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FLYING IN THE MANCHESTER CTR

So you're planning to fly into Manchester International or Woodford and have started to think about planning the trip. The chances are that you'll look at your 1:500,000 chart and flight guide and think, 'this is going to be complex and probably beyond me'. Well, it isn't if you remember what I'm sure your CFI told you. Remember the bit about good pre-planning? Well, that's the answer here. Certainly Manchester is going to be much bigger and more complex airspace than the one you learned in but all the information you need to do a professional job is available at your fingertips. First stop can be the www.ais.org.uk website and a print-off of the pages relevant to Manchester from the AIP. I'm primarily concerned with the navigation element here so I'm not going to go into all the details here but you **must** ...

1. Get PPR and a runway slot time.
2. Have a handling agent.
3. Brief yourself on the entry-exit procedures, and this is what I'm going to talk about.

The Manchester CTR

The **Manchester CTR** is **Class D** airspace and is designed to protect the approach and departure paths of the IFR aircraft operating from the airport. There are, on average, around 750 IFR movements daily. To do this whilst causing as little disruption as possible to the traffic flow and yet allow VFR/SVFR operations, a route structure has been established. The runway in use will determine the route that will be applicable to your flight. This info is available to you as soon as you get within RTF range of the **Arrival ATIS (128.175)**. As the preferential runway direction is westerly that's where we'll start.

The Woodford Entry-Exit Lane

If you look to the SE corner of the **Manchester CTR** you'll see the **E/E Woodford** symbol by the **Congleton VRP** symbol and legend. As you'll also notice, the brown tints of high ground are becoming relevant as you approach - more on this later. In good time, make your first call for zone entry clearance to **Manchester Radar 118.575**. **Woodford** are very rarely active these days but you may be asked to call **Woodford TWR 120.70**. Let's assume you're requesting entry clearance from Manchester. When you select the frequency it will be busy. Just take your time and formulate your call, remember to quote the ATIS code letter. Wait for a gap to open on the RTF then jump in. Remember your first solo? Scary before take-off but unforgettable when you got going!



Here's **Congleton** from high level. You can clearly see the railway (dual track with overhead power supply). Notice also the canal crossing the railway and the flooded quarry to the west of the town. The quarry is an excellent means of pinpointing **Congleton** but isn't marked on the chart. The spot height of **1125ft AMSL** to the east of the town is an escarpment called 'The Cloud' and is regularly used by model aircraft and occasionally by hanggliders. The instructions for entering the **entry-exit lane** say to join **east of Congleton VRP**. This is to establish you on the correct side of the railway line and also to keep you clear of any aircraft that are outbound. You will be on the west side of the railway.

You're now entering the lane and should be following the railway line, staying **within 1nm** to the **east** of it (remember the ANO here?) Altitude? **Not above 2500ft QNH**. If you find you need to go beyond 1nm from the railway then you **must** inform ATC. This won't be refused - they just need to know.

Close to the east of the lane is the Pennine ridge. If the visibility is good you'll see the peaks, some with aerials or microwave links rolling past and stretching ahead in your 1 o'clock. To the west is the flat Cheshire plain with tree-covered farmland and the dominating **Jodrell Bank** radio telescope off in your 10 o'clock.

When you obtained your zone entry clearance it will, almost certainly, have included a clearance limit of **Hilltop**. So you can concentrate on your navigation and listen to the jets being vectored towards the ILS for 24R.

After **Congleton** the railway passes through a very rural landscape, passing over red brick viaducts and through cuttings. Already, ahead, the town of **Macclesfield** is growing in the windshield.



Even from this height you can see the railway running into the town from the south, Macclesfield Town football ground and the golf courses to the SE of the town. Sometimes, if **Woodford** are controlling the entry-exit lane, they may ask you to hold at **Macclesfield**. This is usually to enable them to depart or land IFR traffic.

The railway line is difficult to follow through the centre of **Macclesfield** but, by now, **Woodford airfield** should be in sight. The airfield is often first sighted by the Bae factory buildings, which have blue hangar doors. Handily, there is also a huge canteen building to the north of the runway which has 'British Aerospace' written on it!

