the flight if we were unable to make it there.

Clear in our minds about all our options, we got back to the task in hand, remembering that we were rejoining our original plan and the remaining LOP sites would be on the 'right' side of us once again but as per the original direction of flight. Positioning slightly wider to the West so that we didn't cross over the Horn Head LOP at 90 degrees and miss it, we turned back in towards the waypoint and flew in a gentle turn over the by now common cliff top location scenario. Noted as a visible EIRE marker, which was technically correct, it was quite a difficult one to spot with only one or two of the letters just visible. A sighting is a sighting though, so we were happy to be back on task. The remains of the WW2 LOP looked to be in good condition, along with a nearby Napoleonic Signal Tower. Maybe we should have included the latter in this mission too, but there's always another time. With the functional Gaelic name of Corrain Binne (the point of the cliff), the rocks of the cliff rise 600' straight out of the Atlantic Ocean. About 3NM Southwest of the marker we had flown past McSwyne's Gun, although in the good weather conditions we were experiencing, there was nothing remarkable about this feature. The 'Gun' is a cliff top blow hole and during fierce storms in distant times, sea water has been forced up through the hole rising to 200-300' with the crashing noise being heard 10 miles away. More recent observations indicate that the event is not as spectacular as

it once was, perhaps due to erosion and changes in geology below and within the hole. Nevertheless, occasionally people who have been too inquisitive have fallen into the hole and been killed. Never play Russian Roulette with a gun !!

Across Sheep Haven Bay, towards the next peninsula, which was surrounded almost completely by golden sandy beaches, we approach Melmore Head (#78) and the LOP building situated on the coast. Slightly further inland, located just to the East of the sandy beach on Boyeeghter Bay and just to the North of Melmore Lough, the EIRE marker was relatively clear on preflight printed aerial photos, but the reality was somewhat different and all we could clearly make out was the remains of the number '8'. Perhaps at a different time of the year or in a different light it could be more visible, but at least we had spotted it this time around. Boyeeghter Beach is more commonly known as Murder Hole Beach, and in keeping with previous precedents we have seen in this report, you can choose one of two versions as to the etymology of the name. One is the 19th century tale of a young woman who was reputed to have fallen from the cliff beside it, or was pushed ? The other is that it's because of the dangerous rip currents just offshore from the beach which make swimming perilous and have claimed a few lives over the centuries. You can pay your Euro and take your choice.

LOP #77 HORN HEAD AND BARELY VISIBLE EIRE MARKER

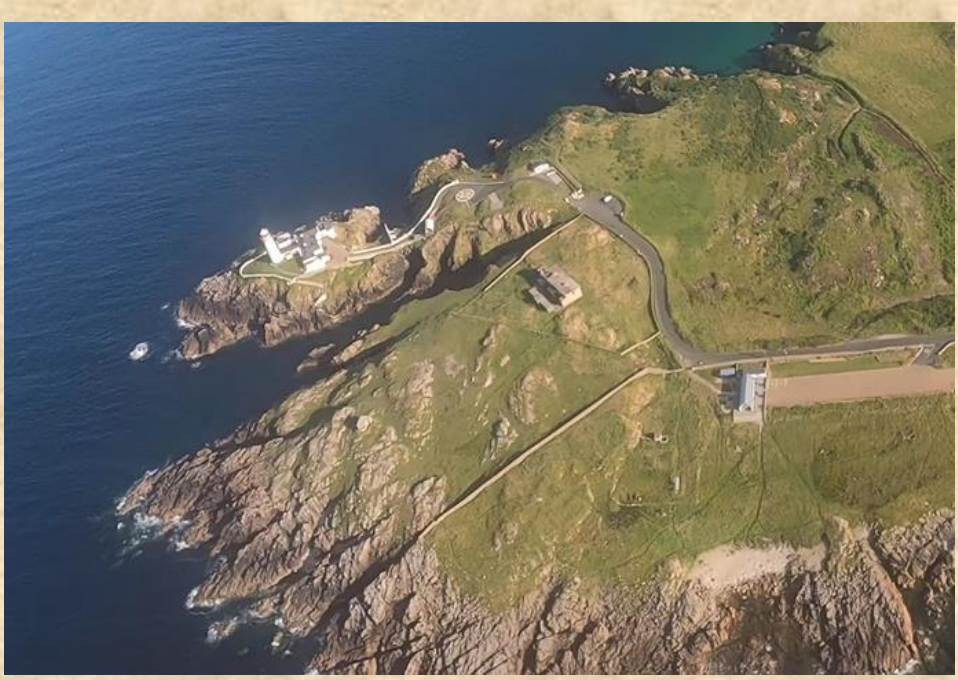
LOP #78 MELMORE HEAD AND ALMOST INVISIBLE EIRE MARKER

