HSRMC RESEARCH PROGRAMME - FUNDING STATUS AS AT 66th HSRMC MEETING (21 May 2013)

NB1: Changes from last update in *red italics*.

NB2: Figures in brackets are ROM costs presented for budgetary purposes only and are not included in the overall total figures.

Work Item		Cost	Funding						Comments
			UK CAA	N CAA	Shell Aircraft	Oil & Gas UK	HSE	Other	
SECTION 1 - ONGOING WORK									
Item 1	HUMS - advanced analysis of HUMS data								Study completed. *Final report published as CAA Paper 2011/01.*
	Original programme	£230k	£176k	£34k	£20k	-	-	-	
	Trial extension	£63k	£13k	-	-	£50k	-	-	
	Additional work	£153k	£62k	£11k	-	-	-	£80k (FAA)	
	Total	**£446k**	**£251k**	**£45k**	**£20k**	**£50k**	**-**	**£80k (FAA)**	
Item 2	Ditching/Water Impact								Side-floating helicopter study completed at EASA. Sufficient funding available to complete EBS specification and to support EASA RMT.
	Side-floating helicopters	£250k	-	-	-	-	-	£250k (EASA)	
	EBS specification	£57k	£32k	-	£10k	-	£15k	-	
	EASA RMT support	£15k	£15k	-	-	-	-	-	
	Total	**£322k**	**£47k**	**-**	**£10k**	**-**	**£15k**	**£250k (EASA)**	

Work Item		Cost	Funding						Comments
			UK CAA	N CAA	Shell Aircraft	Oil & Gas UK	HSE	Other	
Item 3	Operations to Moving Decks								Sufficient funding available to complete all work currently underway.
	Original programme	£366k	£350k	-	-	-	-	£16k (BP)	
	Amendment 15 (Jan 2005)	£72k	£35k	£37k	-	-	-	-	
	Amendment 16 (Feb 2006)	£74k	£48k	£11k	-	-	£15k	-	
	Amendment 17 (Dec 2006)	£9k	£9k	-	-	-	-	-	
	Amendment 18 (Oct 2007)	£58k	£58k	-	-	-	-	-	
	Amendment 19 (July 2008)	£79k	£64k	-	-	-	£15k	-	
	Amendment 20 (Dec 2009)	£25k	-	-	-	£25k	-	-	
	Amendment 21 (Apr 2011)	£118k	£88k	£30k	-	-	-	-	
	Repeater lights	£23k	£3k	-	£20k	-	-	-	
	HELIOS participation fee	£12k	£12k	-	-	-	-	-	
	Total	**£836k**	**£667k**	**£78k**	**£20k**	**£25k**	**£30k**	**£16k (BP)**	
Item 4	Helideck Lighting - in-service trials								Sufficient funding available to complete all work currently identified.
	Stage 2 lighting trials (prototype)	£72k	£56.5k	-	-	-	£15.5k	-	
	Stage 2 lighting trials (production)	£50k	-	-	-	£35k	£15k		
	Flashing light test spec.	£10.5k	£10.5k	-	-	-	-	-	
	Total	**£132.5k**	**£67k**	**-**	**-**	**£35k**	**£30.5k**	**-**	

Work Item			Cost	Funding						Comments
				UK CAA	N CAA	Shell Aircraft	Oil & Gas UK	HSE	Other	
Item 5	HOMP - extension to low airspeed regime									On hold.
	Westland Helicopters Phase 1		£24k	£9k	-	£15k	-	-	-	
	GE Aviation Phase 1		£15k	£15k	-	-	-	-	-	
	Phase 2 (flight trials)		TBD	-	-	-	-	-	-	
	Total		**£39k**	**£24k**	**-**	**£15k**	**-**	**-**	**-**	
SECTION 2 - EXTENSIONS TO EXISTING PROGRAMMES										
Item 6	Offshore Approaches									Sufficient funding available to complete work underway. Further funding required for: ▪ Safety assessment of visual segment. ▪ Integration of shuttling operations.
	Current work	Phase 1, 2 & 3a	£109k	£109k	-	-	-	-	-	
		RAIM availability	£31k	£31k	-	-	-	-	-	
	GIANT work	Phase 3b	£34k	-	£19k	-	-	-	£15k (EU)	
		EGNOS reception	£68k	-	£29k	-	-	-	£39k (EU)	
		Simulator trials	-	-	-	-	-	-	-	
	HEDGE work	AIS receiver	£80k	£9k	-	£25k	£46k	-	-	
		Trials extension	£64k	£52k	£12k	-	-	-	-	
	Total		**£386k**	**£201k**	**£60k**	**£25k**	**£46k**	**-**	**£54k (EU)**	