Your clearance into the zone when **Woodford** are not controlling the lane constitutes a clearance to transit the **Woodford ATZ** so no worries there. However, you should descend after the north edge of **Macclesfield** to fly **not above 1500ft QNH**.



Note the runway layout at **Woodford** and the factory buildings to the north and south of the runway.

Sometimes, **Manchester** may ask you to hold over **Woodford airfield**.

Hilltop VRP is coming up rapidly and now you need to concentrate on fitting into all that heavy metal you can hear. **Manchester Radar** will instruct you to contact **Manchester TWR** before **Hilltop** and the TWR will almost certainly tell you to hold at **Hilltop**. The VRP itself is a bit of a mystery! I certainly haven't ever really spotted where it is! However, go 1nm NW of Woodford and you're there!

When holding at **Hilltop** my tip is to orbit right. This means that you'll be facing up the 23R approach when at your closest point. Why is this handy? Because soon TWR will give you traffic information on one of those inbound for you to follow, and you'll be facing up the approach and ideally placed to see it. Don't allow yourself to move further north towards the 23R final approach, or south towards **Woodford**, as they may have departing traffic.

If Manchester doesn't spot your registration as a visitor they may ask if you are familiar with the **Handforth Flats**. These are a group of three flats, which are on a close base leg between **Hilltop** and the airfield. Locally based aircraft know this but you won't. They aren't marked on the charts so if asked just say you aren't familiar.

Below is the view from **Hilltop** on a showery day. If you look very, very closely you can just about make out a BA B737 on final approach! Just! The **Manchester 23R** threshold will be off in your 10 o'clock and the airfield will have been in sight for some time as it is so big. The terminal buildings are often visible from **Congleton**. Particularly Terminal 2, which is clad in aluminium.

An airmanship thing here, you are going to be parking at one of the three GA parking locations on the airport, and they are all half way down that enormous runway! Plan your approach to land and vacate as soon as possible. Runway utilisation is very important and there will be large fast aircraft behind you. If you can, keep your speed up as long as you can. If you feel that your experience is such that you feel uneasy doing any of these things then advise TWR in good time. They will **not** think less of you! Safety always comes before expedition.



Now you're following the B737 to final number two with the vortex wake warning in mind. If you're in doubt about your ability to judge the vortex miles then ensure you stay above the approach path of the preceding aircraft and land deeper into the runway. **Vortices sink!**



Here's the view from a tight base-leg, notice the greenhouses and railway. The 23R landing threshold is in your 11 o'clock and 24L off to your left. Set your radio preset to **121.85** for GMC so you can make the quick change when instructed. Landing checks completed, clear to land 23R! Down and clear. Easy life!



Yes! Light aircraft do visit Manchester; Although these aircraft are using the now disused grass parking area, you will be parking on one of three hard surface parking areas. These are known as The Ocean Sky Jet Centre, Parking areas Rompa, (named after a local pub), and Tatton. Check your Flight guide or **AIP AD2-EGCC-2-1** from the website. You can print this page and take it with you.

What if I'm arriving from the North?

There's bad news and good news here. For various operational reasons the standard arrival route when on Westerly ops is via Congleton and the entry-exit lane but ...if traffic conditions are **very** favourable you may be offered a non-standard clearance into the zone. This will normally be to enter via **Swinton Interchange** to the NNE of **Barton not above 2500ft**

Again, if you have planned your flight to enter via the conventional route through **Congleton**, and feel unsure about a re-route at the last moment then inform ATC. If you are ever unsure then ask, that's what ATC is there for.

If you do get offered this routing then a note to remember is that the **Barton Local Flying Area** is generally very busy and may be used by aircraft without clearance from Manchester so there may well be unknown aircraft here. Any clearance to enter the **Manchester CTR** via **Swinton** does **not** include a clearance to transit the **Barton ATZ**. So please route around, or, if you can, give them a call on **120.250** the ATC service is usually an AFIS (Information), but may sometimes be degraded to A/G (Radio)



Here is **Swinton** from high level. You'll be following the motorway to the SSW towards **Barton** airfield initially. There is a large sweeping bridge over the **Manchester Ship Canal** and, just beyond it; you'll see a huge development resembling the Vatican! This is the Trafford Centre. A gigantic shopping centre built in the style of a Basilica! Remember, you'll be passing through, or close to the **Barton ATZ** and you must contact **Barton Information** on **120.250**, if you wish to transit.

