Option 1: Notes

1 in 50 Defence Standard

Knight, P D (Paul): Assumed that no ES is required.

Initial Construction Height

	Defence Height to 2050	4.18
	Coping	0.1
	Freeboard	0.15
	Construction height (mOD)	***4.43***

Intervention at 2051: to 1 in 50 up to 2115

	Defence Height to 2115	4.7
	Coping	0.1
	Freeboard	0.15
	Raise height by 520m	***4.95***

Handrail Requirement Assessment

to 2050	Highest wall height at Seamens Hospital Gardens = 1.15	
	Lowest wall height opposite 33 Church Street = 0.48	
	Allow for handrails allong the whole length & 36 yrs maintenance	
2050 to 2115	Highest wall height at Seamens Hospital Gardens = 1.67	
	Lowest wall height opposite 33 Church Street = 1.0	
	Handrails not required - raise wall low spots to min 1.1m	

Car Park Assessment

to 2050	No flood wall required	
2051 to 2115	Replace brick walls with new (average) 1.18m high walls (above GL)	1.18
	Build new 1.1m high flood wall d/s of Fleece Inn (above GL)	1.1
	Raise plinth area at slipway	
	Install non-return valves	
	Install 1.1m high flood gate	
	Raise pontoon access and modify ramp	

Knight, P D (Paul): Costs for brick cladding and exposed aggregate finish.

Eskside Wharf Assessment

to 2050	No flood wall required
2051 to 2115	Build new 1.1m high flood wall to tie into high ground at Sub Station (4.7mOD).
	To provide 1:50 Standard Of Protection to 2115
	Install 2nr Flood Gates across entrances. 10m and 6m widths.

Knight, P D (Paul): £2.5k allowance for artistic enhancements to Penny Hedge flood gate.

Option 1: Cost Breakdown

2013: - Investigation, Design , Consultation & Planning

Site Investigation @ 7% of construction cost	£36,779.95
Design Fees @ 12.5% of construction cost	£65,678.49
SBC Costs @ 2.0% of construction cost	£10,508.56
ECI Contractor Costs	£4,000.00
Consultation, Permits & Licences (inc Planning Application and Environmental Reporting)	£3,500.00
Total 2013 Costs	**£120,466.99**

2014: - Construction Phase

Removal of handrails, shot blasting, painting and reinstallation.	£30,000.00
Construction of average 0.82m high wall.	£186,230.56
Fleece Inn works	£4,803.50
Modifications to pontoon access ramp in car park.	£2,240.00
Gardens Miscellaneous	£21,182.50
Gardens to Eskside Miscellaneous	£88,500.00
Environmental Mitigation	£29,241.56
Environmental Enhancements	£2,500.00
Construction costs	**£364,698.13**
Uplift of 1.16 from SPONS 2009 Q1 prices to 2012 Q3	£423,049.83
Prelims @ 15% of construction cost	£63,457.47
Profit @ 8% of construction cost	£38,920.58
Total Construction Costs	**£525,427.88**
Supervision @ 7% of construction cost	£36,779.95
SBC Costs @ 2.5% of construction cost	£13,135.70
ECC PM Costs @ 4.0 % of construction cost	£21,017.12
Compensation	£25,000.00
Total 2014 Costs	**£621,360.65**

Knight, P D (Paul): Note - proportional reduction from average of 1.1 to average of 0.82

Knight, P D (Paul): Dervived from use of Museum Car Park - loss of 41 spaces @ £1k per annum revenue. Plus £4.5k for compensation to businesses/fishermen.

