HSRMC RESEARCH PROGRAMME - FUNDING STATUS AS AT 61st HSRMC MEETING (26 November 2010)

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 being published as a CAA paper.
	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 spec.
	Side-floating helicopters	£250k	-	-	-	-	-	£250k (EASA)	
	EBS specification	£55k	£30k	-	£10k	-	£15k	-	
	Total	**£305k**	**£30k**	**-**	**£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	-	
	Amendment 20 (Dec 2009)	£25k	-	-	-	£25k	-	-	
	Repeater lights	£23k	£3k	-	£20k	-	-	-	
	Additional trials costs (TBD)	£75k	£45k	£30k	-	-	-	-	
	Total	**£781k**	**£612k**	**£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**	**-**	

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SECTION 2 - EXTENSIONS TO EXISTING PROGRAMMES										
Item 5	HOMP - extension to low airspeed regime									On hold due to lack of resources at contractor (ref. Item 1). Some CAA funding available but costs presently unknown.
	Westland Helicopters Phase 1		£24k	£9k	-	£15k	-	-	-	
	GE Aviation Phase 1		£15k	£15k	-	-	-	-	-	
	Phase 2 (flight trials)		TBD	-	-	-	-	-	-	
	Total		**£39k**	**£24k**	**-**	**£15k**	**-**	**-**	**-**	
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	£46k	£34k	£12k	-	-	-	-	
	Total		**£368k**	**£183k**	**£60k**	**£25k**	**£46k**	**-**	**£54k (EU)**	

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			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								Sufficient funding available to complete all work currently identified.
	Friction measurement & monitoring	£95k	£60k	-	-	-	£35k	-	
	Criterion for aluminium decks	£61k	£23k	-	-	-	£38k	-	
	Total	**£156k**	**£83k**	**-**	**-**	**-**	**£73k**	**-**	
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**	**-**	
SECTION 3 - NEW PROJECTS									
Item 9	HUMS - extension to rotor systems								Preliminary study completed and published in CAA Paper 2008/05. 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	£71k	-	-	£29k	-	-	
	AW139 tail rotor HUMS study	(£25k)	-	-	£25k	-	-	-	
	Total	**£171.5k**	**£87.5k**	**-**	**£25k**	**£59k**	**-**	**-**	

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			UK CAA	N CAA	Shell Aircraft	Oil & Gas UK	HSE	Other	
Item 10	Tail Rotor Strike Warning								Insufficient funding to proceed at present.
	Estimated costs	(£150k)	-	-	-	-	-	-	
	Total	**(£150k)**	**-**	**-**	**-**	**-**	**-**	**-**	
Item 11	TCAS - in-service trials								Work progressing outwith HSRMC.
	Estimated costs	(£250k)	-	-	-	-	-	-	
	Total	**(£250k)**	**-**	**-**	**-**	**-**	**-**	**-**	
Item 12	EGPWS Warning Envelopes								Sufficient funding available to complete S.Puma study. May need additional £20k required to add second type (e.g. S-76).
	HOMP data analysis and reporting.	£27k	-	-	-	-	-	£17k (OGP) £10k (Bristows)	
	Additional helicopter type & helicopter operator	(£20k)	-	-	-	-	-		
	Total	**£47k**	**-**	**-**	**-**	**-**	**-**	**£27k**	

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			UK CAA	N CAA	Shell Aircraft	Oil & Gas UK	HSE	Other	
Item 13	Triggered Lightning Strike Forecasting								Sufficient funding available to complete all work currently identified.
	Estimated costs	£70k	-	£30k	-	£40k	-	-	
	Total	**£70k**	**-**	**£30k**	**-**	**£40k**	**-**	**-**	
Overall Totals		**£2,567.5k**	**£1,373k**	**£213k**	**£115k**	**£255k**	**£160.5k**	**£427k**	