

EMC 2010 Standard Operational Procedures V1

General

All procedures below are 'standard procedures' and can be varied for individual tasks or modified during the competition. Such modifications will be promulgated by team leaders briefing at least, and where possible notified additionally on task sheets and on the intranet as a special bulletin.

All start lists and times will be published on the Intranet.

All times are based on 'official time' which is British Summer Time (BST).

No go areas will be as per generic avoid map and may have special additions for individual tasks.

Runway 03/21 grass will be the standard runway, and will be used as the default. If crosswind components exceed that judged safe by The competition Director or his deputy then Crosswind procedures will be actioned.

Procedure A – For Navigation tasks with quarantine and SP timing.

A start list will be published with an SP time for each aircraft.

At SP time –Y (Y will be given with start time list, and the time will be known as 'planning start time') Crews shall be ready in quarantine, and be given the task map, photo sheet(s) and timing declaration sheet (if applicable), and begin planning.

Before takeoff crews will hand to the designated marshal the completed declaration sheet (if applicable)

Takeoff must be from the deck at SP time – X mins (X will be given with start time list, and the time will be known as 'takeoff time'). Pilots must be ready at the deck and takeoff between takeoff time and takeoff time +1 min.

After takeoff a standard north or south departure (as applicable and as per briefing) must be flown before routing to SP.

SP is a timing gate. Points will be awarded for crossing SP on the given SP time. If a groundspeed element is applicable, timings for this purpose will run from given SP time, not the actual time SP is crossed.

Procedure B – for navigation tasks with quarantine involving limited time /‘speed planning’

Some tasks may involve a limited task time where the time includes that for planning.

In this case the ‘Planning start time’ will be published.

Crews shall be ready in quarantine, and be given as applicable - the task map, photo sheet(s) and declaration sheet, and begin planning.

When ready to start, the aircraft can be positioned at the deck, or if there is a queue, at the back of the start queue. Before takeoff crews will hand to the designated marshal the completed declaration sheet. Marshals will receive the aircraft on the deck and allow takeoff with minimum separation of 30 seconds, as indicated by dropping of a flag. Pilots must make their own decision for separation as regards wake turbulence consideration, but must takeoff within 1 minute of being given the flag signal. If there is a technical problem that prevents this, they must push clear of the deck and join the back of the queue.

After takeoff a standard north or south departure (as applicable and as per briefing) must be flown before routing on task / to SP.

Limited time ends at FP – or as briefed.

Procedure C – For navigation or economy tasks without quarantine, or SP timing.

A start list will be published with takeoff times listed for each aircraft. The aircraft and crew must be ready at the start deck and takeoff between takeoff time and takeoff time +1min. A marshal will be at the deck and will give a countdown of the last 10 seconds to ‘takeoff time’.

After takeoff a standard north or south departure (as applicable and as per briefing) must be flown before routing directly to SP.

Procedure D – economy tasks, open window

A task window will be given. Crews must be ready and takeoff within the task window.

When ready to start, the aircraft can be positioned at the deck, or if there is a queue at the back of the start queue. Marshals will receive the aircraft on the deck and allow takeoff with minimum separation of 30 seconds, as indicated by dropping of a flag. Pilots must make their own decision for separation as regards wake turbulence consideration, but must takeoff within 1 minute of being given the flag signal. If there is a technical problem that prevents this, they must push clear of the deck and join the back of the queue.

After takeoff a standard north or south departure (as applicable and as per briefing) must be flown before routing on task / to SP.

Procedure E – fuelling for economy tasks

Fuel measurement will usually be done in advance by some time or even some days before task start. Details of times to come for fuel measurement will be published.

Measurement will be by weight. A crew member shall present to the designated marshal a container or containers, marked with the correct competition number, which they must prove are empty. The container(s) will be placed on the official weighing machine and the correct fuel mass for the task will be poured in by the crew member. The final fill value must be to the satisfaction of the designated marshal. The marshal will then stay with the container and seal it, then place it in an official fuel quarantine area.

Before the task there will be a time published for verification that the aircraft is empty of fuel. This verification will be done in a designated area, and by people designated to examine that aircraft. These people will be specified in advance and will be members of competing teams. Marshals will also be present in this area.

Examiners should verify that the fuel tanks are completely empty. If the system is not easily examined then the crew may be required to run the engine to stop from fuel exhaustion. This decision will be at the discretion of the examiner – but may be overruled by a designated technical marshal, based on initial scrutineering.