Passing golden beach after golden beach after golden beach for the next 6NM, our next LOP is Fanad Head (#79), located near another of Ireland's 80 lighthouses. The lighthouse station, which like the County's Airport has been voted one of the most beautiful in the World, dates from 1817. It was built in response to the sinking of the British warship HMS Saldanha, a 36-gun Apollo class frigate, which was wrecked at night in 1811 during a gale on the Eastern side of Fanad Head. In company with a sloop, HMS Talbot, it is believed that the Saldanha was attempting to return to their based anchorage in Lough Swilly and outrun the storm. There was an estimated crew of 253 on board and all were lost. Around 200 bodies from the ship were washed up on the other side of the Fanad peninsula at Ballymastocker Beach, once voted the 2nd most beautiful beach in the World but not an accolade it would have earned on that sad day of course. Another sailor was washed up alive on the beach but succumbed to his injuries almost immediately after being rescued. The Talbot was also reported as sunk but it turned out that this was false information and she turned up battered but safe. Six months after the shipwreck a servant at a house 20 miles away shot a strange bird. It turned out to be a parrot with an engraved silver collar reading 'Captain Packenham of His Majesty's Ship Saldanha'. Captain Packenham was also the Captain of HMS Greyhound when it was wrecked off the coast of the Philippines in 1808. In that sinking only 1 crewman was lost and the rest safely made it ashore to Manila. The sinking of the Saldanha remains one of Ireland's worst ever maritime disasters.

Lough Swilly, which is one of Ireland's 3 glacial fjords, was also the site of another sinking in 1917, although not because of weather or seamanship errors. The SS Laurentic, a requisitioned transatlantic ocean liner and one of the most technologically advanced ships in the Royal Navy at the time, was serving as an armed cargo and troop ship. On entering Lough Swilly, the ship hit 2 German laid mines and sank quickly with the loss of over 300 lives. On board as part of the cargo were 3,211 gold bars worth £5 Million in 1917, or around £400 Million today. In good sea conditions the wreck

of the ship can be dived on and attracts a lot of divers. Perhaps that's something to do with the 22 gold bars that were never recovered ?

Arriving at the waypoint, we spot the LOP building, located close to the Lighthouse Visitor Centre, but can see no sign of the reportedly very poorly conditioned EIRE marker. Our onboard aerial photograph library was of little use here as there is no sign on it of the position of the marker, only the LOP. Subsequently I discovered that it had only been discovered by luck during a TV documentary shoot using a drone for aerial footage in 2018. Watching the video, and the still from it, I can see why we didn't see a thing as it's a green grass covered '9' located on green grass. I've had easier Ishihara colour blind test cards and I suppose you can't win them all !!



LOP #79 FANAD HEAD AND INVISIBLE EIRE MARKER – SOMEWHERE ?

THE INVISIBLE FANAD HEAD EIRE MARKER SHOWING #9

Courtesy of TG4 TV

Across the unlucky mouth of Lough Swilly, without any mishaps I hasten to add, our next LOP is located on the Inishowen peninsula and is the most Northerly point on the whole of the island of Ireland, Malin Head (#80). Giving its name to the Malin Sea Area, there is a Met Eireann weather station located on the Head, one of 22 such stations whose reports are broadcast on the world famous BBC Shipping Forecast. Indeed, the whole of the footprint of the Head is festooned with manmade structures.

These include our now obligatory Napoleonic Watch Tower which was built in 1805 and is the most Northerly building in Ireland. Still standing, albeit roofless, it's known as 'Banba's Crown' and named after the spiritual mythological patron Goddess of Ireland. The tower was vital, especially to the Lloyds Insurance Group of London, who used it to monitor and keep in touch with passing shipping. This mainland station did not directly contact ships but instead used a telescope to monitor semaphore signals from another Lloyds signal tower located on the island of Inishtrahull, located 6 miles offshore. There the Lloyds staff would also use a telescope to monitor both messages from shipping and from the Malin Lloyds station and relay semaphore signals from the mainland to the shipping as well as from shipping to the mainland. Close to Banba's Crown are the remains of a Marconi Company radio station. Originally the company had established a radio station in 1901 at Portstewart in County Londonderry, as well as trialing equipment at Ballycastle and Rathlin Island in the same year. In 1902 Portstewart was closed down and the trial equipment which had been moved to Malin Head and Inishtrahull in late 1901 was established as a permanent feature, being declared operational in January 1902. The Marconi Malin Head radio station, which had a 120' long aerial, has been involved in some famous transmissions, including the message sent to request the arrest of the murderer Dr Crippin who was blissfully sailing to Canada along with his mistress, unaware that the long arm of the law would soon catch up with him. In 1912 the station also communicated with the ill-fated RMS Titanic whilst sailing from the Harland and Wolff shipyard in Belfast during her sea trials, to ensure that her modern Marconi radio system was fully operational, and was used on the fateful maiden voyage to pass distress messages to other nearby shipping, undoubtedly saving many lives.

