Directorate of Airspace Policy

All NATMAC Representatives
10 April 2012

CAA DECISION LETTER

Dear Colleagues,

INTRODUCTION OF INSTRUMENT APPROACH PROCEDURES (IAPs) TO RUNWAY 03 AT CRANFIELD AIRPORT

1 INTRODUCTION

1.1 Cranfield Airport issued a consultation document in October 2011 seeking comments on a proposal to introduce IAPs to Runway 03 at the Airport. Upon receipt of the proposal, DAP staff, supported by colleagues from the Safety Regulation Group of the CAA, undertook a detailed analysis of the material, which included an examination of the operational, environmental and consultative requirements of the Airspace Change Process. The purpose of this letter is to provide you with an overview of the proposal and my subsequent decision on it.

2 PROPOSAL OVERVIEW

2.1 IAPs to Runway 03 have existed at Cranfield Airport in the past but were withdrawn more than 10 years ago due to a decline in operational demand. The current IAPs arrangement requires that, when Runway 03 is in use, aircraft must make an instrument approach to Runway 21 followed by a visual circling manoeuvre to land on Runway 03. Cranfield Airport now feel that recent increase in overall demand for IAPs, particularly from modern corporate aircraft types, now make it appropriate to re-establish IAPs in order to enable poor-weather operations to be conducted safely and efficiently.

2.2 The proposal is to introduce NDB/DME and RNAV (GNSS) procedures to Runway 03.

2.3 In examining the design options, the sponsor considered that the 'do nothing' option should be rejected as it did not address the prime objective of establishing more effective air operations. Due to the constraints of the adjacent controlled airspace (CAS) and the potential impact on the airspace arrangements a limited number of alternative options were available for consideration. Positioning of the NDB/DME IAP to the south-side of the extended Runway 03 centreline was dismissed as the procedure design protection areas would infringe the Luton Control Zone. The normal full array of 'T' or 'Y' Initial Approach Segments could not be provided to either side of the Final Approach Track for the RNAV (GNSS) procedure due to the proximity of CAS.

2.4 The sponsor concluded that the only practical and justifiable option was the establishment of NDB/DME Non-Precision Approach procedure based on the CIT NDB (L) and utilising the airport sited DME facility to the north of the extended

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Runway 03 centreline, and a RNAV (GNSS) Non-Precision Approach procedure also to the north of the Runway 03 centreline. Both IAPs are depicted in the draft charts at Enclosure 1.

2.5 Cranfield Airport does not currently have a surveillance radar facility, so it is necessary, for arriving aircraft operating under Instrument Flight Rules to carry out the whole of the published IAP. The proposed NDB procedure for Runway 03 includes a Direct Approach option thus negating the requirement for pilots to fly the whole procedure.

2.6 In order to support the introduction of the proposed IAPs, Cranfield Airport have plans in place for the installation of approach lighting, Precision Approach Path Indicators, stop lighting and the associated control and monitoring system for Runway 03. Work is due to commence during April 12, to be completed by the planned implementation date.

3 STATUTORY DUTIES

3.1 My statutory duties are set out in Section 70 of the Transport Act 2000 (the Act); the CAA (Air Navigation) Directions 2001, as varied in 2004 (the Directions); and Guidance to the CAA on Environmental Objectives relating to the Exercise of its Air Navigation Functions issued in 2002 by the DfT (then called Department of Transport, Local Government and the Regions (the Guidance)) and as updated by an addendum in February 2012.

3.2 Safety

3.2.1 My primary duty is to maintain a high standard of safety in the provision of air traffic services and this takes primacy over all other duties.[1] The proposed new procedures would provide a full instrument approach capability to Runway 03 and, particularly in the case of the RNAV (GNSS) procedure, offer substantial improvements to the landing minima in comparison to the visual circling manoeuvre minima following an instrument approach to Runway 21 (about 460 ft lower for larger aircraft).

3.2.2 Some concern was expressed during consultation with respect to the mix of IFR flights and gliders in Class G airspace in an area where gliding operations routinely takes place. CAA personnel have confirmed that the proposed design and associated airspace management arrangements can nonetheless be safely implemented; a warning note, highlighting glider activity, would be included on appropriate aeronautical charts, together with appropriate glider symbology on the graphic. I am therefore content that the potential adverse flight safety impact on those aircraft operating in the vicinity of the new arrangements can be adequately managed.

