S2-S3 Checklist Explanation

R/T

Student can communicate effectively and correctly using standard-approved R/T as much as possible to avoid ambiguity and confusion. They give concise, correct instructions at a suitable speed and flow with little corrections and errors.

Grade 1

Student has a basic understanding of the R/T required to vector, identify and control Approach-Radar. They make frequent mistakes that need correcting by the mentor and take long time thinking about what to say and how. They can issue instructions such as “descend TO altitude ****’” and “climb FL ***”. Turning phraseology and clearances for approaches need work.

Grade 2

Student can deliver climb/descent instructions (incl. QNH where appropriate) and can turn a/c using appropriate R/T e.g. “EIN123, turn LEFT/RIGHT hdg 1-2-0 degrees” or “EIN123, turn LEFT/RIGHT hdg. 0-9-5”. They can clear a/c for the ILS/LOC approaches using correct phraseology. Delivery speed is improving, errors are still present but the student begins to self-correct.

Grade 3

Student uses more advanced R/T regarding approach control, with respect to speed, vectoring, routing amendments and approach clearances. They can process open-FIR arrivals and departures including VFR competently. They give accurate information and instructions with minimal delay and hesitation. Mistakes are mostly self-corrected.

Grade 4

Student can handle both voice/text transmissions using correct R/T most of the time. Delivery is swift and instructions and intentions are clear with little or no ambiguity. Student is in command at all times and understands how ambiguity is caused thru’ improper R/T and imprecise instructions and how to avoid scenarios where this develops by issuing the correct instruction using approved R/T.

Understanding of Approach-Radar

Student understands what the unit is responsible for, insofar as airspace, clearance limits and restrictions. They can issue correct instructions with appreciation of the limitations of the facility e.g. knowing that giving a join instruction via an NDB/VOR is dependent on the facility's range. They understand the purpose and intent of what Approach-Radar is for and what it is not for.

Grade 1

Student is mostly unaware of what Radar is for and what an Approach(-Radar) unit does.

Grade 2

Student is aware of air-traffic-services-outside-of-controlled-airspace (ATSOCAS, e.g. FIS). They know the limitations of the vis. Range and radar range.

Grade 3

Student knows that Approach handles inbounds and sometimes out bounds (airport dependent) and knows that Approach sequences arrivals so that flow is not restricted and all movements are safe and expeditious. They understand the use of navaids e.g. NDBs and VORs and their limitations. They understand the limits of coverage and ATSOCAS that can be provided and what can be offered to near-by pilots. They understand the vertical and lateral limits of their airspace.

Grade 4

Student understands fully what Approach(-Radar) is for and what can be offered in terms of service and information. They understand the limitations of the field's facilities with respect to navaids and instrument approaches.

Situational Awareness

Student displays awareness of 'the big picture' and can adjust sequences as necessary to facilitate safe and expeditious movement of aircraft. They can identify potentially un-safe scenarios and adjust movements to avoid them, rather than to resolve. They plan forwards effectively and can handle changes diligently and swiftly.

Grade 1

Student does not plan ahead effectively if at all. They cannot yet make fine adjustments to sequences or their actions to allow for safe and expeditious movement. They may cause conflict rather than avoid or resolve through their actions and instructions. They cannot predict scenario development and do not have a grasp of 'the big picture'.

Grade 2

Student can make adjustments to sequences but may cause another scenario(s) to develop. They can see what could happen further down the line but still have not got effective planning skills. Conflict is still present or the chances of conflict are still present in their controlling.

Grade 3

Student makes effective adjustments to sequences and instructions. They can see scenario development and plan to avoid, rather than resolve conflict. They can see 'the big picture' but still sometimes fail to react to some situations where separation could be lost.

Grade 4

Student plans their movements and instructions carefully to avoid conflict most of the time. They have a good mindset and can plan ahead effectively to make way for swift and safe movement of aircraft. They can integrate changes to their sequences to cause minimal disruption.