During 'The Emergency', a top-secret agreement between the Governments of Ireland and Britain allowed a clandestine operation to take place here, consisting of 2 Radio Direction Finding aerials, which were used by the Allies to monitor signals and movements of U-Boats, shipping, and aircraft operated by Germany and its Axis allies. It is also home to the nearby EIRE marker, which has been beautifully restored and arguably the best preserved of any of these relics of the War which, after our fruitless search at Fanad Head, was an easy and welcome sighting to achieve.

More recent activity has included the use of Malin Head as a landing site for fellow pilot Han Solo (also known as Harrison Ford) in his aircraft 'The Millenium Falcon' during the making of 'Star Wars: The Last Jedi', although there was no sign of him and his ship, nor any Galactic Empire Storm Troopers, Jedi Knights, or talking robots, when we flew overhead. When I last visited here several years ago, access to the area was via the Irish designated regional road, the R242. It's since been redesignated as the R2D2, and no doubt there are millions of Star Wars fan 'selfies' taken alongside the roadsigns !!

ON MALIN HEAD, MAY THE 4TH BE WITH YOU !!

Photos courtesy of Nerdist.com, The Irish News, and Lovin.IE

LOP #80 MALIN HEAD AND EIRE MARKER – PLUS BANBA'S CROWN AND MARCONI RADIO STATION

Although not able to do the Kessel Run quite as quickly as The Millenium Falcon doing it in less than 12 parsecs, Wee Vans is still an impressive machine and the miles and LOPs were being eaten up at a good rate. It was now just over an hour since we had left Donegal Airport and we had effectively circumnavigated the whole of the County. It wouldn't be long before our main task was completed, and we could then consider our next moves after an up-to-date weather assessment. There was just under 20NM to go before that point but before that we had our final 2 LOPs and their EIRE markers to locate. Continuing Eastwards along the Inshowen's Northern cliffs, Glengad Head (#81) was only around 3 minutes flying time from Malin Head. Once famous for the fishing industry, Glengad is now predominantly geared to tourism, especially those who appreciate wild countryside and outdoor activities. High above the Atlantic, we quickly locate the EIRE marker on the cliff top and continue onwards to our final LOP at Inishowen Head (#82). Symbolically, perhaps, this final EIRE marker is one of the clearest we have seen, an obvious indication of the hard work by a restoration team. With Northern Ireland only a few miles away across the mouth of Lough Foyle, this would have been one of the most important markers for Allied aircrew, as it would signal that they were very close to Allied territory and the airfields at RAF Eglinton, RAF Ballykelly, RAF Limavady, and RAF Mullaghmore. For us it was equally symbolic, as it indicated the completion of our primary mission of recreating the inspection flight of the EIRE markers carried out by Generals McKenna and Hill. Now we had reached our decision point for the remainder of the flight.

We made a quick call to Shannon Information and reported approaching the FIR boundary. They received us loud and clear and wished us a safe flight with a transfer to Scottish Information or Eglinton Approach as we wished. Returning their good wishes, we thanked them for their service and a promise to return soon.

LOP #81 GLENGAD HEAD AND EIRE MARKER

LOP #82 INISHOWEN AND EIRE MARKER

Looking to the South and Southeast up ahead it was evident that there were still extensive areas of unsuitable weather on our planned track. Heavy grey clouds visibly merged with the high ground around Londonderry and a general darkness pervaded in that direction. A quick online check of the Belfast airfield's online METARs gave a gloomy picture with the cloudbase around 1100' and rain at both airfields. Looking to the Northeast towards the distant island of Islay, and the Mull of Kintyre even further to the East, was much more encouraging as there were blue skies in that direction. Scanning around the Northern Irish coastline which lay ahead to the East also indicated good conditions in thst direction with an estimated cloudbase of 5000'. The weather assesment, discussion of potential options, and the final decision making was not a long conversation and it was agreed that it would be pointless trying to struggle through poor weather conditions to try and overfly the remaining WW2 RAF bases and RN Air Stations in Northern Ireland. I now called Scottish Information, passed our flight details and requested and received a basic service. Our revised routing would be along the Londonderry and Antrim coastline until passing Ballycastle and then cutting across the waters of the North Channel towards the Mull of Kintyre and thence to the volcanic plug of Ailsa Craig and finally the Ayrshire coast of Scotland which lay beyond. Just as a final check of making the right decision, I asked Scottish for the latest Belfast Aldergrove METAR, and although slightly different from the online version, it was still indicating very poor weather. We had indeed made the right call. The latest METAR from Prestwick was still poor too, with the low cloud and drizzle persisting, but with plenty fuel, several more hours of daylight left, and options to return to VMC condition airfields at Islay or Campbeltown, or possibly on the Isle of Bute, we would continue towards our home base for the time being at least.