3.2.3 The appropriate safety management processes have already been undertaken for both the proposed RNAV (GNSS) and NDB/DME procedures. I am therefore satisfied that the proposed airspace design can be safely adopted.

3.3 Airspace Efficiency

3.3.1 I am required to secure the most efficient use of airspace consistent with the safe operation of aircraft and the expeditious flow of air traffic[2]. The proposed procedures

[1] Transport Act 2000, Section 70(1).
[2] Transport Act 2000, Section 70 (2)(a)

recognise the need for efficient use of the airspace by all airspace users and are cognisant of the restrictions imposed by adjacent CAS. The proposal is appropriate to the provision of a full instrument approach capability to Runway 03 at the Airport, and is unlikely to have a noticeable impact in controller or pilot workload, albeit it will remove the need for circling approaches and provide much lower instrument minima by virtue of an aligned final approach. I consider the introduction of these arrangements will represent a significant improvement in overall airspace efficiency.

3.4 Airspace Users

3.4.1 I am required to satisfy the requirements of operators and owners of all classes of aircraft.[1] The sponsor completed a satisfactory consultation with all affected aviation stakeholder groups. Although some concern was raised in regard to the mix of IFR flights and gliders in Class G airspace, the sponsor provided adequate mitigation and therefore, I am satisfied that this proposal meets the requirements of airspace users.

3.5 Interests of Other Parties.

3.5.1 I am required to take account of the interests of any person (other than an owner or operator of an aircraft) in relation to the use of any particular airspace or the use of airspace generally.[2] One consultee expressed concern in respect to the potential overflight of parts of Milton Keynes. Given the restrictions imposed by extant CAS, the overflight of the town by aircraft carrying out an NDB/DME could not be avoided. In mitigation due regard was taken by the sponsor to restrict overflight of Milton Keynes to not below 2500 ft amsl; a lower level would have been permitted if the obstacle environment alone was considered. It must also be noted that under current arrangements overflights of Milton Keynes by aircraft inbound to Cranfield Airport, whether under the IFR or the Visual Flight Rules, may take place under the current airspace arrangements in accordance with Class G requirements at levels below 2,500 ft amsl. I am therefore satisfied that the overall interests of other parties have been considered.

3.6 Environmental Objectives and Impact

3.6.1 I am also obliged to take account of any guidance on environmental objectives given to the CAA by the Secretary of State[3], which has been provided in the detailed Guidance to the CAA on Environmental Objectives relating to the Exercise of its Air Navigation Functions[4]. It is recognised that the introduction the NDB/DME IAP will result in a small proportion of Cranfield's arriving aircraft overflying Milton Keynes. However, both the proposed NDB/DME and RNAV (GNSS) procedures are located in Class G airspace where other aircraft may operate freely in accordance with the airspace classification. Such aircraft may not be associated with Cranfield Airport or known to Cranfield Air Traffic Control and no records of random airspace activity outside controlled airspace are maintained. Based upon noise modelling analyses and the estimated frequency of flights, the expected noise impact of aircraft that cross Milton Keynes using the NDB/DME approach to Runway 03 is unlikely to be discernible in most cases, and if audible, they are unlikely to be significant. The sponsor will be required to undertake a post implementation review of the new arrangements, which will include information on the number and types of approach undertaken.

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[1] Transport Act 2000, Section 70(2)(b).
[2] Transport Act 2000, Section 70(2)(c).
[3] Transport Act 2000, Section 70 (2)(d)
[4] Issued by the then Department for Transport, Local Government and the Regions in January 2002.

3.6.2 Given the advice provided by my expert Environmental Research and Consultancy Department (ERCD) and my personal consideration of the proposal, I am satisfied that the proposed changes do not indicate there will be a significant impact on the environment.

3.7 Integrated operation of ATS

3.7.1 I am required to facilitate the integrated operation of air traffic services provided by or on behalf of the Armed Forces of the Crown and other air traffic services.[1] In this respect, the MOD has been engaged during the consultation process and has stated that they are satisfied with the change proposed.

