Ministry of Defence

de&S MOD COMMERCIAL

SCHEDULE E – BASELINE ASSUMPTIONS

ENGINES FUTURE SUPPORT

CONTRACT NUMBER
701580378

SCHEDULE E

BASELINE ASSUMPTIONS

PROGRAMME ASSUMPTIONS

1. ENGINE FLYING HOURS (EFH)

1.1 The Contractor will support the EFH across all Engine Marks as outlined in the Tables below and the price applies to the achievement of these EFH.

Most Likely (ML) EFH Per Year

TABLE 1 – Most Likely Engine Flying Hours per year (MLEFH per year)

	24/25	25/26	26/27	27/28	28/29	29/30
MK100	15453	15453	15453	15453	15453	15453
MK200 / Mk250	10431	10431	10431	10431	10431	10431

This table is constructed using the assumption that the Mk250 Module 2s will be delivered and paid before the end of December 2024.

2 EFH VARIATION

2.1 Pricing is defined in Schedule F. EFH are defined in Table 1. The ML EFH forms the basis of the price for the Core Services. The price for variations in annual EFH down to the minimum (19,332 per contract year) and up to the maximum (39,825 per contract year) is defined in Schedule F. EFH consumed up to and including the annual maximum EFH are not considered to be Surge for the purposes of this Contract. Variations in flying hours do not apply to EFH consumed below the minimum.

3 CUSTOMER AND FLEET DATA

3.1 The current Engine Fleets[1] are summarised in Table 2 below.

TABLE 2

3.2 Assumptions relating to fleet (Merlin) are summarised in Table 3 below.

Aircraft type	Merlin Mk2	Merlin Mk4	Merlin Mk4A
Operator	Royal Navy	Royal Navy	
Departmental Fleet Aircraft	30	19	6
Engine type	01/8 Mk100	02/8 Mk200	02/8 Mk250
Engines per aircraft	3	3	
MOB	RNAS Culdrose	RNAS Yeovilton	
Other UK bases	Leonardo Helicopters Yeovil Boscombe Down	RNAS Culdrose (MDMF) Leonardo Helicopters Yeovil Boscombe Down	
Out of Service	31 Mar 2040	31 Mar 2040	

[1] The following aircraft are in the Sustainment Fleet (Storage) Merlin Mk1 = 8 (Orphan 8), Merlin Mk3 = 2,

TABLE 3

Aircraft (nos.)	Commando Helicopter Force (CHF)	Merlin Helicopter Force (MHF)
Total Departmental Fleet	25	30
Effective Forward Fleet (EFF)[2]	21	25
In Depth at any point in time	4	4 (1 in 600 hourly maintenance)

a. The number of Aircraft held at readiness cannot be reduced, therefore, they are not available for Engine Modifications.

3.3 The current assumptions relating to Fleet maintenance are summarised in Table 4 below.

TABLE 4

Type of maintenance	Duration
Depth	5 months and 3 weeks
Intermediate Maintenance Package	10-12 weeks
Intermediate Maintenance Package	4-6 weeks

a. Engine Modifications can be conducted during Depth or Intermediate Maintenance Packages; however, such Modifications would be acceptable only if the duration provided for respective maintenance are not exceeded.

b. Consistent with Schedule L, planning for Modification Programmes will be included as an agenda item in the Monthly Programme Review

4 DEPLOYABLE SUPPORT PACKS (DSPs)

4.1 The maximum number of Engines available for Deployable Support Packs (DSPs) is 20. The options for these DSPs are set out in Table 6 below. Additional engines allocated to DSPs above the quantity of 20 shall be subject to an Additional Services Task in accordance with Schedule H. It is assumed that all requirements for Deployed Inventory shall be established from the quantity of DSPs in Table 6.

TABLE 6

[2] Aircrafts in the EFF are held at different state of readiness.