Climbing up to 3000' AMSL, we passed by the resort towns of Portstewart and Portrush, and then Bushmills, the home of a fine smooth Irish Whiskey distillery. To port lay the geological wonder of The Giant's Causeway, although I have to say it's never looked particularly impressive from the air in my experience. Definitely one to see from the ground where you can experience the wonder of the basalt column formations and strangely shaped rocks. Transiting along the Antrim coastline, it was clear to see why it's been designated an Area of Outstanding Natural Beauty. To be fair, you really could lump the whole coast of the entire island of Ireland in that category, having seen what we have seen on this flight. This area is home to the Glens of Antrim, a collection of glacially formed natural valleys, and Glentaisie is the most Northerly of the 9 Glens and heads Southwards from Ballycastle. According to a local 'Seanchai', a lyrical long versed poem recited by a bard, the glen is named after Princess Taisie, the daughter of King Dorm of Rathlin Island. Renowned for her beauty, she was much sought after by suitors but eventually was betrothed to Congal, the heir to the Kingdom of Ireland. The King of Norway was also determined to take her hand in marriage and he arrived to take 'his' bride by force during the wedding of Taisie and Congal. In the ensuing battle the King of Norway was killed and his army fled, leaderless, defeated, and of course empty handed. Shortly after passing Ballycastle, with King Dorm's island of Rathlin lying a couple of miles offshore to port, we passed over Fair Head, a 3NM long cliff which is formed by a 330' high band of distinctive dolerite columns shaped like organ pipes. On top of the clifftop plateau above, also known as Benmore (in Gaelic known as An Bhinn Mhor, or The Great Cliff), there are 3 loughs, the largest of which is Lough na Cranagh and as the name might suggest, contains the remains of a 'crannog' on one of its islands. A crannog is a man made island dating from the Iron or Bronze Age. They were used as dwellings in the Celtic nations of Ireland, Scotland, and Wales until as late as the early 18th century. Often thought to be defensive structures, there is very little archeological evidence of this as most excavations have turned up no weapons or signs of damage and destruction which might be experienced during an attack. Instead it's most likley that they were used as retreats for Kings, Lords, and prosperous citizens, or by marginalised groups such as monks and hermits who craved isolation.

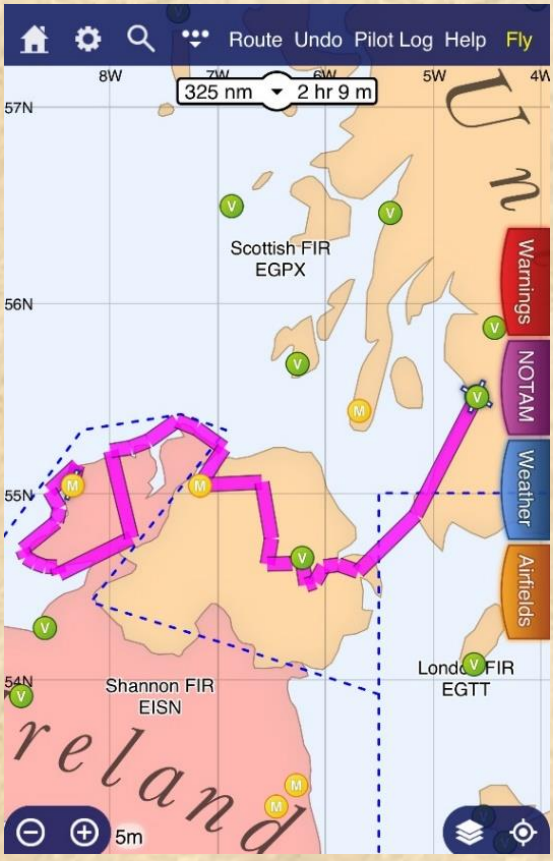
Passing Fair Head was our cue to adjust course a little to the Northeast and begin the water crossing back to Prestwick, but first a quick progress check to see how we were doing and commited ourselves. Our planned elapsed time to this point was 1Hr 13 Mins (based on an updated route input to SkyDemon tactically when we decided to head for Prestwick at Inishowen) and our actual airborne time had been 1 Hr 19 Mins so was quite accurate bearing in mind the extra 5 minutes airborne time we'd accrued at the previous progress check. Fuel burn was planned at 47L and was showing 45L, so again a positive figure as we now had 82L remaining, or around 2 Hrs 20 minutes flight time, including a 30 minute VFR reserve, with an anticipated landing at Prestwick in only 24 minutes time. Satisfied with the figures, we set out across the waters of the North Channel with the volcanic lump of Ailsa Craig, often called Paddy's Milestone, clearly visible ahead at a distance of 36NM. Initially tracking just to the South of the Mull of Kintyre to minimise the time we were out of glide range from land, using the SkyDemon glide tool as a guide, we then turned more direct to Ailsa Craig as several ships and fishing boats were spotted in the area ahead and would be part of our ditching mitigation plan should everything go quite at the front end of the aircraft. One of these looked to be a Type 45 Daring class destroyer of the Royal Navy, with the characteristic radar mast on the superstructure. They would certainly be helpful if assistance was needed and 121.5 MHz was already dialled in as the standby radio frequency just in case. SkyDemon also reckoned we would reach them in a glide too although we hoped this would not need to be tested in anger. Scottish passed me another Prestwick METAR at my request and there had been a slight improvement in conditions with a cloudbase of 800' and visibility now 7KM with showers in the vicinity. Looking forwards on our track, there did seem to be a heavy low level cloud bank lying just inshore from the

