



AERODROME CONTROLLER CRIB SHEET

WHEN YOU LOG ON:

Decide if the weather conditions are **VMC or IMC**.

Conditions are IMC if any of the following are true (in a Class D zone, e.g. Stansted or Heathrow):

- **Visibility** less than **5000 metres**
- BKN or OVC clouds at less than 1500 feet

If conditions are **IMC**, then you need to decide if **Low Visibility Procedures** are in force. LVPs are in force if **any** of the following are true:

- **Visibility** less than **800 metres**
- **RVR** on the active runway less than **600 metres**

Decide on the active runway, according to the wind. The transition altitude is always fixed – it’s on the charts. Work out the transition level, using this table:

QNH	3000FT	4000FT	5000FT	6000FT
1050-1032	FL25	FL35	FL45	FL55
1031-1014	FL30	FL40	FL50	FL60
1013-996	FL35	FL45	FL55	FL65
995-978	FL40	FL50	FL60	FL70

Use this data to create your ATIS. Add any relevant remarks about the status of the aerodrome.

Announce your presence on the ATC channel in IvAc.

Inform any other controller at the aerodrome you are online including any top down controller that may be online e.g London Control, advising them of the active runway and passing any other relevant information.

METEOROLOGICAL CHANGES

When there is a new METAR/ATIS without significant change:

“All Stations, Heathrow Tower, information is now Kilo, no significant change, Heathrow Tower Out”

When there is a new METAR/ATIS with a new QNH:

“All Stations, Heathrow Tower, information is now Kilo, new QNH 1004 hectopascals, new QNH 1004 hectopascals, Heathrow Tower Out”

RADIO CHECK

“Tower BAW123, radio check 118 decimal 7”
“BAW123 readability 5”

IFR CLEARANCE

“Tower BAW123 an A320 with Lima 1014, stand 8, request clearance Heathrow”
“BAW123 cleared Heathrow, Lambourne 3 Romeo, squawk 1234”
“Cleared Heathrow, Lambourne 3 Romeo, squawk 1234, BAW123”
“BAW123 correct”

PUSH AND START

“BAW123 request push”
“BAW123 behind the company 747 taxiing behind you left to right, push and start approved, face south-west, behind”

TAXI

Always use the red carpet method when giving taxi instructions, and give the QNH.
“BAW123 follow the Fly UK 737 to holding point A1 runway 06 via Echo and Alpha, QNH 996 hectopascals”

Crossing an active runway:
“BAW123 at Hotel 1 cross runway 27R report vacated.”
When crossing an inactive runway, clearance to cross can be given as part of the taxi instructions.

You can use conditional line ups to expedite the traffic. Always give the holding point.
“BAW123, behind the landing company Boeing 747, via A1, line up and wait runway 22 behind”.

DEPARTURE SEPARATIONS

The larger of the two separations must be used as the overall departure separation. Any speed separation required must then be added to this figure.

Vortex Separation, timed between the lift offs of main gear:

- Leading aircraft of bigger category – 2 mins
- Leading aircraft of same category – 1 min
- Leading aircraft of smaller category – none

At Stansted and Heathrow, Route Separation is only applied if both aircraft are departing on SIDs.



At Stansted (and many other airfields), route separation varies depending on the SIDs of each aircraft – these can be found on the website.

When the first aircraft is slower, then one minute of Speed Separation is added for every successive group that the leading aircraft is slower by. Most airliners are Gp 3, fast regional jets/turboprops are Gp 2, slow jets and most turboprops are Gp 1, and slow aircraft are Gp 0.

IFR INBOUNDS

Leader	Follower	Spacing (NM)
Heavy	Heavy	4
	Medium	5
	Small	6
Medium	Light	8
	Medium	3*
	Small	5
Small	Light	6
	Small	3
	Light	4

*If the leader is a B757, DC8, B707, IL62 or VC10, this changes to 4nm.

"BAW123, continue approach, surface wind 050 at 12"
 "BAW123 expect late landing clearance"
 "BAW123 runway 06 wind 050 at 12 cleared to land"

SPEED CONTROL ON FINAL

You cannot change the speed radar assigns to aircraft on final approach without asking for permission.

RELEASES

All departing aircraft except those remaining in the circuit need a release from radar before they can be allowed to take off. The exception is when 'free-flow' is in operation, which means that no release is required for SID departures. At Heathrow, free-flow is in operation by default, but can be cancelled by radar at any time (usually during a missed approach). However certain SIDs at Stansted require releases from Radar.

SID: (to rdr) "Request release, BAW123 on LAM3R"
 Non-SID or VFR: (to rdr) "Request release, GABCD"
 Radar: "BAW123 released" or "GABCD released at time 57"

VFR LEAVING THE ZONE

- "Tower GABCD a Warrior with Lima 1014, club parking, request taxi for VFR to Fife leaving via the North"
- "GABCD taxi holding point B1 runway 06 via Echo and Alpha, QNH 1014"
- (to rdr) "Request clearance, GABCD to Fife, leaving the zone to the North."
- Radar: "GABCD is cleared to the North zone boundary, not above altitude 2500ft, VFR, QNH 1014, squawk 0431, release subject radar."
- Pass the clearance to the aircraft.
- Approaching the holding point, get a release, then clear the aircraft for takeoff, specifying the turnout direction.
- "GCD left turn out runway 06 wind 060 at 12 cleared takeoff"
- Transfer the aircraft to approach once airborne.

VFR CIRCUITS

- Taxi as usual. Give circuit clearance during taxi – doesn't need to be coordinated with radar. You don't need a release either.
- "GABCD left hand circuits runway 22, not above height 1200 feet, QFE 1002, VFR, squawk 0431"
- "Left hand circuits runway 22, not above height 1200 feet, QFE 1002, VFR, squawk 0431 GABCD"
- "GCD correct"
- Tell radar that the circuit is active. By default, the pilot will report downwind and final. Don't forget to shout when it becomes inactive again.