2051: - First Intervention

Design Fees @ 10% of construction cost	£70,817.31
SBC Costs @ 2% of construction cost	£14,163.46
Removal of handrails	£2,500.00
Replacement of flood gates	£27,500.00
Raising of walls by 520mm (to a minimum height of 1.1m)	£58,776.64
Construction of 1.18m high flood wall in car park & misc works	£138,781.18
Construction of 1.1m high flood wall d/s of Fleece Inn	£43,767.52
Raise wall at Fleece Inn	£4,803.50
Car Park Flood Gate & NRV's & Misc	£25,740.00
1.1m high wall from Eskside Wharf to Substation (100m)	£189,672.25
Construction Costs	**£491,541.09**
Uplift of 1.16 from SPONS 2009 Q1 prices to 2012 Q3	£570,187.66
Prelims @ 15% of construction cost	£85,528.15
Profit @ 8% of construction cost	£52,457.26
Total Construction Costs	**£708,173.08**
Supervision @ 7% of construction cost	£49,572.12
SBC Costs @ 2.5% of construction cost	£17,704.33
ECC PM Costs @ 4.0 % of construction cost	£28,326.92
Total 2051 Costs	**£888,757.21**

Knight, P D (Paul): Note; 3% increase in costs to allow for wall raising at low spots.

Knight, P D (Paul): Note - reduction in cost proportional to reduction in wall height.

Option 1: Maintenance & Annual Inspection Costs

Inspection	2 persons @ 4hrs each twice per year @ £50 per hr & Expenses & mileage		£450.00
Maintenance 2014 to 2051	**Typical annual works;**		
	Repointing and repairs to facing and copings	2 days	£1,660.00
	Maintenance of flood gates	1/2 day	£490.00
	Replacement of joint seals	1 day	£980.00
	Cleaning of steps	1/2 day	£440.00
	Painting and repairs to handrails	2 days	£1,860.00
	Total annual maintenance & inspection costs		£5,430.00
Maintenance 2051 to 2115	**Typical annual works;**		
	Repointing and repairs to facing and copings	6 days	£4,380.00
	Maintenance of flood gates	2 days	£1,510.00
	Replacement of joint seals	4 days	£3,020.00
	Cleaning of steps	1/2 day	£440.00
	Total annual maintenance & inspection costs		£9,350.00

Notes

1 Based on weekly labour costs of £1,500 per week per person plus additional allowance of £400 per week for a vehicle plus material costs where appropriate.

Option 2: Notes

1 in 100 Defence Standard

Knight, P D (Paul):
Assumed that no ES is required.

	Initial Construction Height	
	Defence Height to 2050	4.32
	Coping	0.1
	Freeboard	0.15
	Construction height	***4.57***
	Intervention at 2051: to 1 in 50 up to 2115	
	Defence Height to 2115	4.7
	Coping	0.1
	Freeboard	0.15
	Raise height by 380mm	***4.95***
	Handrail Requirement Assessment	
to 2050	Highest wall height at Seamens Hospital Gardens = 1.29	
to 2050	Lowest wall height opposite 33 Church Street = 0.62	
	Allow for handrails allong the whole length & 36 yrs maintenance	
to 2115	Highest wall height at Seamens Hospital Gardens = 1.67	
to 2115	Lowest wall height opposite 33 Church Street = 1.0	
	Handrails not required - raise wall low spots to min 1.1m	
	Car Park Assessment	
to 2050	No flood wall required	
2051 to 2115	Replace brick walls with new (average) 1.18m high walls (above GL)	1.18
	Build new 1.1m high flood wall d/s of Fleece Inn (above GL)	1.1
	Raise plinth area at slipway	
	Install non-return valves	
	Install 1.1m high flood gate	
	Raise pontoon access and modify ramp	
	Eskside Wharf Assessment	
to 2050	No flood wall required	
2051 to 2115	Build new 1.1m high flood wall to tie into high ground at Sub Station (4.7mOD).	
	To provide 1:50 Standard Of Protection to 2115	
	Install 2nr Flood Gates across entrances. 10m and 6m widths.	

Knight, P D (Paul):
Costs for brick cladding and exposed aggregate finish.

Knight, P D (Paul):
£2.5k allowance for artistic enhancements to Penny Hedge flood gate.

