

Option A: Do Minimum

Component	Location	Unit	No. of Units	£ per unit	£ per item	Comment
General Culvert Upgrading						
4no Screens	Eldin Hall	Unit	1	3000	3000	
	Jackson Close	Unit	1	5000	5000	
	Main Street	Unit	1	5000	5000	
	Lime Kilne Lane	Unit	1	3000	3000	
Cleaning Field Drain upstream of Eldin Hall		See maintenance below		£1,000		
Regularly maintaining existing system		See maintenance below		£5,000		
Eldin Hall burst pipe in garden		Unit	1	5000	5000	
Eldin hall block off pipe to basement		Unit	1	1000	1000	
Reshaping of open channel upstream of Main Street		Unit	1	50000	50000	
Upgrade Existing 225mm pipe and Lime Kiln Lane			1	10000	10000	
					82000	
Mobilisation/site compound costs			1	5000	£5,000	
Capital Works Subtotal					£87,000	
Contingencies			%	30%	£26,100	
Total Capital Works - with contingencies					£113,100	
Maintenance						
Channel maintenance		Annual cost	1	2000	2000	
Debris and silt removal, rubbish removal and general maintenance		Annual cost	1	5000	5000	
					£7,000	
Fees						
Environmental Scoping			1	2000	2000	
Geotechnical and Structural Investigation			1	1000	1000	
Consultation			1	4000	4000	
Design			1	10000	10000	
Supervision		£ per week	10	1500	15000	
					£32,000	
Total Cost					£145,100	

Option B: Upstream Storage Option Costs

Component	Location	Unit	No. of Units	£ per unit	£ per item	Comment
General Culvert Upgrading						
4no Screens	Eldin Hall	Unit	1	3000	3000	
	Jackson Close	Unit	1	5000	5000	
	Main Street	Unit	1	5000	5000	
	Lime Kilne Lane	Unit	1	3000	3000	
Cleaning Field Drain upstream of Eldin Hall		See maintenance below		£1,000		
Regularly maintaining existing system		See maintenance below		£5,000		
Eldin Hall burst pipe in garden		Unit	1	5000	5000	
Eldin hall block off pipe to basement		Unit	1	1000	1000	
Reshaping of open channel upstream of Main Street		Unit	1	5000	5000	
Upgrade Existing 225mm pipe and Lime Kiln Lane		Unit	1	10000	10000	
					£37,000	
Storage Ponds						
Realignment of Coulston Drain - 100m length		1m length	400	100	40000	
Pond creation - say 2No 1m deep (including excavation and disposal)		1m3 excavation	50000	20	1000000	
Emergency spillway		Unit	1	5000	5000	
					£1,045,000	
Optional Environmental Enhancements						
Planting with wetland plants, grasses			1	10000	10000	
Boardwalk/path construction - say 500m length		1m length	500	50	25000	
Viewing platform - say 2 number		Viewing platform	2	1500	3000	
Bird hides - say 1		bird hide	1	2000	2000	
Information boards - say 2		information board	2	150	300	
					£40,300	
Mobilisation/site compound costs						
			1	15000	£15,000	
Capital Works Subtotal						
					£1,137,300	
Contingencies						
		%		30%	£341,190	
Total Capital Works - with contingencies						
					£1,478,490	
Maintenance						
Channel maintenance		Annual cost	1	2000	2000	
Debris and silt removal, rubbish removal and general maintenance		Annual cost	1	3000	3000	
					£5,000	
Fees						
Environmental Scoping			1	5000	5000	
Geotechnical and Structural Investigation			1	20000	20000	
Consultation			1	10000	10000	
Design			1	30000	30000	
Supervision		£ per week	10	1500	15000	
					£80,000	
					200000	
					£1,758,490	
					Land Purchase	
					Total Cost	

