	SUBJECT: PHYSICAL CHARACTERISTICS				RESPONSE BY OPERATOR				
	QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation		
			S	NS			or reason for non-compliance / non-applicability)		
1.	Are the number and orientation of runways at an aerodrome such that the usability factor of the aerodrome is not less than 95 per cent for the aeroplanes that the aerodrome is intended to serve?	3.1.1							
2.	Are the siting and orientation of runways at an aerodrome such that the arrival and departure tracks minimize interference with areas approved for residential use and other noise-sensitive areas close to the aerodrome in order to avoid future noise problems?	3.1.2							
СН	DICE OF MAXIMUM PERMISSIBLE CROSS-WIND (COMPONEN	ГS						
3.	In the application of paragraph 3.1.1 of the ANO-14-I, are landings or take-off of aeroplanes, in normal circumstances, precluded when the cross-wind component exceeds — 37 km/h (20 kt) in the case of aeroplanes whose reference field length is 1 500 m or over, except that when poor runway braking action owing to an insufficient longitudinal coefficient of friction is experienced with some frequency, a cross-wind component not exceeding 24 km/h (13 kt) should be assumed; — 24 km/h (13 kt) in the case of aeroplanes whose reference field length is 1 200 m or up to but not including 1 500 m; and — 19 km/h (10 kt) in the case of aeroplanes whose reference field length is less than 1 200 m?	3.1.3							
DA	FA TO BE USED		1	r	n	n	1		
4.	Is the data to be used for the calculation of the usability factor based on reliable wind distribution statistics that extend over as long a period as possible, preferably of not less than five years? Are the observations made at least eight times daily and spaced at equal intervals of time?	3.1.4							
5.	Is the threshold located at the extremity of a runway?	3.1.5							
6.	When it is necessary to displace a threshold, either permanently or temporarily, from its normal location, are factors which may have a bearing on the location of the threshold taken into account?								
	A. Where this displacement is due to an unserviceable runway condition, is a cleared and graded area of at least 60 m in length available between the unserviceable area and the displaced threshold?	3.1.6							
	B. Is additional distance provided to meet the requirements of the runway end safety area as appropriate?								
PRI	MARY RUNWAY								

SUBJECT: PHYSICAL CHARACTERISTICS				TICS]	RESPO	NSE B	Y OPERATOR		
			QUESTIO	NS			REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation
								S	NS			or reason for non-compliance / non-applicability)
7.	Excepthe aurunwathe action the ac	pt as provide ctual runway ay adequate eroplanes for han the long ctions for le rmance chara	d in paragrap y length to to meet the o r which the r gest length d ocal condition acteristics of	bh 3.1.9 of the provided operational cunway is in letermined 1 ons to the the relevant	te ANO-14- l for a prin requirement ntended and by applying operations aeroplanes	-I, is nary s of not the and	3.1.7					
SEC	OND	ARY RUNW	VAY				1	r	1	1	1	
8.	Is the to prin for th runwa to obt	e length of a mary runway nose aeroplar ay in additior tain a usabili	secondary ru vs except that nes which rea n to the other ty factor of at	inway deter it needs onl quire to use runway or r t least 95 pe	mined simil y to be adeque that second unways in o r cent?	arly uate dary rder	3.1.8					
RUN	WAY	YS WITH ST	FOPWAYS	OR CLEAI	RWAYS		T		T	1	1	1
9.	Wher an ac applic as app a cas cleary requir runwa	e a runway is ctual runway cation of par- propriate, ma e, does any way provided rements for ta ay is intended	s associated v / length less agraphs 3.1.7 ay be conside combination l permit comp ake-off and la d to serve?	with a stopw s than that 7 or 3.1.8 of red satisfact n of runway pliance with anding of th	vay or clearw resulting fi the ANO-1 cory, but in s y, stopway the operation e aeroplanes	vay, from 4-I, such and onal s the	3.1.9					
10.	 10. Is the width of the runway less than the appropriate dimension specified in the following tabulation: Outer Main Gear Wheel Span (OMGWS) 											
Conur	ode nber	Up to but not including 4.5m	4.5m up to but not including 6m	6m up to but not including 9m	9m up to but not including 15m							
	10	18 m	18 m	23 m	-							
	20	23 m	23 m	30 m	-		3.1.10					
-	30	30 m	30 m	30 m	45 m	-						
	4º	-	-	45 m	45 m							
a) Th th	ne wid an 30	th of a precis m where the	sion approach code number	n runway sh r is 1 or 2.	all be not les	55						

SUBJECT: PHYSICAL CHARACTERISTICS			I	RESPO	NSE B	Y OPERATOR
QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation
		S	NS			or reason for non-compliance / non-applicability)
 11. Where parallel non-instrument runways are intended for simultaneous use, is the minimum distance between their centre lines: 210 m where the higher code number is 3 or 4; 150 m where the higher code number is 2; and 120 m where the higher code number is 1? 	3.1.11					
 12. Where parallel instrument runways are intended for simultaneous use subject to conditions specified in the PANS-ATM (Doc 4444) and the PANS-OPS (Doc 8168), Volume I, is the minimum distance between their centre lines: 1035 m for independent parallel approaches; 915 m for dependent parallel approaches; 760 m for independent parallel departures; 760 m for segregated parallel operations; except that: a) for segregated parallel operations the specified minimum distance: 1) may be decreased by 30 m for each 150 m that the arrival runway is staggered toward the arriving aircraft, to a minimum of 300 m; and 2) should be increased by 30 m for each 150 m that the arrival runway is staggered away from the arriving aircraft; b) for independent parallel approaches, combinations of minimum distances and associated conditions other than those specified in the PANS-ATM (Doc 4444) may be applied when it is determined that such combinations would not adversely affect the safety of aircraft operations? 	3.1.12					
LONGITUDINAL SLOPES		1	r	1	1	1
 13. Does the slope computed by dividing the difference between the maximum and minimum elevation along the runway centre line by the runway length exceed: 1 per cent where the code number is 3 or 4; and 2 per cent where the code number is 1 or 2? 	3.1.13					
 14. Does the longitudinal slope along any portion of the runway the longitudinal slope exceed: 1.25 per cent where the code number is 4, except that for the first and last quarter of the length of the runway the longitudinal slope should not exceed 0.8 per cent; 1.5 per cent where the code number is 3, except that for the first and last quarter of the length of a precision 	3.1.14					