Once aircraft are verified empty, they must be moved to a quarantine refueling area, where a designated marshal shall issue the fuel containers to a crew member. They must be accompanied by the examiner who shall then follow the container to the aircraft and supervise the refueling.

Fuel seals will only be required if the task involves landing at another airfield during the task.

Aircraft will then be moved to final quarantine area.

The examiner must sign the official form verifying that the aircraft was empty and was refueled only from the certified container(s), before being moved to final quarantine area.

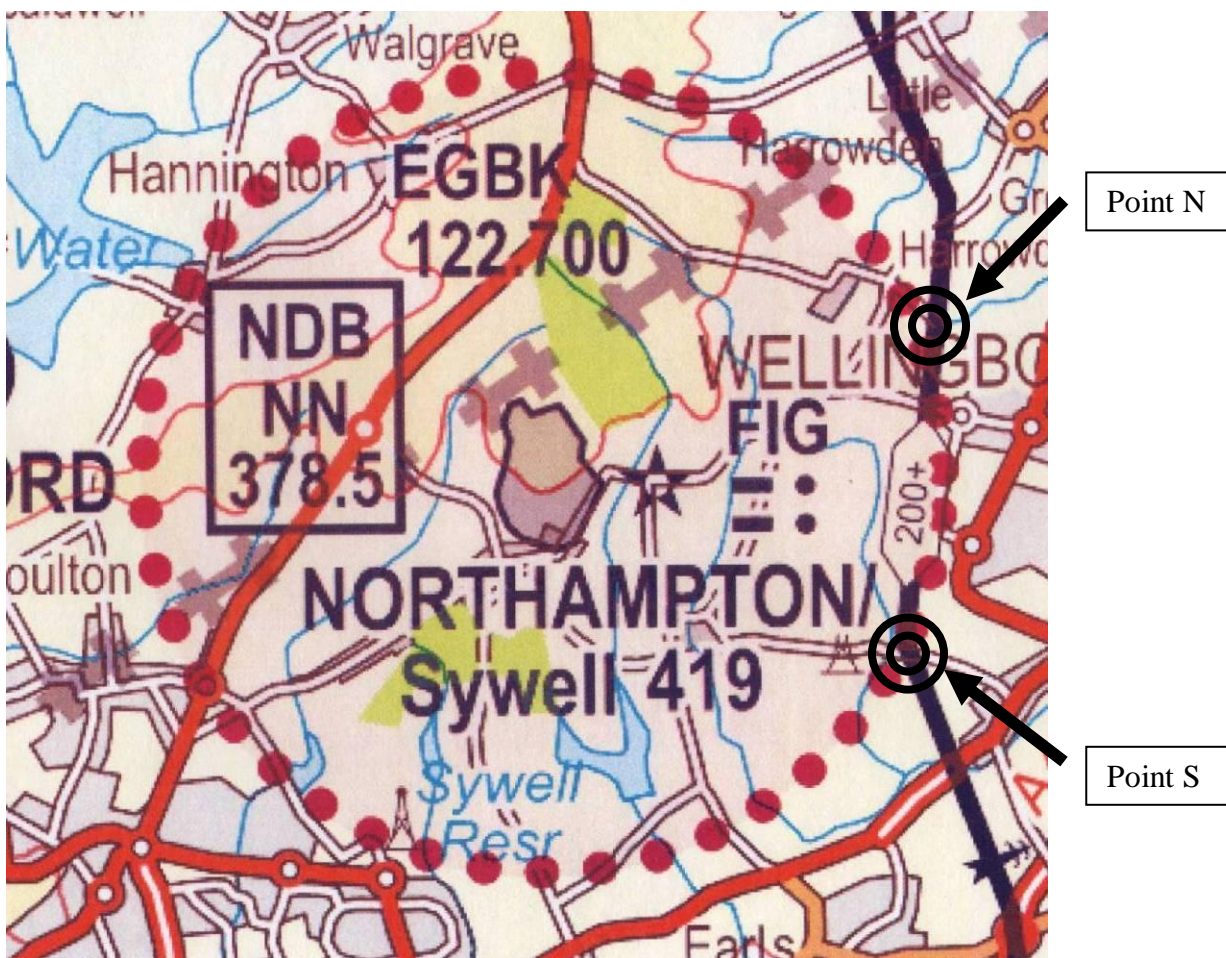
Sywell Task Departure and arrival procedures

Departures and arrivals via Point N or S

Depending on task direction departure Via Point N or S will be specified.