coast, with the cloud in our position currently a few thousand feet above us and showing a gradual lowering to the coastal cloud level ahead. However, looking out to our 10 to 11 O'clock position, the coastline was clearly visible up towards Prestwick with a cloudbase I estimated to be about 1500'. We could most likely get to Prestwick up the coast if needed but even if that turned out to not be viable, then a diversion to the small grass airstrip on the Isle of Bute, around 25NM Northwest of Prestwick was definitely possible as it was visually lying below a high cloudbase similar to that we were now flying under.

Approaching Ailsa Craig, I said goodbye to Scottish Information, obtained the latest Prestwick ATIS, and then contacted Prestwick Approach who already had my details. The weather conditions were confirmed as unsuitable for VFR flight in the Class D airspace, however I was offered and accepted a Special VFR clearance of not above 2000' via the VRP at Dalrymple, which is the standard VFR inbound routing for RW30 operations at Prestwick and very familiar to me as a based pilot. Starting our gradual descent at Ailsa Craig to remain VMC, we coasted in at 1200' AMSL just below the base there. Our cleared track was straight ahead through a valley but the cloud there seemed to descend gradually to a very low level there, hiding the terrain on either side, and I was not happy to continue. Starting a right hand climbing orbit remaining under the cloudbase, I advised Prestwick that the cleared route was not possible due to low cloud and requested a non standard route up the coastline, which I could see had a base of around 1200' AMSL, with an over water element making it possible to descend further, within reason, if needed. The reclearance was issued on my requested route and I was asked to report the airfield in sight and to advise the runway of my choice when it became visual. With a 2,987M runway available, I'd be quite happy to take a downwind landing on RW12 as there was only a downwind component of about 5Kts, should the normal landing direction not be available due to a rain shower, poor visibility, or low cloud. Breaking out Westwards and up to Bute was always there as a safe backup option if conditions started to cause me any doubts. Over the familiar home turf of Ayrshire, we passed by Culzean Castle perched on its cliff (we just can't get away from cliffs and coasts today it seems), a country house more than a true castle designed by the famous Scottish architect Robert Adam and built between 1777 and 1792. Now operated by the National Trust for Scotland, the Castle can be visited for tours or some of it can be booked for accomodation. One interesting feature of the Castle is the Eisenhower Suite, the entire top floor of the building which was gifted in 1945 to General Dwight D Eisenhower in recognition of his role in leading the Allied Forces to victory in Europe. First visiting his new 'apartment' in 1946, he stayed a total of 4 times at the Castle, including once whilst President of the United States. Our mission had come full circle with this link as we had earlier overflown RAF Bishops Court where the General had inspected troops before D-Day, as well as our passing over Blacksod Lighthouse whose Met reports forced the General to revise the D-Day landing date to ensure the best chance of success. Now within touching distance of Prestwick we weaved around a couple of isolated clouds reaching down to around 800' AMSL before turning the corner at the Heads of Ayr cliffs and becoming visual with Prestwick Airport. The cloud base and visibility looked pretty bad to the East of the airfield but keeping the circuit tight would allow us to squeeze in on RW30. Cleared for the approach and landing, we positioned downwind, completed all our checks, and carried out a curved approach at about 1/2NM final, landing with a satisfying squeak at 1907Z (2007L), almost exactly 13 hours after we'd left earlier in the day. Returning to our parking spot and shutting down, the sun began to break to the West of the airfield. It looked like the front had finally decided to shift and shine on us for our arrival home. But no, after tying down the aircraft and putting on the covers, the sky darkened again over the sea and low cloud began to form once more over the whole airfield. I guess Mother Nature was just showing us that she was still the Boss and would have the last word, but we didn't care by

then, we'd achieved a great trip and a large glass of wine awaited to celebrate and reflect on our success !!