Open FIR Arrival Handling

Students can correctly identify (where necessary and appropriate) open FIR arrivals including (S)VFR and IFR aircraft. They upgrade/downgrade ATC services as appropriate and deliver correct instructions and information in a timely manner and can integrate open FIR arrivals into sequence.

Grade 1

Student cannot process arrivals correctly, they may forget to identify (where appropriate) or deliver correct clearances to join CAS (where appropriate) or forget to give necessary information with regards to active runways, QNH, other weather and traffic information.

Grade 2

Student identifies where appropriate but the join to enter CAS (where necessary) or otherwise is incorrect or information is missing. The information missing may be of detriment to safe operations and separation.

Grade 3

Student identifies where appropriate and gives accurate information to the pilot. They begin to integrate these arrivals into the arrival stream(s). Student still forgets to pass information however or may forget to upgrade/downgrade the service provided.

Grade 4

Student can process diligently open-FIR arrivals and integrate them into sequence, passing correct and relevant information at all times. They upgrade/downgrade ATC services as required.

Co-ordination

Students co-ordinate with respective units appropriately; and in a timely manner in order to allow for safe and expeditious movements.

Grade 1

Students forget to co-ordinate with tower/area when for example a runway change has occurred. They do not yet appreciate what needs to be co-ordinated, when, and with whom.

Grade 2

Student can co-ordinate some movements where required, e.g. directs with area. They still cannot co-ordinate effectively so their sequence flow is optimised with regards to levels and speed restrictions.

Grade 3

Student co-ordinates most of the time, appropriately. They may however, under strain, forget to co-ordinate.

Grade 4

Student co-ordinates effectively, in a timely manner with all respective units to ensure safe and expeditious flow of traffic

Vectoring

Student understands the concept of vectoring for safe and expeditious flow of aircraft. Their instructions are tactful and reduce delay and track-mileage as much as possible using correct R/T.

Grade 1

Student can turn an a/c left/right but may over-turn or under-turn them. Their descents are poorly planned and managed. They frequently forget what's going on, and what to do next. They cannot yet stream or build a sequence. They can handle one-three at a time only.

Grade 2

Student can build a basic sequence but cannot stream effectively. They begin to use "more standard" r/t e.g. "EIN123, turn left/right hdg 1-2-0 dgs"/"EIN123, turn left hdg 0-4-5"/ "EIN123 descend TO altitude 3000' QNH ****" etc. They use appropriate phraseology for the necessary approach e.g. "RYR123, turn left/right hdg 1-4-0 dgs, report localiser established runway 35" or "RYR123, turn left/right hdg 2-6-5, cleared ILS approach runway 28, report established"*. Guidelines for R/T are CAP493 (MATS Part 1) and ICAO Doc. 9843. They can handle up to 5 at a time.

Grade 3

Student can now stream and sequence and understands how to ensure separation throughout most of their vectoring. They plan to avoid, rather than resolve conflict thru' vectoring. They use vectors as opposed to speed restrictions to establish separation. They use correct phraseology but still do not use their airspace as efficiently as possible. They can handle 5 or more at a time competently.

Grade 4

The student's vectoring is now safe, expeditious and timely. They deliver instructions using correct R/T and avoid ambiguity. They reduce track mileage as much as possible and separate aircraft justly within the correct restrictions. They use and apply speed control as necessary but not to establish separation. They can competently handle 7+ aircraft in sequence and avoid conflict rather than resolve.

Handling of VFR

Student processes and handles VFR delivering correct information, instructions using correct R/T and keep the a/c separated as long as the a/c is within the correct airspace to be separated by ATC e.g. Class C.

Grade 1

Student issues basic VFR instructions with limited traffic information and airfield information. They do not understand at what point a FIS and Radar Control Service should be given e.g. when entering CAS a/c should be upgraded. They also do not understand what the implications of this upgrade are, e.g. instructions to comply with etc.