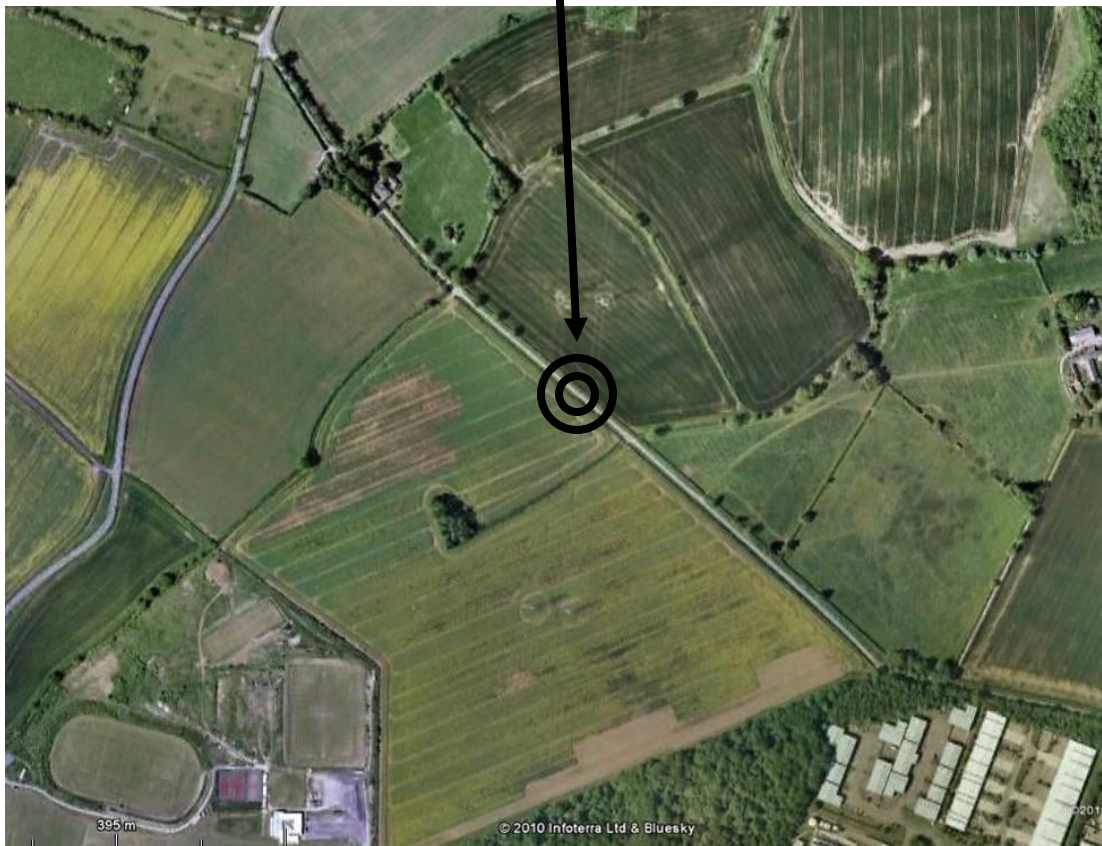
Arrivals procedures will be specified via Points N, S or the West