3.8 National Security

3.8.1 I am required to take into account the impact any airspace change may have upon matters of national security.[2] The MOD has confirmed that national security will not be impacted by this proposal.

3.9 International Obligations

3.9.1 I am required to take into account any international obligations entered into by the UK and notified by the Secretary of State.[3] No new international obligations arise as a result of the proposal. The new airspace is in accordance with national regulatory requirements.

3.10 Consultation with the MOD

3.10.1 Consultation requirements with the Secretary of State for Defence are set out in the Air Navigation Directions (the Directions)[4]. The MOD has confirmed that they are content with the proposal.

4 ENVIRONMENTAL CONSIDERATIONS

4.1 Environmental considerations have already been considered in a previous paragraph. It is not possible to accurately determine the overall environmental impact of this change proposal as no reliable data is available on GA aircraft activity in the area of the change, but it is considered to be limited and therefore I am content that there is no requirement to refer this proposal to the Secretary of State.

5 CONSULTATION

5.1 The Sponsor undertook consultation in accordance with the requirements of CAPs 724 and 725. Assessment of the proposal by DAP Airspace Policy Coordination and Consultation Section concluded that the conduct of the consultation was of a high standard and in accordance with the guidance contained in CAP 725. The sponsor was very proactive in seeking responses and responded in a positive manner to queries and objections.

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[1] Transport Act 2000, Section 70(2)(e).
[2] Transport Act 2000, Section 70(2)(f).
[3] Transport Act 2000, Section 70(2)(g).
[4] The Civil Aviation Authority (Air Navigation) Directions 2001 as varied by the Civil Aviation Authority (Air Navigation) (Variation) Direction 2004.

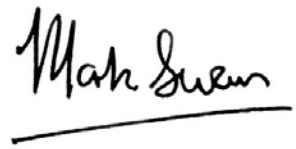
6 REGULATORY DECISION

6.1 I am content that the proposed procedure design can be safely adopted and that flight safety will be enhanced by the provision of a full instrument approach capability to Runway 03, thus satisfying my principal statutory duty. I am equally content that airspace efficiency will not be affected and the needs of the principal users will be met. I am satisfied that the final option presented provided the most pragmatic solution.

6.2 The intention is that the NDB/DME procedure will become effective on the AIRAC 7/2012 implementation date of 28 June 2012, and as the RNAV (GNSS) procedures requires a double AIRAC schedule; it would become effective at AIRAC 8/2012 on 26 July 2012. My staff will review the effectiveness of the arrangements 12 months after introduction and the results of this review will be published.

6.3 If you have any queries, the DAP Case Officer, Dean Miller, may be contacted on 0207 453 6554, or via e mail to dean.miller@caa.co.uk.