BACK HOME SAFELY WITH BRIGHTENING SKIES APPEARING TO THE WEST – BUT NOT FOR LONG !!



PLANNED ROUTE AND ACTUAL ROUTE FLOWN

LEG 8 STATISTICS

	DISTANCE	ELAPSED TIME	AVERAGE GROUND SPEED	FUEL BURN
PLANNED	325NM	2 Hrs 09Min	151Kts	76.8L
ACTUAL	267NM	1 Hr 49Min	147Kts	64L

TOTAL FINAL FLIGHT STATISTICS (ALL 8 FLIGHT LEGS COMBINED)

	DISTANCE	ELAPSED TIME	AVERAGE GROUND SPEED	FUEL BURN
PLANNED	1072NM	7 Hrs 26Min	144Kts	265.4L
ACTUAL	1141NM	7 Hrs 54Min	144Kts	288L

AIRCRAFT & CREW

The Dawn to Dusk competition was flown in a homebuilt Vans RV8 aircraft, carrying the registration G-WEEV and named 'The Spirit of Wee V'. Constructed between 2007 and 2012 by former RAF, airline, and corporate pilot Bob Ellis, the aircraft, which was originally registered G-JBTR, has won several accolades, including the RAA (Canada) Trophy for Best Kit Aircraft and the Nowicki Trophy for the Best RV Aircraft at the LAA Rally at Sywell in 2012. She then went on to win the Royal Aero Club British Air Racing Championship in 2015, flown of course by Bob, as well as taking part in several other international racing and aerobatic competitions. As a fast and manoeuverable aircraft, she has also flown in formation as photo ship aircraft for airborne photography details alongside the iconic Vulcan XH558, the celebrated NHS Spitfire PL983, and a fantastic formation of 2 Spitfires, SM520 and RR232, from Spitfires.com based at Goodwood.

Affectionately known as 'Wee Vans', she is powered by a 180HP Lycoming IO360 engine, giving an economical cruising speed between 140 and 160 Kts, burning between 28 and 35L of fuel per hour, dependent on atmospheric conditions, cruising altitude, and pilot handling. Equipped with a 3-axis autopilot, the workload on the pilot can be dramatically decreased on long flight legs, allowing more time to look out the large bubble canopy to enjoy the view and scan the skies for other traffic. With an ability to land and take off on relatively short strips at maximum all up weight, and with my own personal limit being a minimum of 400M, the aircraft can make use of a variety of airfields which larger or heavier types might struggle with, making it ideal for touring, or indeed Dawn to Dusk Competitions.

The crew for this flight would comprise of 2, which is lucky as that matches the number of seats in the aircraft. Flying as pilot would be myself, Derek Pake, with responsibility also for planning, navigation, and communication tasks. Passing my Private Pilots Licence in 1982, I have flown various Single Engine Piston (SEP) aircraft over the years and have been a shareholder in several types since the mid 1980's. With a couple of sabbaticals along the way, due to children demanding feeding more than an aircraft, I now have almost 800 hours total time, with around 350 hours in the RV8. Professionally I was an Air Traffic Controller with NATS for 41 years, operating airspace at the Prestwick Area Control Centre. Now retired, finding time to fly seems to be a bit less of a problem these days so I'm making the most of it while I can.

Kate Turner was the back seat crew member and carried out additional photographer duties to supplement the wing mounted GoPro camera equipment. This was an essential role as Kate managed to capture quite a few of the EIRE markers that the cameras either missed or were filming at a poor angle. In addition, Kate also carried a set of aerial photographs of every LOP waypoint which she could reference and use to talk me on to right location where they were proving difficult to spot., as well as providing a younger and keener set of eyes to try and locate the more obscured EIRE markers. This was really useful on a couple of occasions and the teamwork between us led to a high degree of success. Kate has been an Air Traffic Services Assistant for many years, working at both Prestwick Airport and now for NATS at Prestwick Centre. Her love of aviation certainly shines through.