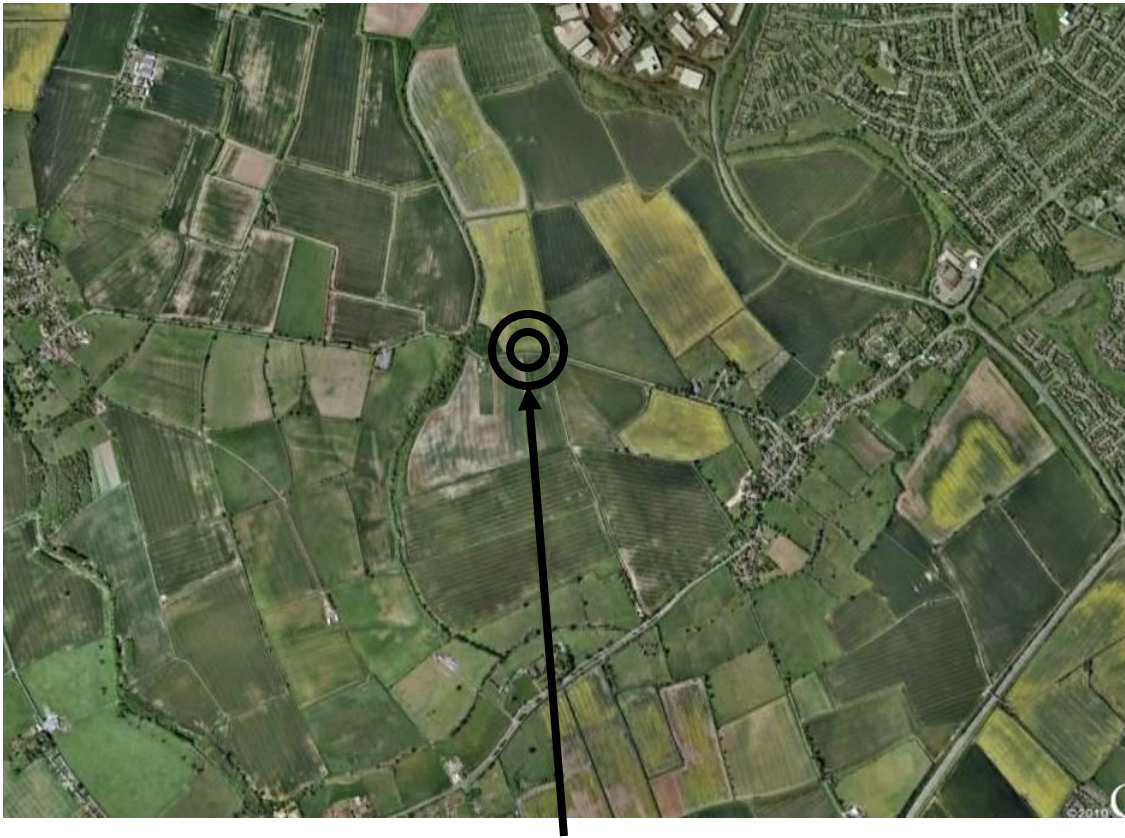
Position of points N and S are as shown below:



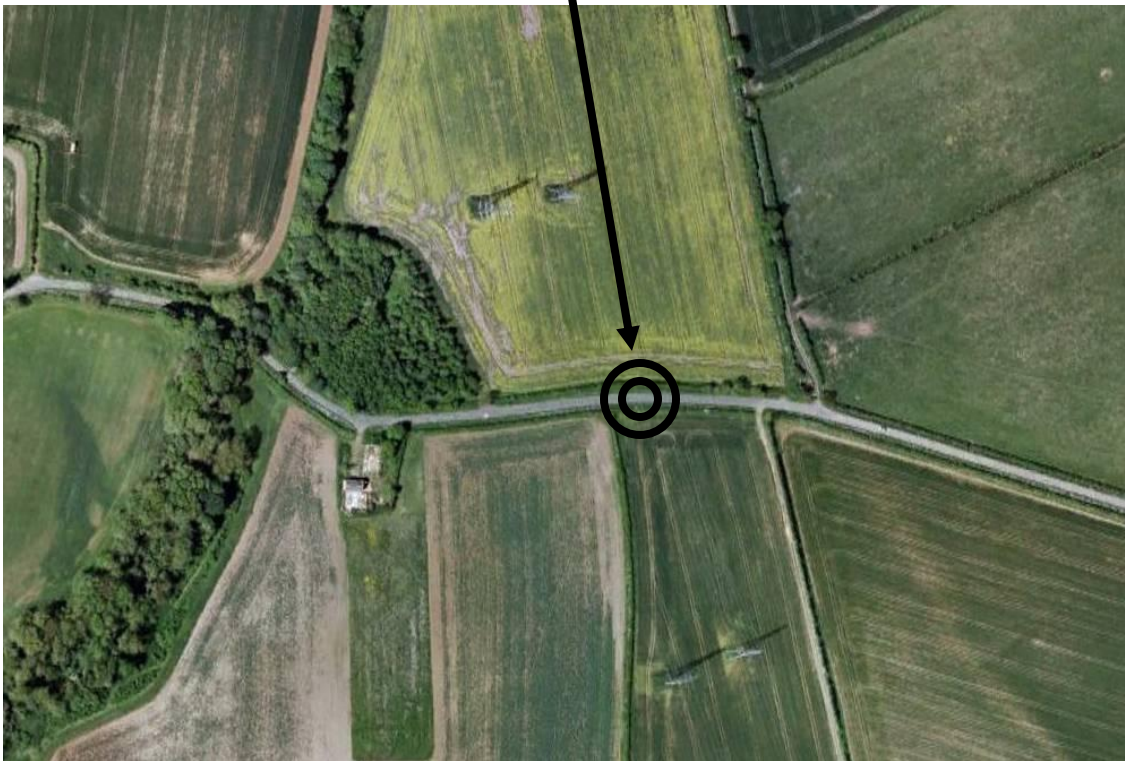


Point N – where wires cross road





Point S – where wires cross road



Procedure 1 – Departure via points N or S



After takeoff proceed as drawn above to Point N or S as applicable before routing to task SP.

