FCRM Partnership Funding Calculator for Flood and Coastal Erosion Risk Management Grant in Aid (FCRM GiA)
Version 8 January 2014

Project Name	Leigh Barrier - Improve
Unique Project Number	

All figures are in £'s
Figures in Blue to be entered onto Medium Term Plan

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Key	
	Input cells
	Calculated cells

SUMMARY: prospect of FCRM GiA funding

		Scheme Benefit to Cost Ratio:	**11.66** to 1
		Effective return to taxpayer:	**11.66** to 1
Raw Partnership Funding Score	**79%** (1)	*Effective return on contributions:*	**n/a** to 1
External Contribution or saving required to achieve an Adjusted Score of 100%	**2,878,453** (2)		
Adjusted Partnership Funding Score (PF)	**79%** (3)		
PV FCERM GiA towards the up-front costs of this scheme (PV Cost for Approval)	**-** (4)		

Cell (2) shows the minimum amount of contributions and/or reductions in scheme cost that are required to raise the Adjusted PF Score to at least 100%. Further increases on this will improve this scheme's chances of an FCRM GiA allocation in the desired year. Planned savings and contributions should be entered into cells(9,10,12) and cells(14-17). See NOTE below.

1. Scheme details

Risk Management Authority type of asset maintainer	**EA** (5)	**Yes** (6)
Duration of Benefits (years)	**40** (7)	
PV Whole-Life Benefits:	**160,729,868** (8)	

Is evidence available that a Strategic Approach has been taken, and that double counting of benefits has been avoided ?

All costs and benefits must be on a Present Value (PV) Whole-Life basis over the Duration of Benefits period. Where Contributions are identified these should also be on a Present Value basis.

PV Costs		
PV Appraisal Costs	735,016	(9)
PV design & Construction Costs	9,764,701	(10)
Sub Total - PV Cost for Approval (appraisal,design,construction)	**10,499,717**	(11)
PV Post-Construction Costs	3,287,444	(12)
PV Whole-Life Costs:	**13,787,160**	(13)

The total value of any necessary contributions will depend on whether maintenance (ongoing costs) is funded through revenue FCRM GiA, or by other means.

NOTE: This scheme is to be maintained by the EA (ref cell 5). Any contributions needed (ref cell 2) are to help fund both up-front costs (cell 11) and future ongoing costs (cell 12) and should be entered into cells(14-17).

PV Contributions secured to date		
PV Local Levy secured to date		(14)
PV Public Contributions secured to date		(15)
PV Private Contributions secured to date		(16)
PV Funding form other Environment Agency functions/sources secured to date		(17)
PV Total Contributions secured to date	0	(18)

WARNING: Contributions less than minimum required in cell (2)

2. Qualifying benefits under Outcome Measure 2: households better protected against flood risk

Number of households in:	Before			After			Change due to scheme		
20% most deprived areas	5	2	-	2	2	-	-3	0	0
21-40% most deprived areas	30	2	-	22	1	-	-8	-1	0
60% least deprived areas	681	908	626	895	658	264	214	-250	-362
At:	Moderate	Significant	Very	Moderate	Significant	Very	Moderate	Significant	Very

	risk	risk	significant risk	risk	risk	significant risk	risk	risk	significant risk
Annual damages avoided (£), compared with a household at low risk							150	600	1,350

Change in household damages, in:	Per year	Over lifetime of scheme	Qual. benefits (discounted)	
20% most deprived areas	-£ 450	-£ 18,000	**OM2 (20%)**	£ 10,094
21-40% most deprived areas	-£ 1,800	-£ 72,000	**OM2 (21-40%)**	£ 40,376
60% least deprived areas	-£ 606,600	-£ 24,264,000	**OM2 (60%)**	£ 13,606,749

3. Qualifying benefits under Outcome Measure 3: households better protected against coastal erosion

Number of households in:	Before		Damages per household avoided:			
20% most deprived areas			Annual damages avoided	£ 6,000	£ 6,000	
21-40% most deprived areas			Loss expected in	50	20	years
60% least deprived areas			Present value of Year 1 loss (i.e. first year damages, discounted based on when loss is expected)	£ 1,184	£ 3,015	
	Long-term loss	Medium-term loss		Long-term loss	Medium-term loss	

Change in household damages, in:	Year 1 loss avoided:	Over lifetime of scheme:	Qual. benefits (discounted):	
20% most deprived areas	£ -	£ -	**OM3 (20%)**	**£ -**
21-40% most deprived areas	£ -	£ -	**OM3 (21-40%)**	**£ -**
60% least deprived areas	£ -	£ -	**OM3 (60%)**	**£ -**