Grade 2

Student knows when an a/c needs to be identified, e.g. when a RCS is issued when an a/c enters CAS. Student realises if an a/c is in, or outside of CAS and pass appropriate information to the pilot and also begin to request information from the pilot e.g. distance to zone-boundary or VRP, altitude etc to co-relate a tag when identifying.

Grade 3

Student upgrades and down-grades ATC services as appropriate with regard to controlled airspace. They pass adequate and accurate traffic information and can issue suitable CAS or other joins to the airfield. They may use navaids where appropriate for these joins e.g. “Cleared to enter the Cork zone on track CRK VOR, VFR, not above alt. 1500’, remain clear of the 35 final approach path.” They may forget to upgrade/down-grade or pass other information.

Grade 4

Student can issue appropriate join and leave instructions and can process upgrades and down-grades to service efficiently. They understand the limitations of VMC and what effect this has to a/c – e.g. an a/c may need to be vectored BUT must still maintain VMC. They separate appropriately inside CAS and pass relevant information and instructions using correct R/T in addition to the above. They integrate arrivals and departures carefully to utilise the airspace to its maximum potential in the scenario.

Descent Management

Students use airspace efficiently and safely with regards to vertical separation. They are aware of the minima e.g. 1 level and are aware how the transition level affects vertical airspace – e.g. higher or lower MSL's. They appreciate but may not understand fully the term transition layer and how it affects safety. They plan descents effectively using correct R/T and avoid conflict.

Grade 1

Student has little appreciation of descent management, e.g. one level takes ~three NM to descend through. They do not appreciate that slowing a/c down in sequence will eventually compromise separation and a/c may leave CAS or need extra vectors to descend.

Grade 2

Student understands the 1/3 rule of thumb and now starts planning descents – they may descend a/c too early, or leave them too high with too much or insufficient track-mileage from touchdown.

Grade 3

Student now utilises levels to a good standard. They separate a/c using levels and a/c no longer leave CAS through improper descent management. They use levels effectively and understands what implications QNH has on transition level and available levels and altitudes for a/c to descend to whilst maintaining separation. They appreciate the lateral distance a/c need to maintain at the same levels to be separated. They avoid descending/climbing a/c thru' other a/c's levels in close proximity (technical loss of separation).

Grade 4

Student uses levels to aid sequencing and uses vertical airspace effectively to maintain a safe and steady flow of traffic. They understand what transition level is and what affects it, they do not cause technical losses of separation by clearing a/c through another's level. They know that a level is vacated when the tag reads a difference of at least 300'. They avoid conflict in general in vertical separation and lateral separation aspects.

Streaming, Merging and Sequencing

Student can stream a/c off of beacons/fixes safely reducing track-mileage effectively. They can merge multiple streams whilst maintaining separation for the approach path and sequence in accordance to arrival priority and a/c type for maximum runway/approach path usage.

Grade 1

Student can only manage one stream or cannot integrate further streams. They struggle to sequence and do not understand the concept of effective sequencing in regards to priority and a/c type (wake vortex, e.g. placing a C152 behind a B747 needs at least 8NM separation).

Grade 2

Student can merge two streams but conflict may occur or the chance of conflict is present throughout. They can create a sequence of a few a/c but cannot or, struggle to make alterations to the sequence – e.g. there may be a chance that a go-around a/c could be made number 3 as opposed to number 5 or 6 with tighter vectoring or speed restrictions being imposed or removed as appropriate.

Grade 3

Student merges streams with reasonable competency – they can allow for small alterations but their sequences are still questionable or could be optimised by more forward thinking and more tactful vectoring.

Grade 4

Student understands a/c priority and the implications of a/c type in sequence – e.g. two a/c of the same type may sometimes require less separation than two a/c of different type, e.g. one light, one heavy. They can make adjustments to sequences to integrate "un-planned" for arrivals such as VFR or a go-around. Their sequences, merging and streaming avoid conflict rather than resolve. They use tactful vectors and instructions to optimise flow.

Services OCAS

Student is aware of the range a FIS can be provided from the facility and can deliver appropriate information and instructions e.g. when joining CAS where required.