QUESTIONS REF TO ANO-14-I YES NO N/A REMARKS (Include reference to documentation or reason for non-complianc / non-applicability) approach runway category II or III the longitudinal slope should not exceed 0.8 per cent; and — 2 per cent where the code number is 1 or 2? Image: Compliance of the code number is 1 or 2? Image: Compliance of the code number is 1 or 2? LONGITUDINAL SLOPE CHANGES Image: Compliance of the code number is 3 or 4; and — 2 per cent where the code number is 1 or 2? Image: Compliance of the code number is 1 or 2? 16. Is the transition from one slope to another accomplished by a curved surface with a rate of change not exceeding: — 0.1 per cent per 30 m (minimum radius of curvature of 30 000 m) where the code number is 4; — 0.2 per cent per 30 m (minimum radius of curvature of 15 000 m) where the code number is 3; and — 0.4 per cent per 30 m (minimum radius of curvature of 7 500 m) where the code number is 1 or 2? Image: Compliance of the code number is 1 or 2? SIGHT DISTANCE Image: Compliance of the another is 0 right from: Image: Compliance of the code number is 1 or 2? Image: Compliance of the code number is 1 or 2? 17. Where slope changes cannot be avoided, are they such that there will be an unobstructed line of sight from: Image: Compliance of the code number is 1 in 0; Image: Compliance of the code number is 1 in 0;	SUBJECT: PHYSICAL CHARACTERISTICS			RESPONSE BY OPERATOR				
sNSor reason for non-compliance / non-applicability)approach runway category II or III the longitudinal slope should not exceed 0.8 per cent; and - 2 per cent where the code number is 1 or 2?Image: Complex	QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation	
approach runway category II or III the longitudinal slope should not exceed 0.8 per cent; and			S	NS			or reason for non-compliance / non-applicability)	
- 2 per cent where the code number is 1 or 2? Image: Construction of the state of the sta	approach runway category II or III the longitudinal slope should not exceed 0.8 per cent; and							
LONGITUDINAL SLOPE CHANGES 15. Where slope changes cannot be avoided, does the slope change between two consecutive slopes exceed:	— 2 per cent where the code number is 1 or 2?							
15. Where slope changes cannot be avoided, does the slope change between two consecutive slopes exceed:	LONGITUDINAL SLOPE CHANGES			-				
16. Is the transition from one slope to another accomplished by a curved surface with a rate of change not exceeding: - 0.1 per cent per 30 m (minimum radius of curvature of 30 000 m) where the code number is 4; - 0.2 per cent per 30 m (minimum radius of curvature of 15 000 m) where the code number is 3; and - 0.4 per cent per 30 m (minimum radius of curvature of 7 500 m) where the code number is 1 or 2? -	 15. Where slope changes cannot be avoided, does the slope change between two consecutive slopes exceed: 1.5 per cent where the code number is 3 or 4; and 2 per cent where the code number is 1 or 2? 	3.1.15						
SIGHT DISTANCE 17. Where slope changes cannot be avoided, are they such that there will be an unobstructed line of sight from:	 16. Is the transition from one slope to another accomplished by a curved surface with a rate of change not exceeding: 0.1 per cent per 30 m (minimum radius of curvature of 30 000 m) where the code number is 4; 0.2 per cent per 30 m (minimum radius of curvature of 15 000 m) where the code number is 3; and 0.4 per cent per 30 m (minimum radius of curvature of 7 500 m) where the code number is 1 or 2? 	3.1.16						
17. Where slope changes cannot be avoided, are they such that there will be an unobstructed line of sight from:	SIGHT DISTANCE			-				
 any point 3 m above a runway to all other points 3 m above the runway within a distance of at least half the length of the runway where the code letter is C, D, E or F; any point 2 m above a runway to all other points 2 m above the runway within a distance of at least half the length of the runway where the code letter is B; and any point 1.5 m above a runway to all other points 1.5 m above the runway where the code letter is A? 	 17. Where slope changes cannot be avoided, are they such that there will be an unobstructed line of sight from: any point 3 m above a runway to all other points 3 m above the runway within a distance of at least half the length of the runway where the code letter is C, D, E or F; any point 2 m above a runway to all other points 2 m above the runway within a distance of at least half the length of the runway where the code letter is B; and any point 1.5 m above a runway to all other points 1.5 m above the runway within a distance of at least half the length of the runway within a distance of at least half 	3.1.17						
DISTANCE BETWEEN SLOPE CHANGES	DISTANCE BETWEEN SLOPE CHANGES	1	I	I	1	1	1	
 18. Undulations or appreciable changes in slopes located close together along a runway shall be avoided. Is the distance between the points of intersection of two successive curves less than: a) the sum of the absolute numerical values of the corresponding slope changes multiplied by the appropriate value as follows: 30 000 m where the code number is 4; 15 000 m where the code number is 3; and 5 000 m where the code number is 1 or 2; or b) 45 m; whichever is greater? 	 18. Undulations or appreciable changes in slopes located close together along a runway shall be avoided. Is the distance between the points of intersection of two successive curves less than: a) the sum of the absolute numerical values of the corresponding slope changes multiplied by the appropriate value as follows: 30 000 m where the code number is 4; 15 000 m where the code number is 3; and 5 000 m where the code number is 1 or 2; or b) 45 m; whichever is greater? 	3.1.18						
			1	I	1	1		