4. Qualifying benefits under Outcome Measure 4: statutory environmental obligations met

Payments under:			Assumed benefits per unit:	Qual. benefits (discounted):	
OM4a		Hectares of net water-dependent habitat created	£ 15,000	OM4a	£ -
OM4b		Hectares of net intertidal habitat created	£ 50,000	OM4b	£ -
OM4c		Kilometres of protected river improved	£ 80,000	OM4c	£ -
				OM4	**£ -**

5. Qualifying benefits arising from the overall scheme, for entry into the Medium-Term Plan

OM, deprivation:		Qual. benefits:	Payment rate:		FCRM GiA contribution:	
OM1		£ 147,072,648	5.56	p in the £1	£ 8,170,703	
OM2	20% most	£ 10,094	45.0		£ 4,542	
	21-40%	£ 40,376	30.0		£ 12,113	
	Least 60%	£ 13,606,749	20.0		£ 2,721,350	
OM3	20% most	£ -	45.0		£ -	
	21-40%	£ -	30.0		£ -	
	Least 60%	£ -	20.0		£ -	
OM4		£ -	100.0		£ -	
Total		£ 160,729,868			**£ 10,908,708**	Maximum for Outcomes delivered. The actual value any scheme is elligible for may be less.

Sensitivity Testing. *It is important that users of this calculator appreciate the implications on funding from changes to input data which may become necessary as the project develops and better information is available. Five typical tests are provided below. Users should consider how appropriate these are to their project, what other tests may be appropriate and how best to use the information with all those that may be involved in the project.*

	Raw Score	Contribution for 100% Score (£k)
As scenario above	79%	2,878,453
Sensitivity 1 - Change in PV Whole Life Cost (25% increase)	28%	12,325,032
Sensitivity 2 - Change in OM2 - 50% of households in Very Significant (Before) risk may already be in Significant Risk band	74%	3,639,056
Sensitivity 3 - Change in OM3 - 50% of households in Medium Term loss (Before) may already be in Long Term loss	79%	2,878,453
Sensitivity 4 - Increase Duration of Benefits by 25%	22%	10,773,124
Sensitivity 5 - Reduce Duration of Benefits by 25%	77%	3,146,618

END OF WORKSHEET

FCRM Partnership Funding Calculator for Flood and Coastal Erosion Risk Management Grant in Aid (FCRM GiA)
Version 8 January 2014

Project Name	Increased storage at Leigh FSA (NMOWL of 28.85m AOD), with Hildenborough embankment (higher cost)
Unique Project Number	

Key Input cells / Calculated cells

All figures are in £'s
Figures in Blue to be entered onto Medium Term Plan

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SUMMARY: prospect of FCRM GiA funding

Scheme Benefit to Cost Ratio:	**9.60**	to 1
Effective return to taxpayer:	**9.60**	to 1
Effective return on contributions:	**n/a**	to 1

Raw Partnership Funding Score	**66%**	(1)
External Contribution or saving required to achieve an Adjusted Score of 100%	**5,786,561**	(2)
Adjusted Partnership Funding Score (PF)	**66%**	(3)
PV FCERM GiA towards the up-front costs of this scheme (PV Cost for Approval)	**-**	(4)

Cell (2) shows the minimum amount of contributions and/or reductions in scheme cost that are required to raise the Adjusted PF Score to at least 100%. Further increases on this will improve this scheme's chances of an FCRM GiA allocation in the desired year. Planned savings and contributions should be entered into cells(9,10,12) and cells(14-17). See NOTE below.

1. Scheme details

Risk Management Authority type of asset maintainer	**EA**	(5)
Duration of Benefits (years)	**40**	(7)
PV Whole-Life Benefits:	**164,211,686**	(8)

Yes (6)
Is evidence available that a Strategic Approach has been taken, and that double counting of benefits has been avoided ?

All costs and benefits must be on a Present Value (PV) Whole-Life basis over the Duration of Benefits period. Where Contributions are identified these should also be on a Present Value basis.

PV Costs		
PV Appraisal Costs	808,563	(9)
PV design & Construction Costs	12,695,688	(10)
Sub Total - PV Cost for Approval (appraisal,design,construction)	**13,504,251**	(11)
PV Post-Construction Costs	3,598,296	(12)
PV Whole-Life Costs:	**17,102,547**	(13)

The total value of any necessary contributions will depend on whether maintenance (ongoing costs) is funded through revenue FCRM GiA, or by other means.
NOTE: This scheme is to be maintained by the EA (ref cell 5). Any contributions needed (ref cell 2) are to help fund both up-front costs (cell 11) and future ongoing costs (cell 12) and should be entered into cells(14-17).