Grade 1

Student is unaware of when and where a FIS can be provided and how far from the facility. They have little understanding of how and FIS works, and what type of information can be passed.

Grade 2

Student knows the range in which a FIS can be provided and the requirements for a FIS to be given, with respect to workload, information from the pilot requesting the service and distance from the facility. Their FIS lacks information and detail however.

Grade 3

Student knows when a FIS should be terminated or upgraded to RCS when an a/c approaches CAS and wishes to enter. Their information is usually accurate but may forget to pass relevant information.

Grade 4

Student delivers accurate information and passes it to pilots requesting, or under a FIS. They know the limitations of this service (e.g. not being able to issue instructions such as vectors OCAS), and they issue appropriate instructions when terminating FIS, whether upgrading the service, or terminating the FIS. Their R/T is accurate and has a smooth flow.

Knowledge of Airspace

Student knows the bases of CAS for the respective facility and the minimum sector, and minimum safety altitude. They are aware of obstacles which are a hindrance to aircraft operating in the vicinity and give tactful instructions to pilots. They understand the three airspace types in Ireland, A, C and G and what can be provided and what flight types can operate in each. Student also understands the upper limits of their airspace and who covers above and any standing agreements that an Area position has with their local facility.

Grade 1

Student has little or no idea of the bases of CAS and confuse minimum sector altitudes with minimum safety altitudes. They frequently descend a/c OCAS or keep them too high for too long. They are unaware that a RCS cannot be provided in class G and are unaware of service upgrades and down-grades. They are unaware of RVSM routing compliance and let non-RVSM compliant flights depart with incorrect flight levels.

Grade 2

Student appreciates RVSM and checks departures' requested flight levels and amends where necessary. They still confuse minimum sector and minimum safety altitudes and may

still descend people into UCAS and/or keep a/c too high for too long. They know that a RCS cannot be provided to a/c that leave CAS into UCAS (Class G) airspace.

Grade 3

Student appreciates the three types of airspace and what services can be provided in each circumstance and what limitations a particular class of airspace may have, with regard to separation and flight rules. They tend not to descend a/c into UCAS and generally keep a/c inside CAS and within minimum sector and minimum safety altitudes. They understand the upper limits of their airspace and who covers above and the standing agreements existing between the units and who to co-ordinate with. They may still descend a/c into UCAS or again keep a/c too high with insufficient track mileage for their planned vectoring pattern. They check and correct non-RVSM compliant requested levels.

Grade 4

Student is aware of the restrictions in Class A, C and G airspace and what services are to be/can be provided to different flight types operating in these classes of airspace. They avoid descending a/c into UCAS and keep within the minimum sector, and safety altitudes. They understand any standing agreements with surrounding units and know who to co-ordinate with. They check for RVSM compliant requested levels and correct where necessary.

Use of Datablock

Student regularly updates Datablock with correct/relevant information to ensure they remember what an a/c is doing or has been instructed to do. They are aware that other units use this information to plan their movements and appreciate the consequences of not updating Datablock.

Grade 1

Student does not update Datablock regularly. They forget to set active runways, arrivals, departures, levels and squawks as well as direct routings or speed restrictions* (*not necessarily needed). They do not use the silent co-ordination function. They do not track a/c or drop track where required.

Grade 2

Student becomes quicker at updating information, but still forgets to set some of the information in the Datablock. They may forget to hand-off or track a/c.

Grade 3

Student sets levels, directs, runways, arrivals and departures on a regular basis. They do not use silent co-ordination regularly however to ensure quick and easy co-ordination. They may forget to update some tags. They drop track where appropriate and hand off as required and accept tags as required.

Grade 4

Student seldom forgets to update Datablock. In addition to above, they now use silent co-ordination as frequently as possible. They drop track where appropriate and hand off as required and accept tags as required.

Knowledge of Local Procedures

Students process aircraft according to local procedures, e.g. arrivals, departures, airspace, standing agreements etc.