Procedure 2 – return via points N or S



The landing deck will be indicated by a ground marker T with the head of the T alongside the first line of the deck. Pilots should approach until the landing direction is established and then join the circuit on the downwind leg.

Flying overhead or nearly so to make the initial observation of landing T and windsock is permitted, but do **NOT** cross Runway 03/21 grass to the west – imagine a ‘glass wall’ between the hard and grass runways that you **cannot** penetrate below 2000’

Pilots should keep a good lookout for other traffic and ensure adequate separation. Pilots must not cut in front of another aircraft already established in the circuit.

For tasks with a duration element additional no go areas near the aerodrome may be established that cannot be entered unless the aircraft is routing directly for an arrival procedure.

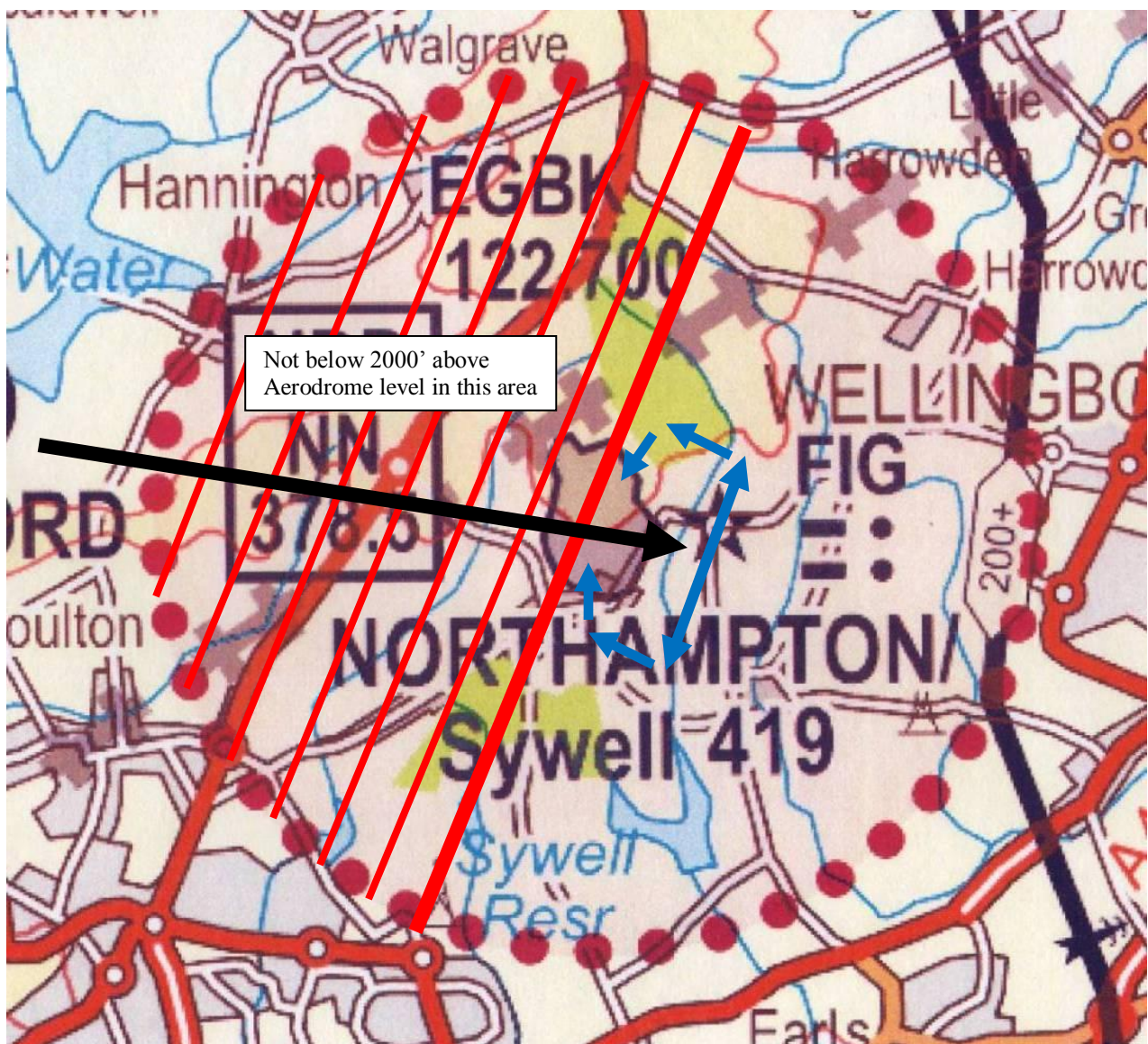
Procedure 3 – overhead return from the west

This procedure will only be allowed if specific permission is given at the briefing.