	SUBJECT: PHYSICAL CHARACTERISTICS		RES			ESPONSE BY OPERATOR		
	QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation	
			S	NS			or reason for non-compliance / non-applicability)	
19.	To promote the most rapid drainage of water, is the runway surface cambered except where a single crossfall from high to low in the direction of the wind most frequently associated with rain would ensure rapid drainage?							
	 A. Is the transverse slope: — 1.5 per cent when the code letter is C, D, E or F; — 2 per cent when the code letter is A or B; but in any event not exceed 1.5 per cent or 2 per cent, as applicable, nor be less than 1 per cent except at runway or taxiway intersections where flatter slopes may be necessary?	3.1.19						
	B. For a cambered surface, is the transverse slope on each side of the centre line symmetrical?							
20.	Is the transverse slope substantially the same throughout the length of a runway except at an intersection with another runway or a taxiway where an even transition should be provided taking account of the need for adequate drainage?	3.1.20						
21.	Is a runway capable of withstanding the traffic of aeroplanes the runway is intended to serve?	3.1.21						
SUI	RFACE OF RUNWAYS				-	_		
22.	Is the surface of a runway constructed without irregularities that would impair the runway surfacecharacteristics or otherwise adversely affect the take-off or landing of an aeroplane?	3.1.22						
23.	Is the paved runway constructed or resurfaced so as to provide surface friction characteristics at or above the minimum friction level as specified in the Guidance Material ?	3.1.23						
24.	Are measurements of the surface friction characteristics of a new or resurfaced runway made with a continuous friction measuring device using self-wetting features?	3.1.25						
25.	Is the average surface texture depth of a new surface less than 1.0 mm?	3.1.26						
26.	When the surface is grooved or scored, are the grooves or scorings either perpendicular to the runway centre line or parallel to non-perpendicular transverse joints, where applicable?	3.1.27						
RUI	NWAY SHOULDERS		r	r	T	1	r	
27.	Are runway shoulders provided for a runway where the code letter is D, E or F.	3.2.1						
WIE	TH OF RUNWAY SHOULDERS					1		
28.	For aeroplanes with OMGWS from 9 m up to but not including 15 m, the runway shoulders shallextend	3.2.2						

	SUBJECT: PHYSICAL CHARACTERISTICS			I	RESPO	NSE B	Y OPERATOR
	QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation
			S	NS			or reason for non-compliance / non-applicability)
	symmetrically on each side of the runway so that the overall width of the runway and its shoulders is not less than:						
	 —60 m where the code letter is D or E; —60 m where the code letter is F with two- or three-engined aeroplanes; and 						
	-75 m where the code letter is F with four (or more)- engined aeroplanes.						
SLO	PPES ON RUNWAY SHOULDERS		-				-
29.	Is the surface of the shoulder that abuts the runway flush with the surface of the runway and its transverse slope does not exceed 2.5 per cent?	3.2.3					
STI	RENGTH OF RUNWAY SHOULDERS						
30.	Is the portion of a runway shoulder between the runway edge and a distance of 30m from the centreline being prepared or constructed so as to be capable, in the event of an aeroplane running off the runway, of supporting the aeroplane without inducing structural damage to the aeroplane and of supporting ground vehicles which may operate on the shoulder?	3.2.4					
RU	NWAY TURN PADS						
31.	Where the end of a runway is not served by a taxiway or a taxiway turnaround and where the code is D, E or F, is a runway turn pad provided to facilitate a 180-degree turn for aeroplanes (See ICAO Annex 14 Vol. I, Figure 3-1)?	3.3.1					
32.	Where the end of a runway is not served by a taxiway or a taxiway turnaround and where the code letter is A, B or C, is a runway turn pad provided to facilitate a 180-degree turn of aeroplanes?	3.3.2					
33.	Is the runway turn pad located on either the left or right side of the runway and adjoining the runway pavement at both ends of the runway and at some intermediate locations where deemed necessary? Note – The initiation of the turn would be facilitated by locating the turn pad on the left side of the runway, since the left seat is the normal position for the pilot-in-	3.3.3					
	command.					<u> </u>	
34.	Does the intersectional angle of the runway turn pad exceed 30 degrees?	3.3.4					
35.	Does the nose wheel steering angle used in the design of the runway turn pad exceed 45 degrees?	3.3.5					
36.	In the design of a runway turn pad when the cockpit of the aeroplane for which the turn pad is intended remains over the turn pad marking, is the clearance distance between any	3.3.6					

SUBJECT: PHYSICAL CHARACTERISTIC	S	RESI			ESPONSE BY OPERATOR			
QUESTIONS	REF TO ANO-14-I	Y	TES	NO	N/A	REMARKS (Include reference to documentation		
		S	NS			or reason for non-compliance / non-applicability)		
wheel of the aeroplane landing gear and the edge of the tur	n							
OMGWS								
Up to but 4.5 m up 6 m up 9 m up								
not to but to but to but								
including not not not								
4.5 m including including including								
6 m 9 m 15 m								
Clearance 1.50 m 2.25 m $3 m^{a,b} \text{ or } 4 m 4 m^{c}$								
^a If the turn pad is intended to be used by aeroplanes with a wheel base less than 18m.								
^b If the turn pad is intended to be used by aeroplanes with a base equal to or greater than 18m.								
Note – Wheel base means the distance from the nose gear to the geometric centre of the main gear								
SLOPES ON RUNWAY TURN PADS								
37. Are the longitudinal and transverse slopes on a runway tur	n							
pad sufficient to prevent the accumulation of water on the surface and facilitate rapid drainage of surface water? At	337							
the slopes the same as those on the adjacent runwa	y 5.5.7							
pavement surface?								
STENGHT OF RUNWAY TURN PADS	1							
38. Is the strength of a runway turn pad at least equal to that of the adjoining runway which it serves, due consideration being given to the fact that the turn pad will be subjected to slow-moving traffic making hard turns and consequen- higher stresses to the pavement?	f n o t 3.3.8							
Note. –Where a runway turn pad is provided with flexible pavement, the surface would need to be capable of withstanding the horizontal shear forces exerted by the main landing gear tires during turning manoeuvres.								
39. Does the surface of a runway turn pad have surface irregularities that may cause damage to an aeroplane using the turn pad?	e 3.3.9							
40. Is the surface of a runway turn pad constructed so as a provide good friction characteristics for aeroplanes using the facility when the surface is wet?	g 3.3.10							
SHOULDERS OF RUNWAY TURN PADS								