Aircraft Type	No of aircraft DSP is required to support	Qty DSPs	Engines
Merlin Mk2	6 A/C	2	3 ea
	2 A/C	1	1 ea
	1 A/C	5	1 ea
Duration of Support	28 Days / 180 EFH		
Mk2 Sub-total	19 A/C	8	12
Merlin Mk4	4 A/C	3	2 ea
Duration of Support	28 Days / 180 EFH		
Mk 4 Sub-total	12 A/C	3	6
Merlin Mk4a Bolt-On*	Max 4 A/C	1 Mk4A Bolt On	2
Duration of Support	28 Days / 180 EFH		
Mk 4aSub-total	4 A/C	1	2
Total	**35 A/C**	**11 + 1 Mk4a Bolt On**	**20**
*Mk4A Bolt On to supplement a Mk4 DSP with RTM322 Mk250 specific assets including 2 x MK250 Engines. In the event that a Release To Service for an Engine interchangeability Modification is introduced during the Contract Period, the number of Engines within DSPs shall remain unchanged.			

4.2 The Contractor shall also range and scale DSPs with sufficient RTM322 LRUs and piece part spares to maintain Engine Availability in accordance with SR-14 and SR-88 to maintain KPIs 1 and 2.

4.3 If the Authority do not deploy with the agreed DSP range and scale, then the missed demands for those deficient items shall not apply for the purposes of KPIs 1 and 2.

4.4 In the event that a deployment leads to the UAIT cap (as defined in Schedule D) being exceeded then replacements will be provided on a best endeavours basis and the missed demand shall not apply to KPIs 1 or 2.

4.5 The increase of Engines in DSPs from 18 to 20 will be implemented over a 6-month period; KPI 1 will not apply to these additional 2 Engines until 1st October 2024.

5 HARSH ENVIRONMENT

5.1 Harsh Environment EFH are excluded from the Core Service price.

5.2 An environment will be classified as a Harsh Environment if any of the following three criteria apply:

(a) Flying takes place in desert regions as identified in Table 7.

(b) Flying takes place in countries identified in Table 8.

(c) Flying takes place in any of the following climatic categories.

> 'A1 Extreme Hot Dry;' as defined within Table 1, on page 2 of DEFSTAN 00-35 Part 4, (Issue 5, Publication Date March 2018) which applies to areas which experience very high temperatures accompanied by high levels of solar radiation, namely, hot dry deserts of North Africa, Western Australia, parts of the Middle East and central Asia including parts of the Indian sub-continent, and parts of South Western USA/Mexico, or;
>
> 'A2 Hot Dry;' as defined within Table 1, on page 2 of DEFSTAN 00-35 Part 4, (Issue 5, Publication Date March 2018) which applies to areas which experience high temperatures accompanied by high levels of solar radiation and moderately low humidity, namely, most of Australia, most of the Middle East and Central Asia, most of the Indian sub-continent, most of the North African continent and parts of the South, South West USA, North Mexico, parts of the South American Continent and the most Southern parts of Europe;

Both of which are detailed in Figure 1A (taken from page 5 of DEFSTAN 00-35 Part 4, (Issue 5, Publication Date March 2018).

And for any of the above the following also applies;

(d) Flying is undertaken which involves landing, take off and hovering in ground effect on un-prepared strips in sandy or dusty regions or where high concentrations of airborne sand or dust or other particles are present.

5.3 The process for determining whether a Deployment will be to a Harsh Environment will be completed prior to the commencement of the Deployment or no later than the first flying hours reported from the Deployment.