Yours sincerely,



M Swan
Director

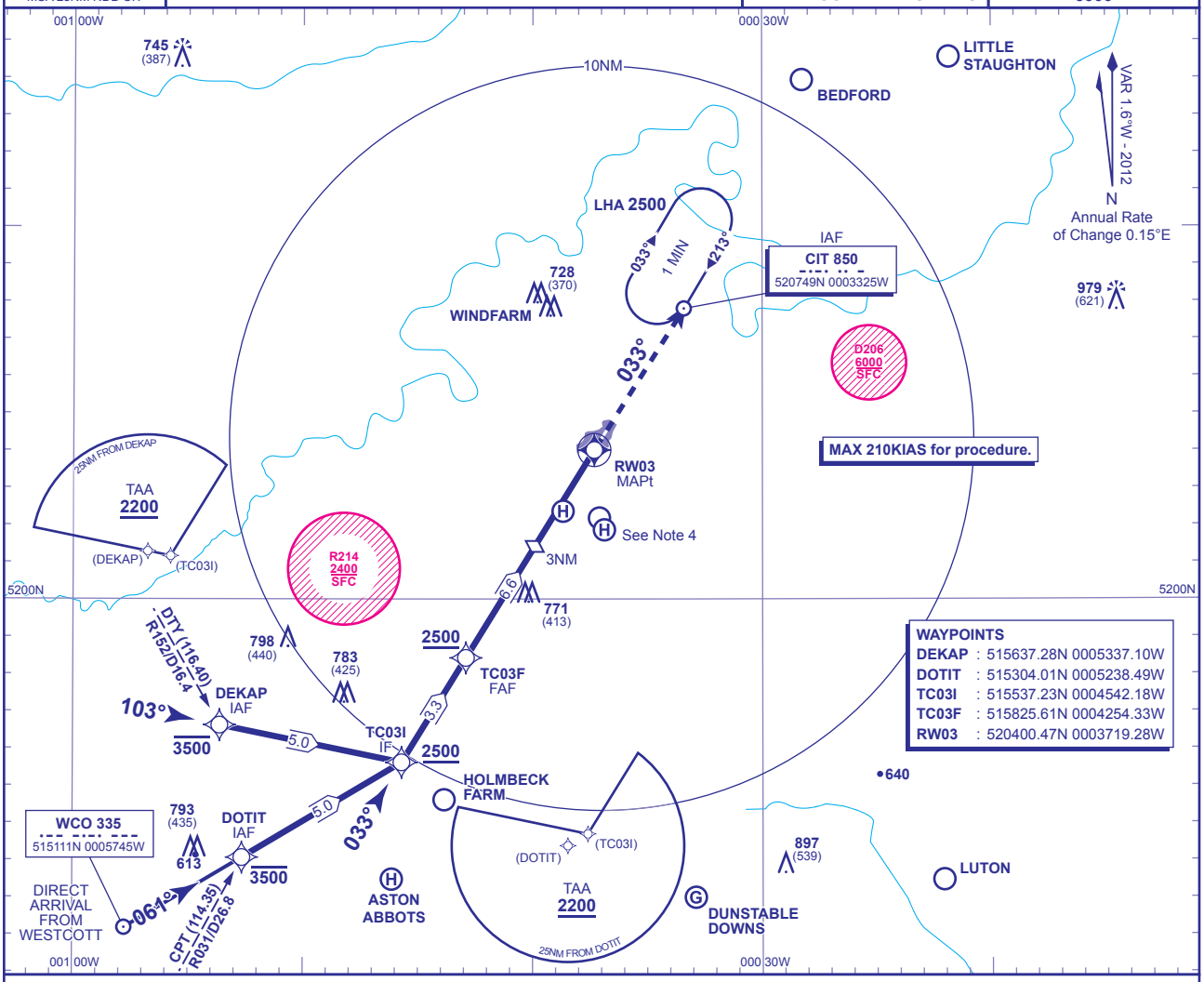
Enclosure:

1. Charts showing proposed NDB/DME and RNAV (GNSS) Non-precision Approach procedures.

INSTRUMENT APPROACH CHART - ICAO

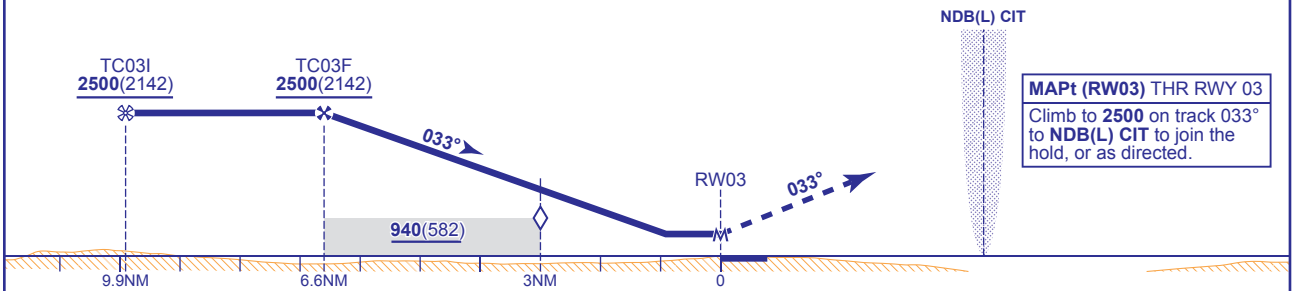
CRANFIELD
RNAV (GNSS)
RWY 03
(ACFT CAT A,B,C)