Aircraft using this procedure must be 2000' above aerodrome level (2400' above sea level) before crossing the western edge of the Aerodrome Traffic Zone boundary .

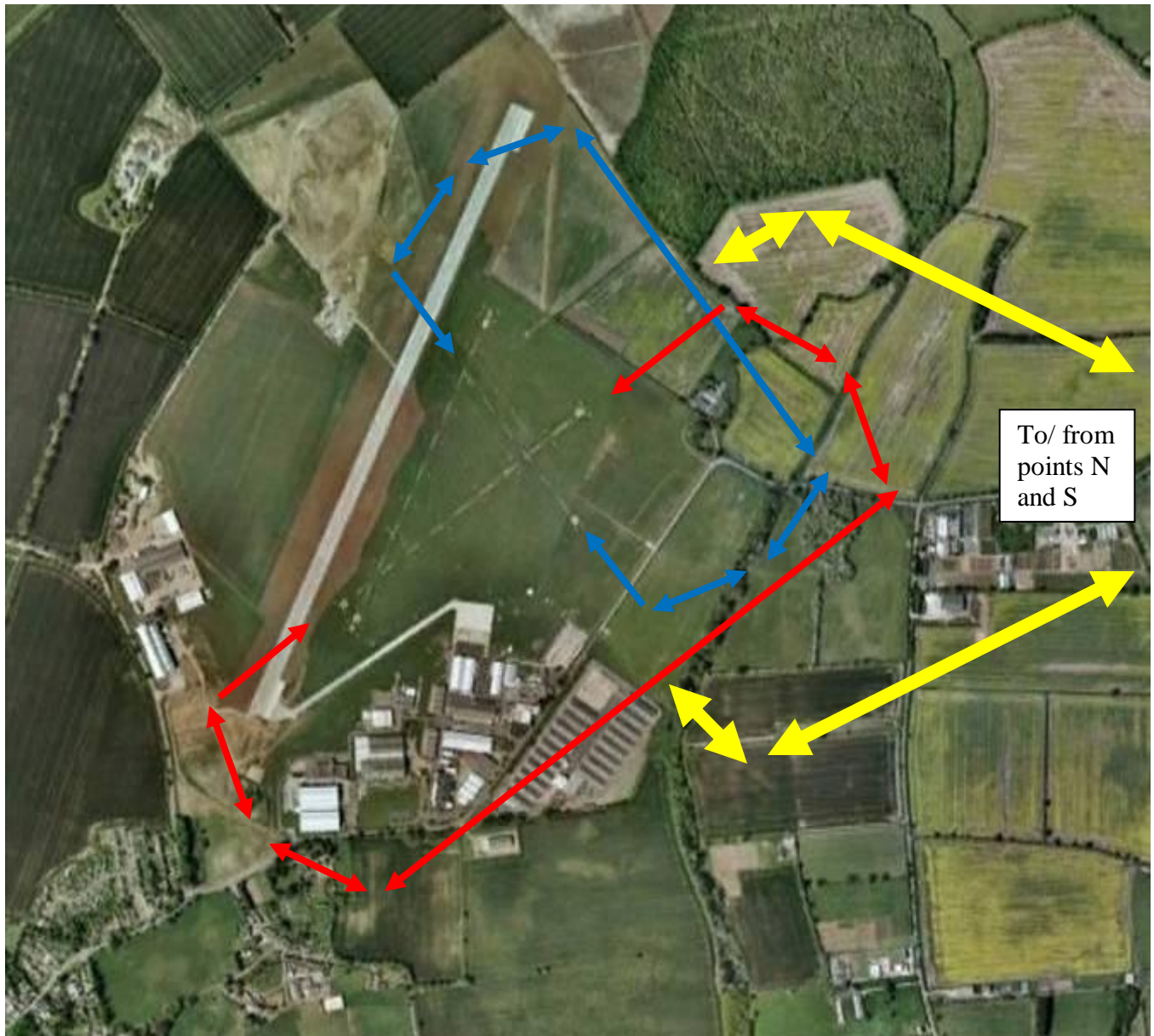
Aircraft must then proceed via the aerodrome overhead, and can only descend when East of the hard runway 03/21.