Manchester will issue clearance to **Sale Water Park** to hold. Follow the motorway, which has arced around, to the southeast. Here is **Sale Water Park** ...



There are a number of lakes here but the golf course you can see here will help to orientate yourself.

When traffic allows you'll be brought on, sometimes to hold on base-leg or directly to final.

Helicopter pilots get a bonus in that they may well be asked to proceed to the **North Side Car Parks** to hold. Then brought on to a parking location close to their handling agents. Just a note here for **helicopter pilots only**. If you are flying from **Swinton to Sale Water Park** or from any point on the **Northern CTR** boundary be aware of **R319, Manchester (Strangeways) Prison Restricted Area** up to **1700ft**.

Please make sure you've had a good look at the aerodrome layout! As you approach this point the TWR controller and RAD between them will be arranging the inbound traffic to allow for larger approach spacing as you come into the published missed approach area. GMC and TWR will also be co-ordinating your passage across the airfield to your parking spot. As you can see there is a lot of talking going on that may not be apparent when listening to the RTF!

There is a pretty good view of the airfield from the car parks! Here you can see the taxiway layout for 23L which may be your departure runway (for the fixed wing pilots) on the way out.



Entering the zone when Manchester is operating on Easterlies

Firstly, a very important point. Take great care to get the runway in use from the ATIS. Between 0600-1200 & 1500-2100 local on Weekdays and 0630-1200 & 1500-2100 local at weekends you will be landing on **05R**. At all other times it will be **05L**. This doesn't affect the inbound route, but is **essential** later for obvious reasons!

I'm not going to give information here about the use of the Low-level route because it's all included in the previous briefing about transiting via the LLR. You might remember that I mention the possibility of meeting traffic holding at **Stretton VRP**. Well, now you may be one of them! **Stretton** will be your entry point and when you request your zone entry clearance it will almost certainly be '**from Stretton to Rostherne Mere not above 1500ft on the Manchester QNH**'.

On rare occasions, you may be asked to hold at **Stretton** due to VFR/SVFR aircraft, which are already holding at **Rostherne** ahead of you. Yes, I know that if you're VFR you don't require separation from other VFR traffic but when you are holding close to final approach do you really want to be looking out for traffic orbiting with you or concentrating on the job in hand? If you do have to hold at **Stretton** keep a good lookout for aircraft transiting the Low-Level route.



Here's **Stretton** from high altitude. It's easy to spot, and the M56 runs across it with the junction with the M6 clearly visible to the east of the old airfield. On this photo you can also make out the grass strip on the northeast corner of the old airfield to the north of the wartime tarmac runway. There is occasional activity here so keep a good lookout.

So, you've been cleared on to **Rostherne Mere VRP** and should already be flying **not above 1500ft QNH**. The route is along the M56 keeping the motorway close to your left. Don't be tempted to cross it! There may be outbound traffic routeing along the north side! However, it is important not to stray too far to the south, as you will be close to the 05L/R approach.

So, on the next page is **Rostherne Mere** again from high level to give better area coverage. Note the M56 coming in from the west and the double junction on the motorway. The Mere has a large population of ducks & geese, particularly in the autumn through to spring. Personally, I would hold just to the west of the motorway junction to avoid lifting the birds.



At or before reaching **Rostherne Mere** you will have been transferred to the TWR and will have the airport in sight. Personally, I hold in a right hand orbit here so that as I turn at the VRP the turn allows you to easily scan the approach. This also allows you to run along the motorway facing the direction of oncoming outbound traffic.

The TWR will identify an inbound to you with instructions to position to final behind it with the vortex wake recommended spacing. Now, you might think it would be impossible to mis-ident runway 05L & 05R? Well, I can assure you, it has been done, and by professionals! If you are landing 05L then the displaced threshold will place you down the runway towards your parking position. If you're landing 05R then you will have noticed when you briefed yourself on the runway layout that the first exit is about 2000m down the runway! Again, be aware that there will be fast traffic behind you and, if you can, land well down the runway so as to vacate as soon as possible. If you feel able, keep your speed up as long as you can. **If you feel unable to do this then just advise ATC in good time, preferably before you leave Rostherne Mere, and they will come up with another plan.**

After landing, ATC will get you across the departure runway, (if dual runway operations are in progress), then clear you to your parking spot.