Work Item			Cost	Funding						Comments
				UK CAA	N CAA	Shell Aircraft	Oil & Gas UK	HSE	Other	
Item 7	Helideck Friction - review of CAP 437 criterion and new criterion for aluminium decks									*Funding needed for further testing.*
	Friction measurement & monitoring		£95k	£60k	-	-	-	£35k	-	
	Criterion for aluminium decks		£71k	£33k	-	-	-	£38k	-	
	Helideck nets	Feasibility study	£9k	£9k	-	-	-	-	-	
		Initial testing	£35k	£13k	-	-	-	£22k	-	
		Further wheels/nets/deck surfaces	TBD	-	-	-	-	-	-	
	Total		**£210k**	**£115k**	**-**	**-**	**-**	**£95k**	**-**	
Item 8	Helideck Environment - review of vertical flow criterion									All work completed and reported in CAA Papers 2008/02 and 2008/03.
	Current work		£40k	£28k	-	-	-	£12k	-	
	Update of design guide		£7.5k	£7.5k	-	-	-	-	-	
	Total		**£47.5k**	**£35.5k**	**-**	**-**	**-**	**£12k**	**-**	

Work Item		Cost	Funding						Comments
			UK CAA	N CAA	Shell Aircraft	Oil & Gas UK	HSE	Other	
SECTION 3 - NEW PROJECTS									
Item 9	HUMS - extension to rotor systems								Preliminary study completed and published in CAA Paper 2008/05. Study on application of AAD to tail rotors completed, and reported. *Final report published as CAA Paper 2012/01.* *No further funding required at this time*.
	Preliminary study	£46.5k	£16.5k	-	-	£30k	-	-	
	Application of anomaly detection techniques to tail rotor health monitoring	£100k	£71k	-	-	£29k	-	-	
	Further work, e.g. support for AgustaWestlands RTVP	£25k	-	-	£25k	-	-	-	
	Total	**£171.5k**	**£87.5k**	**-**	**£25k**	**£59k**	**-**	**-**	
Item 10	Tail Rotor Strike Warning								Insufficient funding to proceed at present.
	Estimated costs	(£150k)	-	-	-	-	-	-	
	Total	**(£150k)**	**-**	**-**	**-**	**-**	**-**	**-**	
Item 11	TCAS - in-service trials								Trials completed and implementation in progress.
	Estimated costs	(£250k)	-	-	-	-	-	-	
	Total	**(£250k)**	**-**	**-**	**-**	**-**	**-**	**-**	

Work Item		Cost	Funding						Comments
			UK CAA	N CAA	Shell Aircraft	Oil & Gas UK	HSE	Other	
Item 12	EGPWS Warning Envelopes								*Further funding required for next phase of work on warning form and format.*
	HOMP data analysis and reporting	£27k	-	-	-	-	-	£17k (OGP) £10k (Bristows)	
	Additional helicopter type	£18.5k	**-**	**-**	£10k	-	-	£5k (OGP) £3.5k (BP)	
	Total	**£45.5k**	**-**	**-**	**£10k**	**-**	**-**	**£35.5k**	
Item 13	Triggered Lightning Strike Forecasting								Sufficient funding available to complete all work currently identified.
	Forecasting system development & demonstration	£66k	-	£30k	-	£36k	-	-	
	In-service trial #1	£18k	-	£2k	-	£4k	-	£12k	
	System upgrade	£37k	-	-	£3k	-	-	£23k (CHC) £16k (oil companies)	
	In-service trial #2	£5k	-	-	-	-	-		
	Total	**£126k**	**-**	**£32k**	**£3k**	**£40k**	**-**	**£51k**	
Overall Totals		**£2,762k**	**£1,495k**	**£215k**	**£128k**	**£255k**	**£182.5k**	**£486.5k**	