SUBJECT: PHYSICAL CHARACTERISTICS			RESPONSE BY OPERATOR			Y OPERATOR	
	QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation
			S	NS			or reason for non-compliance / non-applicability)
41.	Are the runway turn pads provided with shoulders of such width as is necessary to prevent surface erosion by the jet blast of the most demanding aeroplane for which the turn pad is intended and any possible foreign object damage to the aeroplane engines? Note – As a minimum, the width of the shoulders would need to cover the outer engine of the most demanding aeroplane and thus may be wider than the associated	3.3.11					
42.	Is the strength of the runway turn pad shoulders capable of withstanding the occasional passage of the aeroplane it is designed to serve without inducing structural damage to the aeroplane and to the supporting ground vehicles that may operate on the shoulder?	3.3.12					
RU	NWAY STRIPS						
43.	Are the runways and any associated stopways included in a strip?	3.4.1					
LE	NGTH OF RUNWAY STRIPS						
44.	 Does the strip extend before the threshold and beyond the end of the runway or stopway for a distance of at least: 60 m where the code number is 2, 3 or 4; 60 m where the code number is 1 and the runway is an instrument one; and 30 m where the code number is 1 and the runway is a non-instrument one? 	3.4.2					
WI	DTH OF RUNWAY STRIPS						
45.	 Precision approach runway: Does the strip extend laterally to a distance of at least: 140 m where the code number is 3 or 4; and 70 m where the code number is 1 or 2; on each side of the centre line of the runway and its extended centre line throughout the length of the strip? 	3.4.3					
46.	 Non-precision approach runway: Does the strip extend laterally to a distance of at least: 140 m where the code number is 3 or 4; and 70 m where the code number is 1 or 2; on each side of the centre line of the runway and its extended centre line throughout the length of the strip? 	3.4.4					
47.	 Non-instrument runway: Does the strip extend on each side of the centre line of the runway and its extended centre line throughout the length of the strip, to a distance of at least: 75 m where the code number is 3 or 4; 40 m where the code number is 2; and 	3.4.5					

SUBJECT: PHYSICAL CHARACTERISTICS]	RESPONSE BY OPERATOR		
	QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation
			S	NS			or reason for non-compliance / non-applicability)
	— 30 m where the code number is 1?						
OB	IECTS ON RUNWAY STRIPS						
48.	Are objects situated on a runway strip which may endanger aeroplanes regarded as an obstacle and removed?	3.4.6					
49.	Are fixed objects, other than visual aids required for air navigation or those required for aircraft safety purposes and which must be sited on the runway strip, and satisfying the relevant frangibility requirement in Chapter 9 of the ANO- 14-I, permitted on a runway strip of a precision approach runway delineated by the lower edges of the inner transitional surfaces?	3.4.7					
	A. Are mobile objects permitted on this part of the runway strip during the use of the runway for landing or take-off?						
GR	ADING OF RUNWAY STRIPS				-		
50.	Does that portion of a strip of an instrument runway within a distance of at least:						
	- 75 m where the code number is 3 or 4; and						
	- 40 m where the code number is 1 or 2; from the centre line of the runway and its extended centre line provide a graded area for aeroplanes which the runway is intended to serve in the event of an aeroplane running off the runway?	3.4.8					
51.	Does that portion of a strip of a non-instrument runway within a distance of at least:						
	 75 m where the code number is 3 or 4; 40 m where the code number is 2; and 30 m where the code number is 1; from the centre line of the runway and its extended centre line providea graded area for aeroplanes which the run-way 	3.4.9					
	is intended to serve in the event of an aeroplane running off the runway?						
52.	Is the surface of that portion of a strip that abuts a runway, shoulder or stopway flush with the surface of the runway, shoulder or stopway?	3.4.10					
53.	Is that portion of a strip to at least 30 m before the start of a runway prepared against blast erosion in order to protect a landing aeroplane from the danger of an exposed edge?	3.4.11					
SLO	OPES ON RUNWAY STRIPS						
LO	NGITUDINAL SLOPES						
54.	Does the longitudinal slope along that portion of a strip to be graded exceed:	3.4.13					