If traffic is particularly quiet ATC may offer a clearance directly to **Jodrell Bank** for aircraft approaching from the south. This will usually be **not above 1500ft QNH** and you'll be brought on from Jodrell bank to a base leg.



There is a railway line, (dual track with overhead power lines), running from the CTR boundary at **Holmes Chapel** (the village is marked on the 1:500000 chart). However, I'd be surprised if the Radio telescope isn't the first thing you see as it is painted white and 305ft high! **Jodrell Bank** is not a HIRTA and I've never known it to affect GPS reception. **Jodrell Bank** is quite some distance from the 05R/05L landing threshold and, to shorten the distance you may be asked to proceed towards the airfield and then hold on base leg at a point specified by ATC. This won't be a VRP but just an instruction to take up an orbit.

OUTBOUND ROUTES, Westerlies first!

OK. So you got here and you're standing next to your aircraft after completing your walk around. But before getting to that stage there is some preparation to do. Your handling agent should be able to provide information on the outbound routes but you will have done this already won't you? Manchester is unusual because it has VFR/SVFR route clearances, which will be passed to you in the same format as a Standard Instrument Departure. The AIP page that details them is **AD2-EGCC-1-17** and you can print this page off the www.ais.org.uk website.

23R or L in use means you can expect a Congleton 3 VFR/SVFR departure and lets assume you've got your 1:500,000 map spread on the seat of your aircraft. Look across the runway on a bearing of around 140° and you'll see a wooded hill standing in the Cheshire Plain away from the main body of the Pennines. That's **Alderley Edge Hill** and it's your first waypoint. You'll then notice the route will then join the **Woodford Entry-Exit Lane**, so you'll be back on familiar ground. If you glance across the **AD2-EGCC-1-17** info you'll see that there is an altitude step that requires you to fly not above 1500ft until the northern edge of Macclesfield. After which you can climb to not above 2500ft southbound to the CTR boundary. When you printed the AIP page with the text information I'd strongly suggest you also print **AD2-EGCC-4-1**, a chart of the local flying and entry/exit procedures, which is very useful.

We've looked at it, now let's fly it.....

Firstly, remember to book out by telephone with ATC. Your handling agent will have access to a direct line or appropriate telephone line.

You've listened to the Departure ATIS on **121.975** and copied the details, be particularly careful to note the runway in use, (Left or Right). It's going to be very important as to where you will be instructed to taxi to later. Engine started and radio selected to **121.7 (Manchester Delivery)**. '*Manchester Delivery, GABCD,*' **G-CD pass your details.** '*GABCD, (aircraft type), requesting VFR clearance with information (code), QNH**** for (destination)*'. **GABCD, your clearance is a Congleton 3 VFR departure, Squawk 3713, QNH ****.** Remember here to read back your clearance, squawk, and QNH. Delivery will then instruct you to call **Ground** on **121.850** when ready for taxi.

You're ready for taxi and Ground will clear you to either.....

If runway 23R is in use proceed to Link G. But do be prepared to be cleared to an alternative link - the choice will be made by ATC to achieve the most expeditious departure sequence.

If 23L is the runway in use for departures ... Ground will instruct you to follow designated taxiways to...almost certainly '**D1 to hold short of 23R**'. This will be your crossing point for the landing runway and you **MUST** read back the '**hold short**' instruction. You're now on the move following taxiways B & K to D1 and you can see there is a Boeing 757 holding ahead. Be very cautious of jet blast! A C172 has been turned over and damaged when holding behind a jet at D1 particularly because the upslope from the hold means that the heavy aircraft will use a lot of power to move off! By now you'll have been transferred to **TWR** on **118.625**. A landing aircraft rolls past and TWR clear you to cross 23R ... expect a clearance to '**hold at V5**' and then transfer to TWR on **119.40**. On contact you will be cleared to a runway holding point to report checks complete ... checks complete and you're ready to go ... there may well be a delay here due to other traffic and also to make sure you get your vortex departure separation ...