2_2 MSA 25NM NDB CIT	APP 122.850	CRANFIELD APPROACH	AD ELEVATION 358	TRANSITION ALTITUDE 6000
	TWR 134.925, 122.850	CRANFIELD TOWER	THR ELEVATION 358	
			OBSTACLE ELEVATION 979 AMSL (621) (ABOVE THR)	
			BEARINGS ARE MAGNETIC	



RECOMMENDED PROFILE Gradient 5.2%, 320FT/NM

NM	6	5	4	3 (SDF)	2	1
ALT(HGT)	**2320**(1962)	**2000**(1642)	**1680**(1322)	**1360**(1002)	**1040**(682)	**730**(372)



Aircraft Category		A	B	C
OCA (OCH)	LNAV	**690**(332)	**690**(332)	**690**(332)
VM(C)OCA (OCH AAL)	Total Area	**800**(442)	**970**(612)	**1150**(792)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	630	530	420

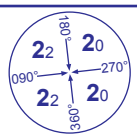
NOTE 1 CIT NDB(L) hold restrictions: Below **5500** hold restricted to MAX 180KIAS with sector 1 joins restricted to MAX 140KIAS. At **5500** and above hold restricted to MAX 140KIAS, sector 1 joins prohibited.
2 Missed Approach Procedure uses **conventional navigation aids** and is not available without **NDB(L) CIT**.
3 Intensive glider activity takes place beneath the LTMA in VMC and in IMC.
4 Occasional light aircraft and helicopter activity at Salford Helipad (520222N 0003841W), Hulcote Farm (520211N 0003706W), and Helimech Helipad (520152N 0003653W).

CHANGE: NEW CHART.