SUBJECT: PHYSICAL CHARACTERISTICS]	RESPONSE B		Y OPERATOR	
	QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation
			S	NS			or reason for non-compliance / non-applicability)
	— 1.5 per cent where the code number is 4;						
	— 1.75 per cent where the code number is 3; and						
	— 2 per cent where the code number is 1 or 2?						
LO	IGITUDINAL SLOPE CHANGES	ſ			1	1	
55.	Are slope changes on that portion of a strip to be graded as gradual as practicable and abrupt changes or sudden reversals of slopes avoided?	3.4.14					
TR	ANSVERSE SLOPES						
56.	 Are transverse slopes on that portion of a strip to be graded adequate to prevent the accumulation of water on the surface but not exceed: 2.5 per cent where the code number is 3 or 4; and 3 per cent where the code number is 1 or 2; 	3.4.15					
	except that to facilitate drainage the slope for the first 3 m outward from the runway, shoulder or stopway edge shall be negative as measured in the direction away from the runway and may be as great as 5 per cent?						
57.	Does the transverse slope of any portion of a strip beyond that to be graded exceed an upward slope of 5 per cent as measured in the direction away from the runway?	3.4.16					
STF	ENGTH OF RUNWAY STRIPS						
58.	Is that portion of a strip of an instrument runway within a distance of at least:						
	— 75 m where the code number is 3 or 4; and						
	- 40 m where the code number is 1 or 2;	2 4 15					
	from the centre line of the runway and its extended centre line prepared or constructed as to minimize hazards arising from differences in load bearing capacity to aeroplanes which the runway is intended to serve in the event of an aeroplane running off the runway?	3.4.17					
59.	 Is that portion of a strip containing a non-instrument runway within a distance of at least: 75 m where the code number is 3 or 4; 40 m where the code number is 2; and 30 m where the code number is 1; from the centre line of the runway and its extended centre 	3.4.18					
	line prepared or constructed as to minimize hazards arising from differences in load bearing capacity to aeroplanes which the runway is intended to serve in the event of an aeroplane running off the runway?						
RUI	WAY END SAFETY AREAS	1		1	T	T	
60.	Is a runway end safety area provided at each end of a runway strip where:	3.5.1					

	SUBJECT: PHYSICAL CHARACTERISTICS]	RESPO	NSE B	Y OPERATOR
	QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation
			S	NS			or reason for non-compliance / non-applicability)
	— the code number is 3 or 4; and						
	— the code number is 1 or 2 and the runway is an instrument one?						
DIN	IENSIONS OF RUWAY END SAFETY AREAS						
61.	Does the runway end safety area extend from the end of a runway strip to a distance of at least 90* m where						
	- the code number is 3 or 4; and						
	- the code number is 1 or 2 and the runway is an instrument one?	3.5.3					
	*If an arresting system is installed, the above length may be reduced, based on the design specification of the system, subject to acceptance by the Chairman.						
62.	Is the width of the runway end safety area at least twice that of the associated runway?	3.5.5					
63.	Are objects situated on a runway end safety area which may endanger aeroplanes regarded as obstacles and removed?	3.5.7					
64.	Does the runway end safety area provide a cleared and graded area for aeroplanes which the runway is intended to serve in the event of an aeroplane undershooting or overrunning the runway?	3.5.8					
SLO)PES ON RUNWAY END SAFETY AREAS			•			
GE	NERAL						
65.	Are the slopes of a runway end safety area such that no part of the runway end safety area penetrates the approach or take-off climb surface?	3.5.9					
LO	NGITUDINAL SLOPES						
66.	Do the longitudinal slopes of the runway end safety area exceed a downward slope of 5 per cent?						
	A. Are the longitudinal slope changes as gradual as practicable and abrupt changes or sudden reversals of slopes avoided?	3.5.10					
TR	ANSVERSE SLOPES						
67.	Do the transverse slopes of the runway end safety area exceed an upward or downward slope of 5 per cent, and transitions between differing slopes as gradual as practicable?	3.5.11					
STI	RENGTH OF RUNWAY END SAFETY AREAS						
68.	Is the runway end safety area prepared or constructed as to reduce the risk of damage to an aeroplane undershooting or overrunning the runway, enhance aeroplane deceleration and facilitate the movement of rescue and fire fighting vehicles as required in paragraphs 9.2.34 to 9.2.35 of the ANO-14-I?	3.5.12					

SUBJECT: PHYSICAL CHARACTERISTIC	SUBJECT: PHYSICAL CHARACTERISTICS			RESPONSE B		Y OPERATOR
QUESTIONS	REF TO ANO-14-I	Y	TES	NO	N/A	REMARKS (Include reference to documentation
		S	NS			or reason for non-compliance / non-applicability)
LOCATION OF CLEARWAYS		-	-		-	-
69. Is the origin of a clearway at the end of the take-off run available?	¹ 3.6.1					
LENGTH OF CLEARWAYS		-			_	
70. Does the length of a clearway exceed half the length of the take-off run available?	3.6.2					
WIDTH OF CLEARWAYS		-			_	
 71. Does the clearway extend laterally on each side of the extended centre line of the runway to a distance of at leas : a. 75 m for instrument runways; and 	3.6.3					
b. half of the width of the runway strip for non instrument runways.	-					
SLOPES ON CLEARWAYS						
72. Does the ground in a clearway project above a plane having an upward slope of 1.25 per cent, the lower limit of thi plane being a horizontal line which:	3					
 a) is perpendicular to the vertical plane containing the runway centre line; and 	3.6.4					
b) passes through a point located on the runway central line at the end of the take-off run available?	•					
73. Are abrupt upward changes in slope avoided when the slope on the ground in a clearway is relatively small o when the mean slope is upward?						
A. In such situations, in that portion of the clearway within a distance of 22.5 m or half the runway width whichever is greater on each side of the extended centre line, do the slopes, slope changes and the transition from runway to clearway generally conform with those of the runway with which the clearway i associated?	3.6.5					
OBJECTS ON CLEARWAYS	-1	T	T			I
74. Is an object situated on a clear-way which may endange aeroplanes in the air regarded as an obstacle and removed	3.6.6					
STOPWAYS: WIDTH OF STOPWAYS	1	1	T	T		
75. Does the stopway have the same width as the runway with which it is associated?	¹ 3.7.1					
SLOPES ON STOPWAYS	-	I	T			1
76. Do the slopes and changes in slope on a stopway, and the transition from a runway to a stopway, comply with the specifications of paragraphs 3.1.13 to 3.1.19 of the ANO	3.7.2					

