HSRMC RESEARCH PROGRAMME - FUNDING STATUS AS AT 59th HSRMC MEETING (7 December 2009)

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								Sufficient funding available to complete all work currently identified.
	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 progressing outwith HSRMC at EASA. Sufficient funding available to complete EBS spec.
	Side-floating helicopters	£250k	-	-	-	-	-	£250k (EASA)	
	EBS specification	£46k	£21k	-	£10k	-	£15k	-	
	Total	**£296k**	**£21k**	**-**	**£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 work underway and any likely additional funding required for sea trials. Any funding remaining at end of sea trials will be used for recalculation of S.Puma and S-76 operating limits already known to be necessary.
	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	-	
	Additional trials costs (TBD)	£75k	-	£30k	£20k	£25k	-	-	
	Total	**£733k**	**£564k**	**£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	£138k	£87.5k	-	-	£35k	£15.5k	-	
	Flashing light test spec.	£10.5k	£10.5k	-	-	-	-	-	
	Total	**£148.5k**	**£98k**	**-**	**-**	**£35k**	**£15.5k**	**-**	
Item 5	HOMP - extension to low airspeed regime								Sufficient funding available to complete all work currently identified.
	Westland Helicopters Phase 1	£24k	£9k	-	£15k	-	-	-	
	GE Aviation Phase 1	£15k	£15k	-	-	-	-	-	
	Phase 2 (flight trials)	TBD	-	-	-	-	-	-	
	Total	**£39k**	**£24k**	**-**	**£15k**	**-**	**-**	**-**	

Work Item			Cost	Funding						Comments
				UK CAA	N CAA	Shell Aircraft	Oil & Gas UK	HSE	Other	
SECTION 2 - EXTENSIONS TO EXISTING PROGRAMMES										
Item 6	Offshore Approaches									Sufficient funding available to complete work underway. Further funding required for: ▪ Demonstration of integration with new helideck lighting. ▪ Safety assessment of visual segment. ▪ Integration of shuttling operations.
	Current work	Phase 1, 2 & 3a	£109k	£109k	-	-	-	-	-	
		RAIM availability	£34k	£34k	-	-	-	-	-	
	GIANT work	Phase 3b	£31k	£5k	£11k	-	-	-	£15k (EU)	
		EGNOS reception	£78k	£2k	£37k	-	-	-	£39k (EU)	
		Simulator trials	-	-	-	-	-	-	-	
	HEDGE work	AIS receiver	£80k	£25k	-	£25k	£30k	-	-	
	Total		**£332k**	**£175k**	**£48k**	**£25k**	**£30k**	**-**	**£54k (EU)**	
Item 7	Helideck Friction - review of CAP 437 criterion and new criterion for aluminium decks									Additional funding required to pursue more portable friction tester. Additional funding required to investigate effects of helicopter tyre footprint pressure.
	Friction measurement & monitoring		£95.5k	£60.5k	-	-	-	£35k	-	
	Criterion for aluminium decks		£49k	£24k	-	-	-	£25k	-	
	Total		**£144.5k**	**£84.5k**	**-**	**-**	**-**	**£60k**	**-**	
Item 8	Helideck Environment - review of vertical flow criterion									All work completed.
	Current work		£40k	£25k	-	-	-	£15k	-	
	Update of design guide		£7.5k	£7.5k						
	Total		**£47.5k**	**£32.5k**	**-**	**-**	**-**	**£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. Sufficient funding available to complete all work currently identified.
	Preliminary study	£46.5k	£16.5k	-	-	£30k	-	-	
	Application of anomaly detection techniques to tail rotor health monitoring	£100k	£30k	-	£25k	£45k			
	Total	**£146.5k**	**£46.5k**	**-**	**£25k**	**£75k**	**-**	**-**	
Item 10	Tail Rotor Strike Warning								Insufficient funding to proceed at present.
	Estimated costs	(£150k)	-	-	-	-	-	-	
	Total	**(£150k)**	**-**	**-**	**-**	**-**	**-**	**-**	
Item 11	TCAS - in-service trials								Trials presently progressing outwith HSRMC at Bristow Helicopters.
	Estimated costs	(£250k)	-	-	-	-	-	-	
	Total	**(£250k)**	**-**	**-**	**-**	**-**	**-**	**-**	
Item 12	EGPWS Warning Envelopes								Funding to be confirmed.
	Estimated costs	(£30k)	-	-	-	-	-	-	
	Total	**(£30k)**	**-**	**-**	**-**	**-**	**-**	**-**	

Work Item		Cost	Funding						Comments
			UK CAA	N CAA	Shell Aircraft	Oil & Gas UK	HSE	Other	
Item 13	Triggered Lightning Strike Forecasting								Insufficient funding to proceed at present.
	Estimated costs	(£50k)	-	-	-	-	-	-	
	Total	**(£50k)**	**-**	**-**	**-**	**-**	**-**	**-**	
Overall Totals		**£2,333k**	**£1,298.5k**	**£171k**	**£115k**	**£215k**	**£132.5k**	**£400k**	

Added £35k OGUK contribution to HDL.
Added £20k Shell contribution to HEDGE (and found £5k Shell money).
Added £25k CAA contribution to HEDGE.
Vired £30k OGUK funding from HUMS for rotors (replacing with CAA funding) to HEDGE.

To add SOPS amdt 20 (+£25k CAA funding).
To add HDL £5k CAA funding.
To add HOMP LAS data collection trails (+£25k CAA funding).