AERO INFO DATE 22 MAR 12

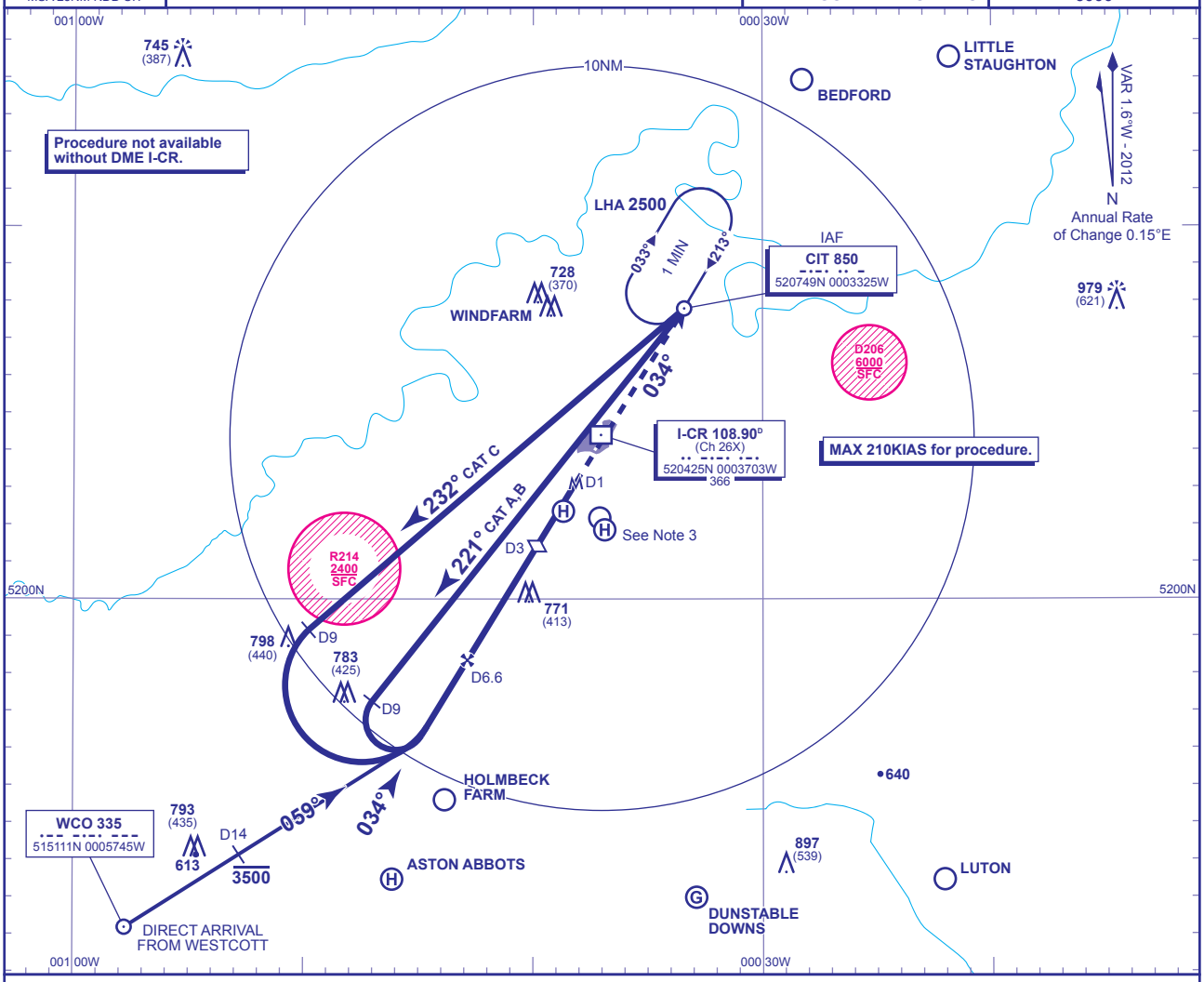
INSTRUMENT APPROACH CHART - ICAO

CRANFIELD
NDB(L) DME
RWY 03
(ACFT CAT A,B,C)



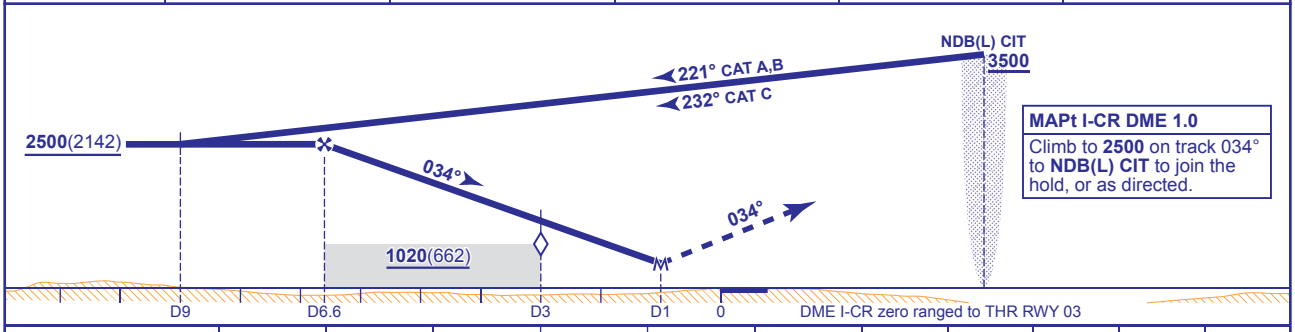
MSA 25NM NDB CIT

APP	122.850	CRANFIELD APPROACH	AD ELEVATION	358
TWR	134.925, 122.850	CRANFIELD TOWER	THR ELEVATION	358
			OBSTACLE ELEVATION 979 AMSL (621) (ABOVE THR)	
			BEARINGS ARE MAGNETIC	TRANSITION ALTITUDE 6000



RECOMMENDED PROFILE Gradient 5.2%, 320FT/NM

NM	6	5	4	3 (SDF)	2
ALT(HGT)	**2310**(1952)	**1990**(1632)	**1680**(1322)	**1360**(1002)	**1040**(682)



MAPt I-CR DME 1.0
Climb to **2500** on track 034° to **NDB(L) CIT** to join the hold, or as directed.

Aircraft Category		A	B	C
OCA (OCH)	Procedure	**730**(372)	**730**(372)	**730**(372)
VM(C)OCA (OCH AAL)	Total Area	**800**(442)	**970**(612)	**1150**(792)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	630	530	420

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CHANGE: NEW CHART.

AERO INFO DATE 14 MAR 12