Aircraft should then descend clear of the circuit and join downwind to land.



Crosswind procedures

If the crosswind component is such that takeoff or landing on runway 03/21 is precluded then a deck on Runway 05/23 or 15/33 will be made available. Circuit directions and routing to and from Points N and S will be as shown below.



After landing procedures

Navigation tasks – Quarantine procedure

After landing taxi clear of deck and proceed to quarantine area as briefed and / or marshaled.

A marshal shall direct you to a specific parking point. Pilot stops engine. Marshal approaches and indicates start of quarantine time.

Crews then have 15 minutes to complete declaration maps with position of markers / photos, and found track lines, and clearly mark comp number and pilots name on the map.

There must be strictly no talking between different crews and no contact with team leader or assistants during this time.

Crews hand the declaration map to the designated marshal. Time then stops.

Whenever possible the crews will then be invited to witness a scorer using an overlay to assess the positions of the found photos/ markers and calculate the score. This is entered on the score sheet and signed by both the scorer and a member of the crew.

Crews and aircraft then vacate the quarantine area as soon as practicable.

Economy tasks – Quarantine procedure

Landings can be made either engine on or off – however great care will be needed in the case of engine off approaches to ensure safe traffic flow and separation. Penalties will be given for any situation judged by the marshals to be compromising safety in such an event.

After landing the aircraft must vacate the deck – either under its own power or pushed. If pushed the crew are responsible for the pushing and must vacate the deck without delay. Penalties will be given if marshals judge that this is not done in a reasonable time – resulting in the deck being blocked for another approaching aircraft.

There will be a clearly marked ‘taxy lane’ of 100M which the aircraft must taxi through under its own power in order to prove that the aircraft carries usable residual fuel. If the aircraft fails to complete this 100 meter taxi the competitor will be scored as though the aircraft had outlanded.

From the taxiway the aircraft must be moved to the quarantine area where fuel seals will be checked (if applicable).

If the task has a photo/ marker spotting element then that aspect will be as per procedure for navigation task quarantine.

Logger downloading

For all navigation and economy tasks, the procedure for extracting logger information is as follows;

After completing Quarantine procedures a member of the crew (or team leader) takes the logger(s) to the scoring office. The logger primary will then be downloaded in front of the competitor.

If the trace is incomplete then the secondary will be downloaded as well.

Crew member then leaves scoring office with logger(s)

Generic penalties

Notice is drawn to Local Regulations 1.14.2 which details actions liable to disqualification.

All penalties below are 'standard' and can be varied, modified or added to for individual tasks or modified during the competition. Such modifications will be promulgated by team leaders briefing at least, and where possible notified additionally on task sheets and on the intranet as a special bulletin.

Generic Navigation Task Penalties

Late for start time : Takeoff is only allowed between start time and start time +1min. Competitors must be clear of the deck immediately after that time, and may start at the end of the takeoff list and will incur a 30% penalty for the task.

Backtracking or circling within 2km of track = 100% penalty for task. For the purposes of this rule backtracking is any flown track that has greater deviation than 90 degrees from task track leg.

Flying task in opposite direction to that specified (grid tasks) = 100% penalty for task

Flying any section of the course twice = 100% penalty for task

Failing to takeoff or land within deck = 20% penalty for task (except where takeoff or landing is a separate task, or takeoff or landing is designated as 'free')

Outlanding = 100% penalty for task

Breaking quarantine rules = 100% penalty for task.

Late hand in of declaration map in post flight quarantine = 2 points / sec penalty.

Breaking any of the general rules or UK Air law, flight in unauthorized airspace, or designated no fly zones, or any flying deemed dangerous by the competition director = 100% penalty for the task.