Option C: Upgrade Existing Culvert

Component	Location	Unit	No. of Units	£ per unit	£ per item	Comment
General Culvert Upgrading						
4no Screens	Eldin Hall	Unit	1	3000	3000	
	Jackson Close	Unit	1	5000	5000	
	Main Street	Unit	1	5000	5000	
	Lime Kline Lane	Unit	1	3000	3000	
Cleaning Field Drain upstream of Eldin Hall		See maintenance below		£1,000		
Regularly maintaining existing system		See maintenance below		£5,000		
Eldin Hall burst pipe in garden		Unit	1	5000	5000	
Eldin hall block off pipe to basement		Unit	1	1000	1000	
Reshaping of open channel upstream of Main Street		Unit	1	50000	50000	
Upgrade Existing 225mm pipe adt Lime Kiln Lane			1	10000	10000	
					£82,000	
New Culvert Pipes						
Section 1			180	7000	1260000	
Section 2			490	7000	3430000	
					£4,690,000	
Mobilisation/site compound costs						
			1	15000	£15,000	
Capital Works Subtotal						
					£4,787,000	
Contingencies						
		%		30%	£1,436,100	
Total Capital Works - with contingencies						
					£6,223,100	
Maintenance						
Channel maintenance		Annual cost	1	1000	1000	
Debris and silt removal, rubbish removal and general maintenance		Annual cost	1	3000	3000	
					£4,000	
Fees						
Environmental Scoping			1	2000	2000	
Geotechnical and Structural Investigation			1	1000	1000	
Consultation			1	10000	10000	
Design			1	10000	10000	
Supervision		£ per week	10	1500	15000	
					£38,000	
Total Cost						
					£6,261,100	

Option D: Diversion Channel and Culvert

Component	Location	Unit	No. of Units	£ per unit	£ per item	Comment
General Culvert Upgrading						
4no Screens	Eldin Hall	Unit	1	3000	3000	
	Jackson Close	Unit	1	5000	5000	
	Main Street	Unit	1	5000	5000	
	Lime Kiline Lane	Unit	1	3000	3000	
Cleaning Field Drain upstream of Eldin Hall		See maintenance below		£1,000		
Regularly maintaining existing system		See maintenance below		£5,000		
Eldin Hall burst pipe in garden		Unit	1	5000	5000	
Eldin hall block off pipe to basement		Unit	1	1000	1000	
Reshaping of open channel upstream of Main Street		Unit	1	50000	50000	
Upgrade Existing 225mm pipe and Lime Kiln Lane		Unit	1	10000	10000	
					£82,000	
New Culvert Pipes						
Diversion Pipe		m	250	5000	1250000	
Duversion Channel		m	740	700	518000	
2 No new screens		Unit	2	3000	6000	
					£1,774,000	
Mobilisation/site compound costs						
			1	15000	£15,000	
Capital Works Subtotal						
Contingencies		%		30%	£561,300	
Total Capital Works - with contingencies						
					£2,432,300	
Maintenance						
Channel maintenance		Annual cost	1	2000	2000	
Debris and silt removal, rubbish removal and general maintenance		Annual cost	1	2000	2000	
					£4,000	
Fees						
Environmental Scoping			1	2000	2000	
Geotechnical and Structural Investigation			1	1000	1000	
Consultation			1	4000	4000	
Design			1	10000	10000	
Supervision		£ per week	10	1500	15000	
					£32,000	
Total Cost						
					£2,464,300	

Cost Benefit Table

		PVc	PVd	PVb	Net Present Value (NPV)	B/C Ratio
Option A (do minimum)	Do Nothing		5,112			
	Do 5yr Scheme	318	3,855	1,257	939	3.95
Option B	Do Nothing		5,153			
	Do 100yr Scheme	1,882	131	5,022	3,140	2.67
Option C	Do Nothing		5,153			
	Do 100yr Scheme	6,360	131	5,022	- 1,338	0.79
Option D	Do Nothing		5,153			
	Do 100yr Scheme	2,563	131	5,022	2,459	1.96

Table detailing AAD damages for the whole of cayton (excluding the caravan park) Options B,C and D	Without Scheme	With 100yr Scheme
AAD	£ 208,688	£ 5,293

Table detailing AAD damages for the whole of cayton (excluding the caravan park) Options A Do Minimum	Without Scheme	With 100yr Scheme
AAD	£ 208,688	£ 157,385