YOUR WINDSWEPT AND INTERESTING 'WEE VANS' DAWN TO DUSK COMPETITION CREW 2023

THREAT & ERROR MANAGEMENT

As with every flight undertaken, it's essential to identify and mitigate any potential risks, which either always exist as potential threats or may occur as the result of errors made by humans somewhere along the way, inside or outside the aircraft. The list below is not exhaustive, but an indication of some of the factors we identified, assessed, and provided mitigation for in order to reduce the possibility of the safety of our flight being compromised.

1. ***WATER CROSSINGS***

When operating a SEP aircraft, there is always the possibility of an engine failure, or a reduced amount of power being available, both of which can lead to an unplanned water landing if unable to glide to land. Aware of this risk, our flight was carried out with the following mitigations.

- All flight legs would attempt to maximise the time spent within gliding distance of land by using the shortest distance possible or by flying at a suitable cruising altitude.
- Where this was not possible, shipping would be identified and its position monitored as a potential ditching position.
- To assist in Search & Rescue, if required, a Flight Plan would be filed and opened for all legs, and communication established with an appropriate ATC agency for over water operations where practicable.
- The standby frequency 121.5Mhz would be selected and monitored in case there was no communication with ATC and an emergency situation needed to be communicated. With Ireland situated under the North Atlantic aircraft routes used by high altitude airliners, even a relay through another pilot on the frequency would raise help quickly.
- As a dinghy is not practicable for carriage in a RV8 unless flying solo, as a minimum we would continuously wear life jackets, brief their use, and familiarise ourself with ditching drills and escape routes from the aircraft.
- A Personal Locator Beacon, with a valid in service date, would be carried and available for immediate use in the event of an emergency.
- Prior to any water crossing, the engine management instruments would be checked to ensure that all parameters were within limits and that the fuel load available was sufficient for the crossing, including any turnback or diversion from any position on the crossing.
- The aircraft transponder and ADSB out would be operated at all times during the flight, with the ability to squawk a special SSR readily available to give ATC units an indication that we were in distress.

2. ***WEATHER CONDITIONS***

Weather is of course the biggest factor over which we have absolutely no control, but can pose a very high risk of causing an accident. Intense diligence in assessing the forecast weather, monitoring actual conditions and updated forecasts whilst in flight, and dealing with any unexpected conditions were all essential tenets of mitigating any danger. The following elements helped provide mitigation and ensure that weather was not able to compromise the safe operation of any flight

- Long range forecasts were obtained from a variety of recognised weather sources around 7 days before the planned day of the flight and assessed for the degree of risk that might be experienced.
- As the day of the flight approached, more granular forecasts became available, again helping to shape a GO/NO GO decision making process .
- The evening before the flight, a final look was taken at the TAF data for airfields along or close to the entire route, as well as using other recognised sources, to build a holistic picture of the likely weather situation the flight would experience. If unsuitable, as it was predicted to be for our first flight attempt date, the flight would be postponed to a weather back up day. Any postponement date would go through exactly the same procedure.
- On the day of the flight, a final cross check of METARs, TAFs, weather radar and satellite pictures, plus Area Met Forecasts were used to confirm the previous night's GO decision. On the actual day of our flight in this report, the data obtained confirmed the predicted movement of a frontal system which we had calculated could be flown around in a clockwise direction, passing ahead of poor weather heading Southwards and passing behind it when heading Northwards.
- Once airborne, regular visual checks would be made of the surrounding area in order to confirm that there had been no deterioration of the expected conditions, as well as periodic checks of METAR and TAF data for upcoming airfields ahead or close by.
- As the flight progressed, situational awareness was maintained of escape routes, should we be caught by unexpected and sudden changes which might compromise continued flight in VMC. These included turn back options, diversions around isolated conditions, or landing at a suitable airfield if conditions would likely become too extreme.
- Knowledge and experience of weather conditions associated with maritime and mountainous areas was applied to ensure that the aircraft was not operated in a situation where the weather conditions would outmatch the aircraft performance.

3. AIRSPACE & NAVIGATION

Knowledge of the airspace, special procedures for VFR flight, and communications and equipment requirements was essential to allow the most efficient flight profile to be flown. Irish airspace has some subtle differences from UK airspace so it was important to know about these before departure instead of trying to adapt to them whilst in the air. Awareness of the airspace and the ATC agencies would also help to prevent any inadvertent infringement of Controlled Airspace on our route. To help prevent any occurrences, the following were carried out.

- Annotating a paper chart and 'walking' through the route, noting the airspace boundaries, bases levels, ICAO classifications, and frequencies. Supplementary information was also obtained by referring to the online AIPs for both the UK and Ireland.