Additional Generic Economy Task Penalties

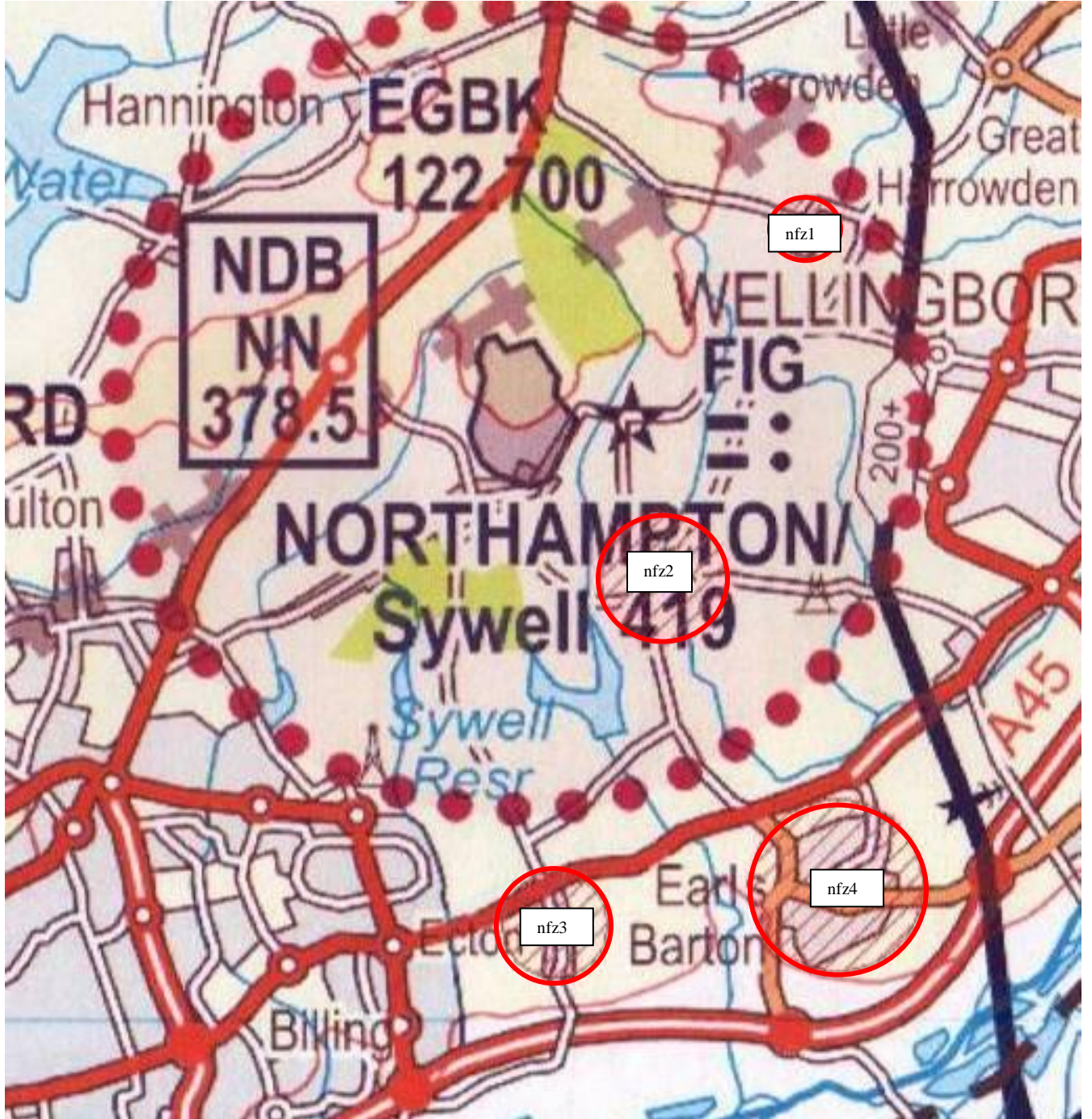
All applicable penalties above will apply. In addition:

Circling in opposite direction to that established by previous aircraft in thermal = 100% penalty

Not capable of taxiing through marked 100M taxi lane = 100% penalty for task

Broken or missing tank seals (if required) = 100% task penalty.

Local area No fly zones



Authorisation to fly

Sywell is a busy local airport with many aviation related businesses and flying schools that will continue to operate on a restricted basis during the competition.

When arriving Pilots must receive A Sywell procedures briefing from the competition director or his specifically authorized deputy, before any practice flying takes place. Non authorized flying may attract a penalty to be carried forwards to the competition!

Practice flying before 7th August must be with the utmost respect for the other based operators. The circuit and arrival and departure procedures above are special EMC procedures and will take effect from Tuesday 3rd August. Different procedures will exist before this date.

There may be restrictions of use between the 3rd and the 7th. There will be a daily briefing to advise.

If pilots have radio equipment that they can carry and use during this time please do so.

Deck practice will only be permitted at authorized times – daily briefing will advise.

Please respect the No fly zones above, and please respect all local villages and avoid directly overflying.

Please also note that UK Airlaw only allows overflight of villages and towns above 1000' above ground level.

Many local farms have livestock and breed game birds. They are not easily seen from above, so please do not fly below 500' above ground level and pay particular respect to the area within 20km of Sywell – we have to live here after you have returned home !