SUBJECT: PHYSICAL CHARACTERISTICS			RESPONSE BY OPERATOR					
QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation		
		S	NS			or reason for non-compliance / non-applicability)		
14-I for the runway with which the stopway is associat except that:	ed							
 a) the limitation in paragraph 3.1.14 of the ANO-14-I a 0.8 per cent slope for the first and last quarter of t length of a runway need not be applied to the stopwa and 	of ne y;							
 b) at the junction of the stopway and runway and alo the stopway the maximum rate of slope change may 0.3 per cent per 30 m (minimum radius of curvature 10 000 m) for a runway where the code number is 3 4? 	ng pe pf pr							
STRENGTH OF STOPWAYS		1		1				
77. Is a stopway prepared or constructed so as to be capable, the event of an abandoned take-off, of supporting t aeroplane which the stopway is intended to serve withou inducing structural damage to the aeroplane?	in ne ut 3.7.3							
SURFACE OF STOPWAYS		1		1				
78. Is the surface of a paved stopway so constructed resurfaced as to provide surface friction characteristics or above those of the associated runway when the stopw is wet?	or at ay 3.7.4							
RADIO ALTIMETER OPERATING AREA	-					-		
79. Is a radio altimeter operating area established in the protocol threshold area of a precision approach runway?	e- 3.8.1							
LENGTH OF THE AREA	- 1		1			1		
80. Does the radio altimeter operating area extend before t threshold for a distance of at least 300 m?	ne 3.8.2							
WIDTH OF THE AREA		1	1	1	I			
81. Does a radio altimeter operating area extend laterally, each side of the extended centre line of the runway, to distance of 60 m, except that, when special circumstance so warrant, the distance may be reduced to no less than m if an aeronautical study indicates that such reducti would not affect the safety of operations of aircraft?	on a 28 30 00 3.8.3							
LONGITUDINAL SLOPE CHANGES								
82. Are slope changes on a radio altimeter operating ar avoided or kept to a minimum?	ea							
 A. Where slope changes cannot be avoided, are slo changes as gradual as practicable and abrupt chang or sudden reversals of slopes avoided, with the rate change between two consecutive slopes not exceedi 2 per cent per 30 m? 	a 3.8.4 of 1 og 1							
TAXIWAYS Note — Unless otherwise indicated the requirements in this s	ction are applic	able to a	all types	of taxiw	avs.			

SUBJECT: PHYSICAL CHARACTERISTICS			RESPONSE BY OPERATOR					
QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation		
		S	NS			or reason for non-compliance / non-applicability)		
83. Are taxiways provided to permit the safe and expeditious surface movement of aircraft?	3.9.1							
84. Are sufficient entrance and exit taxiways for a runway provided to expedite the movement of aeroplanes to and from the runway and provision of rapid exit taxiways considered when traffic volumes are high?	3.9.2							
 85. Is the design of a taxiway such that, when the cockpit of the aeroplane for which the taxiway is intended remains over the taxiway centre line markings, the clearance distance between the outer main wheel of the aeroplane and the edge of the taxiway is not less than that given by the following tabulation: OMGWS Up to but 4.5m up 6 m up to 9 m up to not to but not but not but not including including including including including 4.5 m 6 m 9 m 15 m Clearance 1.50 m 2.25 m 3 m^{a,b} or 4 m 4 m^c ^a On straight portions. ^b On curved portions if the taxiway is intended to be used by aeroplane with a wheel base of less than 18m. ^c On curved portions if the taxiway is intended to be used by aeroplane with a wheel base equal to or greater than 18m. Note 1 — Wheel base means the distance from the nose gear to t geometric centre of the main gear. 	3.9.3							
WIDTH OF TAXIWAYS								
 86. Does a straight portion of a taxi-way have a width of not less than that given by the following tabulation: Up to but 4.5 m up to 6 m up to 9m up to not but not but not but not including including including including 4.5 m 6 m 9 m 15 m 	3.9.4							
Taxiway 7.5 m 10.5 m 15 m 23 m width								
TAXIWAY CURVES								
87. Are changes in direction of taxiways as few and small as possible?								
A. Are the radii of the curves compatible with the manoeuvring capability and normal taxiing speeds of the aeroplanes for which the taxiway is intended?	3.9.5							

SUBJECT: PHYSICAL CHARACTERISTICS		RESPONSE BY OPERATOR					
	QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation
			S	NS			or reason for non-compliance / non-applicability)
	B. Is the design of the curve such that, when the cockpit of the aeroplane remains over the taxiway centre line markings, the clearance distance between the outer main wheels of the aeroplane and the edge of the taxiway is not less than those specified in 3.9.3?						
JUN	ICTIONS AND INTERSECTIONS						
88.	To facilitate the movement of aeroplanes, are fillets provided at junctions and intersections of taxiways with runways, aprons and other taxiways?						
	A. Does the design of the fillets ensure that the minimum wheel clearances specified in 3.9.3 of the ANO-14-I are maintained when aeroplanes are manoeuvring through the junctions or intersections?	3.9.6					
TA	XIWAY MINIMUM SEPARATION DISTANCES						
89.	Is the separation distance between the centre line of a taxiway and the centre line of a runway, the centre line of a parallel taxiway or an object less than the appropriate dimension specified in Table 3-1 of the ANO-14-I, except that it may be permissible to operate with lower separation distances at an existing aerodrome if an aeronautical study indicates that such lower separation distances would not adversely affect the safety or significantly affect the regularity of operations of aeroplanes?	3.9.7					
SLO	DPES ON TAXIWAYS						
LO	NGITUDINAL SLOPES		_	-	_	-	
90.	 Does the longitudinal slope of a taxiway exceed: 1.5 per cent where the code letter is C, D, E or F; and 3 per cent where the code letter is A or B? 	3.9.8					
LO	NGITUDINAL SLOPE CHANGES				1		
91.	 Where slope changes on a taxiway cannot be avoided, is the transition from one slope to another slope accomplished by a curved surface with a rate of change not exceeding: 1 per cent per 30 m (minimum radius of curvature of 3 000 m) where the code letter is C, D, E or F; and 1 per cent per 25 m (minimum radius of curvature of 2 500 m) where the code letter is A or B? 	3.9.9					
SIG	HT DISTANCE						
92.	 Where a change in slope on a taxi-way cannot be avoided, is the change such that, from any point: 3 m above the taxiway, it will be possible to see the whole surface of the taxiway for a distance of at least 300 m from that point, where the code letter is C, D, E or F; 	3.9.10					