VFR ENTERING THE ZONE

- Radar gives an inbound estimate for the aircraft.
- "Inbound estimate GABCD Archer from Fife, estimates the field at 59"
- Radar will transfer the aircraft once it has the airfield in sight.
- You give joining instructions.
- "Tower GABCD 5 miles north with Lima 1014, request joining instructions to land"
- "GABCD Tower join left downwind runway 06, not above height 1200 feet, QFE 1002", or
- "GABCD Tower make standard overhead join, then left circuit runway 06, not above height 1200 feet, QFE 1002"



SEQUENCING IFR WITH VFR

Rule of thumb: you need, as a minimum, the required vortex gap plus 4 miles to fit in a VFR aircraft.

Short delay required – extend downwind

"GABCD number 2 to a 737 on a 1 mile final, caution wake vortex, recommended spacing is 4 miles, extend downwind leg as necessary and report final"

Longer delay required – orbit

"GABCD number 2 to a 747 on a 7 mile final, caution wake vortex, recommended spacing is 8 miles, orbit at the end of the downwind leg as necessary and report final"

Undetermined delay – orbit

"GABCD position in the sequence is not determined, orbit at the end of the downwind leg and standby for further instructions"

SPECIAL VFR (SVFR)

SVFR is a flight in a CTR that would otherwise have to be IFR – it could be in a Class A CTR, in IMC, or at night. If it is night/IMC and the pilot is not simulating daylight/VMC, then he cannot fly VFR but he can fly SVFR.

SVFR clearances must not be issued if the visibility is less than 1800 metres or if there are BKN or OVC clouds at less than 600 feet. Helicopters are exempt from this rule.

If the weather changes to become IMC, you should inform VFR pilots of the change.

"GABCD weather is now IMC, what are your intentions?"

He will then request either IFR or SVFR clearance. You must not give VFR clearance.

SVFR clearances are identical to VFR clearances, except for the fact that the flight rules are specified as "Special VFR" instead of "VFR".

TRAFFIC INFORMATION

In a Class D zone, you have to provide traffic information to all aircraft on relevant VFR aircraft. You have to provide separation between IFR and SVFR aircraft, and between pairs of SVFR aircraft.

All departing aircraft need traffic information on circuit traffic, on inbound IFR/SVFR traffic, and on any other relevant traffic.

All arriving aircraft need traffic information on circuit traffic, on departing IFR/SVFR traffic, and on any other relevant traffic.

"BAW123, Traffic Information, a C172 in left hand circuit runway 22, not above height 1000ft"

"BAW123, Traffic Information, a Seneca, estimating the field at time 47, not above altitude 2000ft"

"BAW123, Traffic Information, a C172 orbiting at the end of the left downwind leg for runway 22, not above height 1000ft, continue approach"

"BAW123, Traffic Information, a C172 departing runway 33 to the south, not above 2500ft"

MISSED APPROACH

ATC initiated:

"BAW123 go around, I say again, go around, acknowledge"

Pilot initiated:

"BAW123 going around"

"BAW123 acknowledged"

As soon as possible, ask radar how he wants the missed approach. Pass those instructions to the aircraft and then transfer him to radar. If radar takes too long to respond, just give the aircraft the standard missed approach.

You may give an aircraft conducting a missed approach heading instructions without prior coordination if there is a conflict (e.g. a departure rolling).

WINDSHEAR

If you get a pilot report of windshear, then you must continue to pass this on to arriving and departing aircraft until it can be broadcast on the ATIS.

"BAW123 at (time) a departing/arriving (a/c type) reported windshear at (altitude). Airspeed loss/gain (number) knots, strong left/right drift"

Once there are no further reports of windshear, it can be removed from the ATIS and does not need to be reported to pilots.

LOW VISIBILITY PROCEDURES (LVPS)

You must protect the localiser sensitive area by using the next holding points back from the runway.

Aircraft must not be allowed to line up or otherwise infringe the localiser sensitive area until a landing aircraft has vacated the runway completely, or a departing aircraft has become airborne.



You have to tell radar to increase the final approach spacing in order to accommodate the reduced flow rate. The usual is 10nm or vortex, whichever is greater (6nm in Dual Runway Ops).

EMERGENCIES

All emergencies should be coordinated with radar. Radar should put a large gap (around 10-15nm in front and around 8nm behind) around the emergency aircraft. Once an inbound emergency aircraft gets within around 15nm, you should sterilise the runway (disallow any further movements on that runway).

The standard acknowledgement is: "BAW123 mayday acknowledged (further instructions)"

EFATO (engine failure at/after takeoff)

"BAW123, airfield is in your 5 o'clock position, range 3 miles – All runways available for landing."

The cockpit workload will be extremely high. The aircraft may wish to make a visual circuit.

Aborted Take-off

Not yet rolling:

BAW123, hold position, cancel take-off. I say again, cancel take-off. Acknowledge."

Already rolling:

"BAW123, Stop immediately. I say again, BAW123, stop immediately. Acknowledge."

Runway Blocked

Send around any aircraft you have on final. Coordinate with radar, so they can break aircraft off the final approach.

RT Failure

"BAW123, if you read the transmission, squawk ident"

Transmit blind to the aircraft, just in case they hear you.

Departing aircraft should fly the SID, then maintain speed and level for 7 mins, then proceed as filed. Arriving aircraft could be unpredictable, so allow plenty of space. Coordinate with radar.

CLOSING

"All Stations, Stansted Tower closing at time 13, air traffic services terminated, frequency change approved, Stansted Tower Out"