5.4 The pricing mechanism applicable for those Harsh Flying Hours is specified in Schedule F of the Contract.

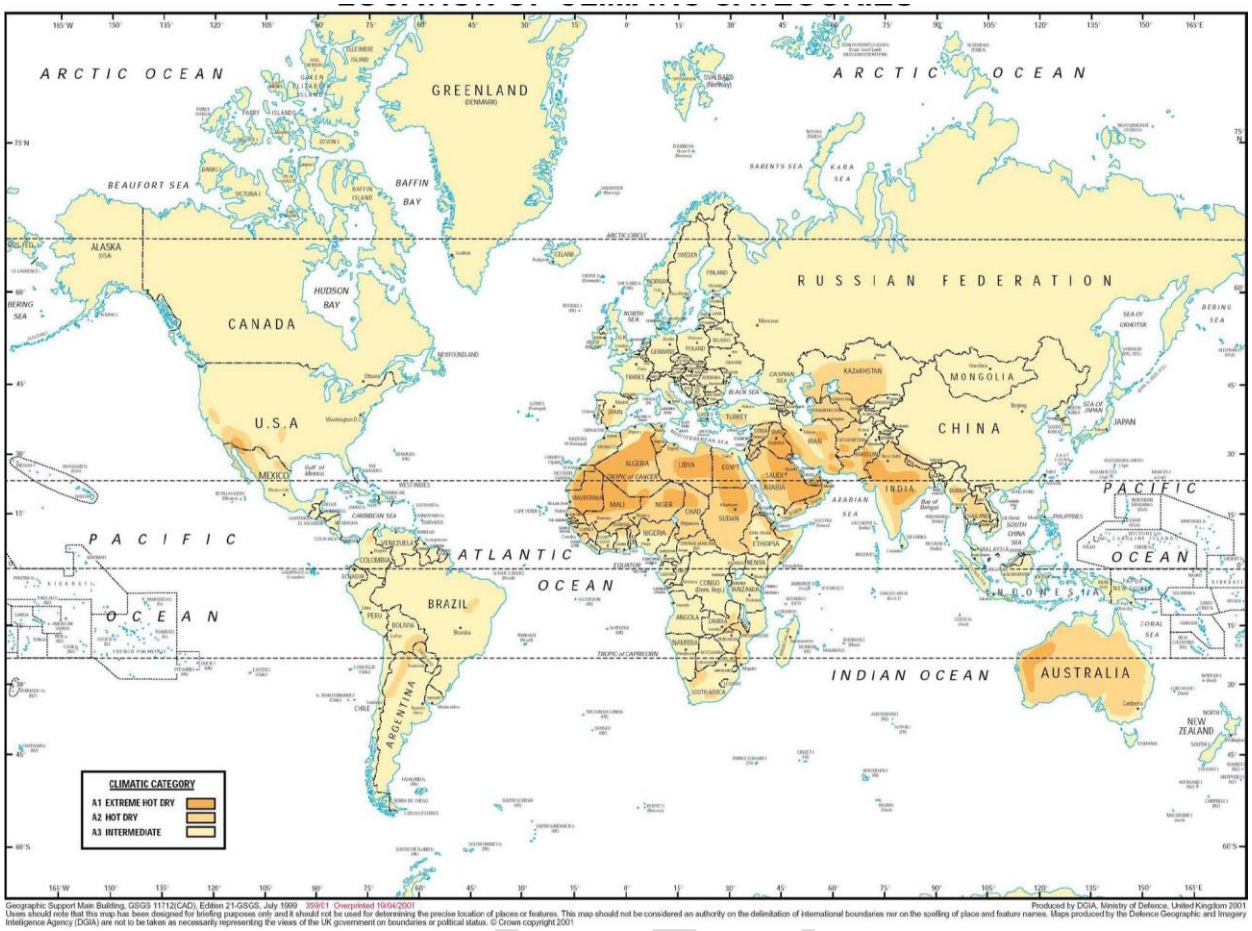

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Figure 1A Location of Warm Climatic Categories

Table 7: Desert Regions classified as a Harsh Environment

Location	Area agreed as Harsh
Arabian (eastern) Desert	In Egypt between the Nile River and Red Sea extending southward into the Sudan
Atacama Desert	Northern Chile
Chihuahua Desert	New Mexico, Texas, Arizona Including Painted Desert) and Mexico
Colorado/ Mojave Desert	South of the Mojave desert, along the Colorado River in southern California and Southern California
Death Valley desert	Eastern California and southwest Nevada
Gibson Desert	Interior Western Australia
Gobi Desert	Mongolia and China
Great Sandy Desert	Western Australia
Great Victoria Desert	Western and southern Australia
Kalahari Desert	Southern Africa
Kara-Kum Desert	Turkmenia
Kavir Desert	Central Iran
Kyzl Kum Desert	Kazakhstan and Uzbekistan
Lut Desert	Eastern Iran
Nafud Desert	Saudi Arabia
Namib Desert	South West coast of Africa
Sahara Desert	Northern Africa extending westward to the Atlantic
Simpson Desert	Central Australia
Sonoran Desert	South Western Arizona and southeast California
Syrian Desert	Northern Saudi Arabia, eastern Jordan, southern Syria and western Iraq

Table 8: Countries classified as Harsh Environments

Country
Afghanistan
Algeria
Bahrain
Egypt
Iran
Iraq
Israel
Jordan
Kuwait
Lebanon
Libya
Oman
Qatar
Saudi Arabia
Syria
Tunisia
UAE

6 OTHER ASSUMPTIONS

Redacted FOIA 2000 Section 43 Commercial Interest