SUBJECT: PHYSICAL CHARACTERISTICS		RESPONSE BY OPERATOR				
QUESTIONS	REF TO ANO-14-I	Y	TES	NO	N/A	REMARKS (Include reference to documentation
		S	NS			or reason for non-compliance / non-applicability)
 2 m above the taxiway, it will be possible to see whole surface of the taxiway for a distance of at 200 m from that point, where the code letter is B; 1.5 m above the taxiway, it will be possible to see whole surface of the taxiway for a distance of at 150 m from that point where the code letter is A? 	the east and the east					
TRANSVERSE SLOPES						
 93. Are the transverse slopes of a taxiway sufficient to pre the accumulation of water on the surface of the taxiway shall not exceed: 1.5 per cent where the code letter is C, D, E or F; a 2 per cent where the code letter is A or B? 	vent but 3.9.11 nd					
STRENGTH OF TAXIWAYS			_			-
94. Is the strength of a taxiway at least equal to that of runway it serves, giving due consideration to the fact th taxiway will be subjected to a greater density of traffic as a result of slow moving and stationary aeroplanes higher stresses than the runway it serves?	the at a and, 3.9.12 5, to					
SURFACE OF TAXIWAYS						-
95. Does the surface of a taxiway have irregularities that c damage to aeroplane structures?	ause 3.9.13					
96. Is the surface of a paved taxiway so constructed a provide good friction characteristics when the taxiwa wet?	s to y is 3.9.14					
RAPID EXIT TAXIWAYS						
 97. Is a rapid exit taxiway designed with a radius of turn curve of at least: 550 m where the code number is 3 or 4; and 275 m where the code number is 1 or 2; to enable exit speeds under wet conditions of: 93 km/h where the code number is 3 or 4; and 65 km/h where the code number is 1 or 2? 	-off 3.9.15					
98. Is the radius of the fillet on the inside of the curve at a r exit taxiway sufficient to provide a widened taxiway th in order to facilitate early recognition of the entrance turn-off onto the taxiway?	apid roat and 3.9.16					
99. Does a rapid exit taxiway include a straight distance a the turn-off curve which is sufficient for an exiting air to come to a full stop clear of any intersecting taxiway	after craft 3.9.17 ?					
100. Is the intersection angle of a rapid exit taxiway with runway greater than 45° or less than 25° rather than preferred 30°?	the 3.9.18					
TAXIWAYS ON BRIDGES						

SUBJECT: PHYSICAL CHARACTERISTICS		RESPONSE BY OPERATOR					
QUESTIONS	REF TO	Y	ES	NO	N/A	REMARKS (Include	
	ANU-14-1	S	NS			or reason for non-compliance / non-applicability)	
101. Is the width of that portion of a taxiway bridge capable of supporting aeroplanes, as measured perpendicularly to the taxiway centre line, less than the width of the graded area of the strip provided for that taxiway?	3.9.19						
A. If so, is a proven method of lateral restraint provided which shall not be hazardous for aeroplanes for which the taxiway is intended?	3.9.19						
102. Is access provided to allow rescue and fire fighting vehicles to intervene in both directions within the specified response time to the largest aeroplane for which the taxiway bridge is intended?	3.9.20						
A. Is protection of adjacent areas below the bridge from jet blast provided if aeroplane engines overhang the bridge structure?							
103. Is the bridge constructed on a straight section of the taxiway with a straight section on both ends of the bridge to facilitate the alignment of aeroplanes approaching the bridge?	3.9.21						
TAXIWAY SHOULDERS							
 104. Are straight portions of a taxiway where the code letter is C, D, E or F provided with shoulders which extend symmetrically on each side of the taxiway so that the overall width of the taxiway and its shoulders on straight portions is not less than: 44 m where the code letter is F; 38 m where the code letter is E; 34 m where the code letter is D; and 25 m where the code letter is C? 	3.10.1						
A. On taxiway curves and on junctions or intersections where increased pavement is provided, is the shoulder width less than that on the adjacent straight portions of the taxiway?							
105. When a taxiway is intended to be used by turbine-engined aeroplanes, is the surface of the taxiway shoulder so prepared as to resist erosion and the ingestion of the surface material by aeroplane engines?	3.10.2						
TAXIWAY STRIPS	I		r				
106. Is a taxiway, other than an aircraft stand taxilane, included in a strip?	3.11.1						
WIDTH OF TAXIWAY STRIPS							

SUBJECT: PHYSICAL CHARACTERISTICS			RESPONSE BY OPERATOR					
QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation		
		S	NS			or reason for non-compliance / non-applicability)		
107. Does the taxiway strip extend symmetrically on each side of the centre line of the taxiway throughout the length of the taxiway to at least the distance from the centre line given in Table 3-1, column 11 of the ANO-14-I?	3.11.2							
OBJECTS ON TAXIWAY STRIP	L			1				
108. Does the taxiway strip provide an area clear of objects which may endanger taxiing aeroplanes?	3.11.3							
GRADING OF TAXIWAY STRIPS	1			1				
 109. Does the centre portion of a taxiway strip provide a graded area to a distance from the centre line of the taxiway of not less than that given by the following tabulation: 10.25 m where the OMGWS is up to but not including 4.5m 11 m where the OMGWS is 4.5m up to but not including 6m 12.50 m where the OMGWS is 6m up to but not including 9m 18.50 m where the OMGWS is 9m up to but not including 15m, where the code letter is D 19 m where the OMGWS is 9m up to but not including 15m, where the code letter is E 22 m where the OMGWS is 9m up to but not including 15m, where the code letter is F 	3.11.4							
SLOPES ON TAXIWAY STRIPS	I				I			
 110. Is the surface of the strip flush at the edge of the taxiway or shoulder, if provided, and the graded portion having an upward transverse slope not exceeding: 2.5 per cent for strips where the code letter is C, D, E or F; an 3 per cent for strips of taxiways where the code letter is A or B; the upward slope being measured with reference to the transverse slope of the adjacent taxiway surface and not the horizontal? 	3.11.5							
A. Does the downward transverse slope exceed 5 percent measured with reference to the horizontal?								
111. Do the transverse slopes on any portion of a taxiway strip beyond that to be graded exceed an upward or downward slope of 5 per cent as measured in the direction away from the taxiway?	3.11.6							
HOLDING BAYS, RUNWAY-HOLDING POSITIONS, INTERMEDIATE HOLDING POSITIONS AND ROAD HOLDING POSITIONS								