Grade 1

Student is mostly unaware of STARs, SID routings, levels, MSAs, hand-off procedures and other local procedures not limited to the aforementioned.

Grade 2

Student is aware of some but not all local procedures - they still have gaps in their knowledge and skill set.

Grade 3

Student applies what they know to a good standard; they are aware of most, if not all local procedures but may from time-to-time forget.

Grade 4

Student is fully aware of local procedures and their knowledge is at a level where they would pass their exam.

Identification

Student correctly identifies aircraft in whatever circumstance and uses (a) correct technique(s) to identify aircraft, e.g. discreet squawk code assignment and successful

transponder response, turn of thirty degrees, squawk IDENT function, radar hand off, level and position report which relates accurately to the position of a radar blip etc.

Grade 1

Student is mostly unaware of what identification is, what it's for, and how to do it. They may have knowledge of methods but are unsure how to identify or why. Student will incorrectly identify a/c be it with a DUPE tag, or other method.

Grade 2

Student incorrectly identifies a/c or fails to identify. They appreciate the importance of identification with regards to "tagging up" an a/c with what's displayed on the 'scope. They have knowledge of some, but not all methods of identification.

Grade 3

Student identifies a/c correctly using an appropriate method most of the time; they also have knowledge of the methods available for identification. They may still fail to identify a/c correctly or assume that an a/c need not be identified for one reason or another.

Grade 4

Students have detailed knowledge of the methods of identification and correctly identify a/c. They fully appreciate the reasons behind identification and that a/c under a FIS need not be identified.

Use of Speed Control

Students employ speed control to maintain separation rather than establish it; they select appropriate speeds for a/c type and number/position in sequence so that separation is not compromised and that expeditious movement of a/c is not compromised.

Grade 1

Student cannot apply speed control effectively, they are unaware of a/c type capabilities and slow/speed up a/c in sequence so that separation or sequencing is compromised.

Grade 2

Students may still be over-zealous with speed restrictions, they do not appreciate that slowing number 5 to 200 or less and expecting them to drop 8 levels in 25 miles is not going to be achievable (at least for most!) They are unsure of values to use and are not consistent.

Grade 3

Student begins to use a consistent set of restrictions where necessary e.g. high speed approved, 250, <250, 230, 210, 180, 160>, 160 'til 4DME, <160 'til 4DME, minimum approach speed or minimum clean speed. Their sequences begin to hold their shape and separation due to adequate and tactful speed restriction. They still however make errors in judgement regarding speed/descent management/sequencing.

Grade 4

Student uses a consistent set of values applied sensibly to maintain separation but to also allow for expeditious flow.

Separation

Students separate a/c effectively using sensible methods.

Grade 1

Student frequently compromises separation and/or has frequent technical losses of separation through improper descent managements, speed restrictions, vectors or otherwise.

Grade 2

Students have some knowledge of how to separate, e.g. vectors, change of levels, routing and track mileage from each other incl. Traffic information. They may still compromise or have the chance of compromising separation.

Grade 3

Students generally avoid losses or technical losses of separation and generally use good application of methods of separation e.g. vectors, change of levels, increasing lateral distance etc.

Grade 4

Students generally have little or no losses of separation and/or the chances of technical losses of separation are slim. They use good controlling methods to establish/maintain or increase separation.

Aerodrome Control

Students cover the airport they're controlling for their exam on a top-down basis covering Approach-Radar but also Aerodrome. They perform Aerodrome tasks to a

good level of competency (as stipulated during OBS-S2 training) and prioritise movements and communication effectively.

Grade 1

Students can handle the approach position only.

Grade 2

Students can handle the approach position and some aspects of Aerodrome reasonably competently. Their priority needs work and their attention may become too concentrated on one area.

Grade 3

Student controls both positions to a reasonable standard but still makes priority errors, e.g. forgetting to give a landing clearance when someone calls up FL100 in-bound.

Grade 4

Student controls both positions competently with very good prioritisation, they may make mistakes but they are minor/self corrected.