- Insertion of the route in to SkyDemon, using forecast winds, and printing out the Pilot Log for each leg, which would give a paper plan to use along with paper charts in the event of any technical failure of electronic navigation aids.
- Whilst in flight, running 3 independently fed moving map GPS navigation systems, including the aircraft EFIS and the fixed aircraft GPS receiver, SkyDemon on an iPad using the GPS data from the portable SkyEcho ADSB equipment, and SkyDemon on an iPhone using GPS and GLONASS from a BadElf Pro standalone GPS receiver. Each system provided real time data regarding the aircraft's position and the position of airspace boundaries, whilst SkyDemon also provided instant access to airspace and communications information.
- Setting up the SkyDemon airspace warning tools with adequate warning buffers and monitoring any airspace alerts both visually and aurally through a Bluetooth headset.
- Anticipating in good time where the flight profile would either have to be changed to remain below Controlled Airspace or where an ATC clearance should be requested, using an appropriate waypoint as an aide memoir.
- Continuous operation of Mode S transponder, which includes ADSB-OUT, to provide ATC agencies and other airspace users with situational awareness of our position.
- Where the aircraft was operated above 1000' AMSL with Controlled Airspace above, the flight was undertaken with the Autopilot Altitude Hold engaged, with a sufficient buffer margin to ensure that any inadvertent Autopilot disconnect could be safely managed before a vertical infringement occurred. This reduced workload and allowed monitoring of airspace avoidance as well as enhancing lookout for other traffic.
- Below 1000' AMSL, the autopilot was not engaged as there is a procedural limitation imposed to prevent the aircraft descending towards terrain with insufficient recovery time, should there be an unexpected Autopilot disconnect.
- Requests for ATC clearance included both a route and maximum altitude request. Cognisance was taken of anticipated IFR operations when making each request, for example, the use of the Lambay Island VFR route not above 500' with Dublin ATC. This route avoided placing us in conflict with IFR traffic on the ILS for RW28 operations at Dublin and therefore a clearance was readily forthcoming from the controller.
- Monitoring the RT transmissions and using the SkyDemon traffic display fed by the SkyEcho ADSB equipment helped maintain situational awareness of the traffic within Controlled Airspace, as well as allowing visual acquisition of relevant traffic which might be a factor if we had to deviate from our clearance in an emergency.
- Requesting any changes to our flight profile in Controlled Airspace from ATC and obtaining a revised clearance prior to flying them.
- Advising ATC of any change to another frequency when outside Controlled Airspace and a more suitable agency was available.

4. *MANAGEMENT OF HUMAN FACTORS*

As well as managing the operation of the aircraft, equipment, navigation and communication, it was also important to ensure that we managed ourselves in order to ensure our own wellbeing, to recognise and cope with fatigue management, and also be aware of our own human limitations which may lead to errors being made.

- Ensure that the 'IMSAFE' preflight pilot check recommended by the CAA and GASCO was carried out.

- Plan adequate stops along the route, including the ability to rest, eat, rehydrate, and use the 'facilities'.
- Carry accessible on board fluid supplies and snacks to ensure hydration was maintained and a 'sugar rush' could quickly be obtained if required for alertness.
- Carry adequate onboard 'emergency' toilet items in case nature acts before a landing is possible.
- Maintain regular engagement and conversation so that each crew member can monitor the other for signs of fatigue or possible incapacitation.
- Writing down of ATC clearances and information, cross checking them as the readback is made to ensure that all information is correct.
- Encouragement to challenge anything that either crew member is unsure or unhappy about, helping to foster a good working relationship and culture.
- Discuss any decision making to arrive at a sense checked consensus before acting on a change to a plan.
- Have fun !!

VIDEO LINKS

Whilst we hope that you have enjoyed reading our competition entry, you might also wish to watch some of the inflight scenes from the day. Two short videos have been produced and are accessed online through Vimeo using the links below. The first video is a generic one and concentrates more on some of the magnificent scenery we experienced rather than the overflying of the WW2 airfields, LOPs, and EIRE markers, although you might spot some of course. The second video features a selection of the airfields, LOPs, and EIRE markers.

Each video is accompanied by music with a family connection. The first contains tracks co-written, co-performed, and co-produced by my daughter Samantha. The second video contains a track which she wrote, performed, and produced all by herself and was specially commissioned for the video. Hopefully you will enjoy your short musical flights with us over the beautiful Irish coast !!

EIREBORNE

https://vimeo.com/839294046?share=copy

DAWN TO DUSK 2023 'EIREBORNE'

https://vimeo.com/853862726/d9ca05cdbc?share=copy

WE HOPE YOU ENJOYED OUR IRISH ADVENTURE

BEST WISHES FROM

KATE TURNER & DEREK PAKE

PRESTWICK – SEPTEMBER 2023

EIRE – SLAN GO FOIL !!