SUBJECT: PHYSICAL CHARACTERISTICS		RESPONSE BY OPERATOR				
QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation
		S	NS			or reason for non-compliance / non-applicability)
112. Are holding bay(s) provided when the traffic density is medium or heavy?	3.12.1					
 113. Are runway-holding position or positions established: a) on the taxiway, at the intersection of a taxiway and a runway; and b) at an intersection of a runway with another runway when the former runway is part of a standard taxiroute? 	3.12.2					
114. Is a runway-holding position established on a taxiway if the location or alignment of the taxiway is such that a taxiing aircraft or vehicle can infringe an obstacle limitation surface or interfere with the operation of radio navigation aids?	3.12.3					
115. Are intermediate holding positions established on a taxiway at any point other than a runway-holding position where it is desirable to define a specific holding limit?	3.12.4					
116. Are road-holding positions established at intersections of roads with a runway?	3.12.5					
LOCATIONS						
117. Is the distance between a holding bay, runway-holding position established at a taxiway/runway intersection or road-holding position and the centre line of a runway in accordance with Table 3-2 of the ANO-14-I?						
A. In the case of a precision approach runway, are positions for holding aircraft or vehicle established such that they will not interfere with the operation of radio navigation aids or penetrate the inner transitional surface?	3.12.6					
118. If a holding bay, runway-holding position or road-holding position for a precision approach runway code number 4 is at a greater elevation compared to the threshold, the distance, specified in Table 3-2 shall be further increased 5 m for every metre the bay or position is higher than the threshold.	3.12.8					
119. Is the location of a runway-holding position established in accordance with paragraph 3.12.3 of the ANO-14-I such that a holding aircraft or vehicle will not infringe the obstacle free zone, approach surface, take-off climb surface or ILS/MLS critical/ sensitive area or interfere with the operation of radio navigation aids?	3.12.9					
APRONS						
120. Are aprons provided where necessary to permit the on- and off-loading of passengers, cargo or mail as well as the servicing of aircraft without interfering with the aerodrome traffic?	3.13.1					

SUBJECT: PHYSICAL CHARACTERISTICS		RESPONSE BY OPERATOR					
QUESTIONS	REF TO ANO-14-I	Y	ES	NO	N/A	REMARKS (Include reference to documentation	
		S	NS			or reason for non-compliance / non-applicability)	
SIZE OF APRONS							
121. Is the total apron area adequate in permitting expeditious handling of the aerodrome traffic at its maximum anticipated density?	3.13.2						
STRENGTH OF APRONS							
122. Is each part of an apron capable of withstanding the traffic of the aircraft it is intended to serve, with due consideration being given to the fact that some portions of the apron will be subjected to a higher density of traffic and, as a result of slow moving or stationary aircraft, to higher stresses than a runway?	3.13.3						
SLOPES ON APRONS							
123. Are slopes on an apron, including those on an aircraft stand taxilane, sufficient to prevent accumulation of water on the surface of the apron but kept as level as drainage requirements permit?	3.13.4						
124. Does the maximum slope on aircraft stands exceed 1 per cent?	3.13.5						
125. Do aircraft stands provide the following minimum clearances between an aircraft entering or exiting the stand and any adjacent building, aircraft on another stand and other objects?							
Code letter Clearance							
A 3m							
B 3m							
C 4.5 m							
D 7.5 m	3.13.6						
E 7.5 m							
F 7.5 m							
a) between the terminal, including any fixed passenger bridge, and the nose of an aircraft; and							
b) over any portion of the stand provided with azimuth guidance by a visual docking guidance system?reduced from that mentioned in paragraph 3.13.6 of the							
ANO-14-I at a nose-in aircraft stand, where the code letter is D, E or F?							
ISOLATED AIRCRAFT PARKING POSITION	1	1	ſ	1	1	1	
127. Is an isolated aircraft parking position designated or the aerodrome control tower advised of an area or areas suitable for the parking of an aircraft which is known or	3.14.1						

SUBJECT: PHYSICAL CHARACTERISTICS		RESPONSE BY OPERATOR					
QUESTIONS	REF TO ANO-14-I	YES		NO	N/A	REMARKS (Include reference to documentation	
		S	NS			or reason for non-compliance / non-applicability)	
believed to be the subject of unlawful interference, or which for other reasons needs isolation from normal aerodrome activities?							
128. Is the isolated aircraft parking position located at the maximum distance practicable and in any case never less than 100 m from other parking positions, buildings or public areas, etc?							
A. Is care taken to ensure that the position is not located over underground utilities such as gas and aviation fuel and, to the extent feasible, electrical or communication cables?	3.14.2						

Comments of Inspector (s):

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Conclusions:

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Signature of Aerodrome Safety Inspector (AGA), Member

Signature of Aerodrome Safety Inspector (AGA), Member

Signature of Aerodrome Safety Inspector (AGA), Member

Signature of Aerodrome Safety Inspector (AGA), Team Leader