This is where it all comes together either departing from 23R or left ... clear for take-off! ...

As soon as you feel happy to do so, commence a left turn towards **Alderley Edge Hill VRP** ... you'll hear TWR clearing jets to line up behind you and as soon as they see you commence your turn, clearing them for take-off with you in sight. First climb step is **not above 1500ft QNH** and you'll be keeping **Alderley Edge Hill close to your left**. If Woodford are using the Entry-Exit lane you may be instructed to contact **Woodford TWR** on **120.7**. If not, you'll be staying with Manchester TWR.



Here's **Alderley Edge Hill** from high level. Unfortunately, the vertical shots don't show the elevation of the hill itself. It's **650ft AMSL**, and stands out very well! Notice the railway line to the west of the Hill? Don't be tempted to follow it, continue around the hill onto a track of approx 090 degrees and **Macclesfield** will appear ahead ... and **Woodford** airfield will be off in your 10 to 11 o'clock. As you pass **Alderley Edge Hill** keep looking ahead for the **Macclesfield-Congleton** railway line. It's twin track with overhead power cables. If you can find **Prestbury railway station** then you're a better pilot than me because I certainly can't! And I'm not alone! But the railway is very visible, as it sweeps away from **Macclesfield** southbound. As you join the railway the rules I've mentioned in the inbound section come into force ... **stay within 1nm of the railway, keeping the line to your left of course** ... you may now climb to not above 2500ft. If you find you need to deviate away from the railway to maintain VMC then you must tell ATC. Continue southbound down the railway line and **Congleton** is coming up ahead ... again the hills are close off to your left and you should be well aware of them if visibility is towards the lower limits for, especially, SVFR flight. Report leaving the zone at **Congleton** and you're up and away.

A bit of preparation and wasn't it easy?

Non-Standard routing to the South?

Sometimes, if you're going to a destination to the west or southwest, ATC may offer a more direct routing. This will depend on the IFR traffic offering to the TWR controller. You may be offered a clearance via the **Wilmslow-Crewe** railway line **not above 1500ft QNH**. This one is nice and easy ... see the railway I mentioned to the west of **Alderley Edge Hill VRP**? Well, that's it! Follow the railway, it's dual track with overhead power cables and takes you directly past **Jodrell Bank VRP** (remember the radio telescope?) and then to the zone boundary at **Holmes Chapel**. **Holmes Chapel** is marked on the 1:500,000 chart and can be easily spotted southbound. Just before the village itself there is a long, high, red brick viaduct on the railway line. To the south of the village, the **M6** will cross diagonally from northwest to southeast. On crossing the motorway you are well clear of the Control Zone.

How about leaving to the East?

If traffic permits it is sometimes possible to offer a clearance to leave the zone via **Buxton VRP**. Expect an altitude restriction of not above 3500ft or 3000ft QNH. The direct routing will take you almost directly overhead **Woodford airfield** and you'll soon be aware of the Pennine ridge ahead rising on your track to **1345ft** and **later 1663ft AMSL**! Even worse is the fact that **Kinder Scout, (2087ft AMSL)** is **4nm north** of your route! In the early mornings or in frontal type conditions cloud tends to collect along the Pennine ridge and regularly sit on the top of the hills. You should seriously consider the prevailing weather before requesting or accepting a VFR/SVFR clearance via Buxton! Here is **Buxton VRP**...



The town itself is situated in a bowl in the hills and the many light stone Georgian style buildings show up very well. There is a stone viaduct to the east of the town centre which carries the railway line into Buxton and this stands out very well. Oh! By the way, the station at Buxton is a terminus.

But I want to go Northbound!

Bad news! The route structure is such that you will have to leave the zone to the south and then route around through the Low-level route or to the east of the Control zone. **Better news** ... ATC are not that inflexible, if traffic is very heavy you may be expected to follow the Congleton 3 VFR/SVFR departure. However, there is every chance that you will be offered a non standard clearance to leave the Control zone via a designated point to the north or northwest. Sometimes even on a direct track to your destination! Altitude to fly 'not above' will be specified. Most common points are ...