PV Contributions secured to date		
PV Local Levy secured to date		(14)
PV Public Contributions secured to date		(15)
PV Private Contributions secured to date		(16)
PV Funding form other Environment Agency functions/sources secured to date		(17)
PV Total Contributions secured to date	0	(18)

WARNING: Contributions less than minimum required in cell (2)

2. Qualifying benefits under Outcome Measure 2: households better protected against flood risk

Number of households in:	Before			After			Change due to scheme		
20% most deprived areas	5	2	-	2	2	-	-3	0	0
21-40% most deprived areas	30	2	-	22	1	-	-8	-1	0
60% least deprived areas	681	908	626	708	597	263	27	-311	-363
At:	Moderate risk	Significant risk	Very significant risk	Moderate risk	Significant risk	Very significant risk	Moderate risk	Significant risk	Very significant risk
Annual damages avoided (£), compared with a household at low risk							150	600	1,350

Change in household damages, in: Per year | Over lifetime of scheme | **Qual. benefits (discounted)**

20% most deprived areas	-£ 450	-£ 18,000	**OM2 (20%)**	£ 10,094
21-40% most deprived areas	-£ 1,800	-£ 72,000	**OM2 (21-40%)**	£ 40,376
60% least deprived areas	-£ 672,600	-£ 26,904,000	**OM2 (60%)**	£ 15,087,207

3. Qualifying benefits under Outcome Measure 3: households better protected against coastal erosion

Number of households in:	Before		Damages per household avoided:			
	Long-term loss	Medium-term loss		Long-term loss	Medium-term loss	
20% most deprived areas			Annual damages avoided	£ 6,000	£ 6,000	
21-40% most deprived areas			Loss expected in	50	20	years
60% least deprived areas			Present value of Year 1 loss (i.e. first year damages, discounted based on when loss is expected)	£ 1,184	£ 3,015	

Change in household damages, in:	Year 1 loss avoided:	Over lifetime of scheme:		Qual. benefits (discounted):
20% most deprived areas	£ -	£ -	**OM3 (20%)**	**£ -**
21-40% most deprived areas	£ -	£ -	**OM3 (21-40%)**	**£ -**
60% least deprived areas	£ -	£ -	**OM3 (60%)**	**£ -**

4. Qualifying benefits under Outcome Measure 4: statutory environmental obligations met

Payments under:			Assumed benefits per unit:	Qual. benefits (discounted):	
OM4a		Hectares of net water-dependent habitat created	£ 15,000	OM4a	£ -
OM4b		Hectares of net intertidal habitat created	£ 50,000	OM4b	£ -
OM4c		Kilometres of protected river improved	£ 80,000	OM4c	£ -
				OM4	**£ -**

5. Qualifying benefits arising from the overall scheme, for entry into the Medium-Term Plan

OM, deprivation:		Qual. benefits:	Payment rate:		FCRM GiA contribution:	
OM1		£ 149,074,010	5.56	p in the £1	£ 8,281,889	
OM2	20% most	£ 10,094	45.0		£ 4,542	
	21-40%	£ 40,376	30.0		£ 12,113	
	Least 60%	£ 15,087,207	20.0		£ 3,017,441	
OM3	20% most	£ -	45.0		£ -	
	21-40%	£ -	30.0		£ -	
	Least 60%	£ -	20.0		£ -	
OM4		£ -	100.0		£ -	
Total		£ 164,211,686			**£ 11,315,986**	Maximum for Outcomes delivered. The actual value any scheme is elligible for may be less.

Sensitivity Testing. *It is important that users of this calculator appreciate the implications on funding from changes to input data which may become necessary as the project develops and better information is available. Five typical tests are provided below. Users should consider how appropriate these are to their project, what other tests may be appropriate and how best to use the information with all those that may be involved in the project.*

	Raw Score	Contribution for 100% Score (£k)
As scenario above	66%	5,786,561
Sensitivity 1 - Change in PV Whole Life Cost (25% increase)	24%	16,285,990
Sensitivity 2 - Change in OM2 - 50% of households in Very Significant (Before) risk may already be in Significant Risk band	62%	6,547,165
Sensitivity 3 - Change in OM3 - 50% of households in Medium Term loss (Before) may already be in Long Term loss	66%	5,786,561
Sensitivity 4 - Increase Duration of Benefits by 25%	20%	13,762,569
Sensitivity 5 - Reduce Duration of Benefits by 25%	64%	6,083,699

END OF WORKSHEET