Carrington ... this used to be a VRP but is no longer and is **NOT** marked on the 1:500,000 chart. However, see the multiple obstruction group 2nm SSW of **Barton airfield at 420 & 450ft AMSL**? That is **Carrington**. It is a large oil refinery and chemical complex with storage tanks and often a gas flare. It should be clearly visible as you commence your turn towards the north. After passing **Carrington** avoid the **Barton** ATZ if possible. If you wish to transit you must give **Barton Information** a call on **120.250**.

The other main location used is **Thelwall Viaduct VRP**. Here it is - note the **Manchester Ship Canal** and the **River Mersey** running beneath it. The viaduct carries the 8 lanes of the M6 over the waterways and is often visible from Manchester airport. The movement of all the vehicles over it will help you spot it in restricted visibility. Clearance to leave here is usually not above **1250ft QNH** to tie in with the maximum altitude restriction of the Low-level route.



Non-standard clearances to points to the north and particularly northeast may be given. On track **Pole Hill VOR** is not out of the question. The altitude restriction will reflect ATC needs and also the fact that you are leaving the zone towards high ground.

OUTBOUND ROUTES.... now Easterlies!

We've covered booking-out and the RT and all that was said there applies to a departure when the easterly runways are in use. You should expect a '**Thelwall 1 VFR/SVFR** departure squawking **3713**'. Easterlies are a little easier in that when both runways are in use the departure runway will be **05L**. So no crossing complications, you'll be instructed to taxi to **Link Bravo**. But be prepared to be cleared to an alternative link, as the choice will be made by ATC to achieve the most expeditious departure sequence.

After airborne it's a turn to the left as soon as you can ... but avoid overflight of the airport terminal buildings! Cross the **M56** and then **ESE** along the motorway to **Thelwall Viaduct** (see picture above). The M56 is very close to the north of Manchester airport and is very easy to spot as soon as you are airborne. The altitude restriction on this route is **not above 1250ft QNH** to tie in with the Low-Level route maximum altitude.

A few cautions here ...

Firstly, on easterlies, inbound traffic will be routing along the M56 keeping it to its left and holding at **Rostherne Mere VRP**. So ensure you keep the M56 to your left.

Secondly, avoid overflying the village of **Lymm**. It is marked on the 1:500,000 chart and is noise sensitive. Also, there is a strip with an east-west runway close to the east of the town which does generate some traffic, there are several based aircraft and their standard operating procedure is to fly from and to the airfield via the low-level route.

Thirdly, as you join the low-level route keep a good lookout for traffic in the route. **Manchester TWR** will not be aware of traffic in the low-level route and will not pass traffic information!

Any non-standard routeings when easterly runways are in use?

Because the Thelwall departure feeds traffic into the Low-level route without a long diversion it is very rare for traffic to be offered a non-standard routeing. However, as usual, subject to traffic, aircraft going north may be offered direct tracks - see the non-standard zone exit points mentioned in '**But I want to go Northbound!**' in the **Westerly** departures section.

If you are going southbound it may be possible to offer you a routeing down the **Wilmslow-Crewe railway** (see '**Non-standard routeing to the South?**' in the **Westerlies** section), **but this is very dependant on offering IFR traffic. Not only departures but arriving traffic too! So the chances are not good.**

Eastbound traffic. You may be offered a routeing via **Buxton** (see '**How about leaving to the East?**' in the **westerlies** section).

ALWAYS PLAN FOR THE STANDARD ROUTES. DON'T BANK ON A NON STANDARD ROUTE BEING OFFERED. ATC WILL NOT DELAY OTHER TRAFFIC TO ALLOW YOU A DIRECT ROUTEING!

IMPORTANT NOTE: The main idea of this information is to help you with navigating in the Manchester Control zone so I have purposely left out the general information on the rules relating to VFR/SVFR flight in Class D airspace. **AIP AD 2-EGCC-1-17** is a good place to start. The detailed rules about the Woodford Entry-Exit lane are found in **AD 2-EGCD-1-4**. It's not too daunting. As I've said before, don't feel overwhelmed, pre-plan and you will enjoy mixing with the big jets!

Mike Rudkin

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