Option 2: Cost Breakdown

2013: - Investigation, Design , Consultation & Planning

Site Investigation @ 7% of construction cost	£40,490.03
Design Fees @ 12.5% of construction cost	£72,303.62
SBC Costs @ 2.0% of construction cost	£11,568.58
ECI Contractor Costs	£4,000.00
Consultation, Permits & Licences (inc Planning Application and Environmental Reporting)	£3,500.00
Total 2013 Costs	**£131,862.23**

2014: - Construction Phase

Removal of handrails, shot blasting, painting and reinstallation.	£30,000.00
Construction of average 0.96m high wall.	£218,026.03
Fleece Inn works	£4,803.50
Modifications to pontoon access ramp in car park.	£2,240.00
Gardens Miscellaneous	£21,182.50
Gardens to Eskside Miscellaneous	£88,500.00
Environmental Mitigation	£34,234.02
Environmental Enhancements	£2,500.00
Construction costs	**£401,486.05**
Uplift of 1.16 from SPONS 2009 Q1 prices to 2012 Q3	£465,723.82
Prelims @ 15% of construction cost	£69,858.57
Profit @ 8% of construction cost	£42,846.59
Total Construction Costs	**£578,428.98**
Supervision @ 7% of construction cost	£40,490.03
SBC Costs @ 2.5% of construction cost	£14,460.72
ECC PM Costs @ 4.0 % of construction cost	£23,137.16
Compensation	£25,000.00
Total 2014 Costs	**£681,516.89**

Knight, P D (Paul):
Note - proportional reduction from average of 1.1 to average of 0.96

Knight, P D (Paul):
Dervived from use of Museum Car Park - loss of 41 spaces @ £1k per annum revenue. Plus £4.5k for compensation to businesses/fishermen.

2051: - First Intervention

Design Fees @ 10% of construction cost	£68,537.44
SBC Costs @ 2% of construction cost	£13,707.49
Removal of handrails	£2,500.00
Replacement of flood gates	£27,500.00
Raising of walls by 380mm (to a minimum height of 1.1m)	£42,952.16
Construction of 1.18m high flood wall in car park & misc works	£138,781.18
Construction of 1.1m high flood wall d/s of Fleece Inn	£43,767.52
Raise wall at Fleece Inn	£4,803.50
Car Park Flood Gate & NRV's & Misc	£25,740.00
1.1m high wall from Eskside Wharf to Substation (100m)	£189,672.25
Construction Costs	**£475,716.61**
Uplift of 1.16 from SPONS 2009 Q1 prices to 2012 Q3	£551,831.26
Prelims @ 15% of construction cost	£82,774.69
Profit @ 8% of construction cost	£50,768.48
Total Construction Costs	**£685,374.43**
Supervision @ 7% of construction cost	£47,976.21
SBC Costs @ 2.5% of construction cost	£17,134.36
ECC PM Costs @ 4.0 % of construction cost	£27,414.98
Total 2051 Costs	**£860,144.91**

Knight, P D (Paul):
Note proportional reduction in wall raising height and also 3% allowance for raising low spots to 1.1m

Knight, P D (Paul):
Note - reduction in cost proportional to reduction in wall height.

Option 2: Maintenance & Annual Inspection Costs

Inspection	2 persons @ 4hrs each twice per year @ £50 per hr & Expenses & mileage		£450.00
Maintenance 2014 to 2051	**Typical annual works;**		
	Repointing and repairs to facing and copings	2 days	£1,660.00
	Maintenance of flood gates	1/2 day	£490.00
	Replacement of joint seals	1 day	£980.00
	Cleaning of steps	1/2 day	£440.00
	Painting and repairs to handrails	2 days	£1,860.00
	Total annual maintenance & inspection costs		£5,430.00
Maintenance 2051 to 2115	**Typical annual works;**		
	Repointing and repairs to facing and copings	6 days	£4,380.00
	Maintenance of flood gates	2 days	£1,510.00
	Replacement of joint seals	4 days	£3,020.00
	Cleaning of steps	1/2 day	£440.00
	Total annual maintenance & inspection costs		£9,350.00

Notes

1 Based on weekly labour costs of £1,500 per week per person plus additional allowance of £400 per week for a vehicle plus material costs where appropriate.

Option 3: Notes

1 in 200 Defence Standard

	Initial Construction Height (mOD)	
	Defence Height to 2050	4.43
	Coping	0.1
	Freeboard	0.15
	Construction height (OD)	***4.68***

Eskside Wharf Assessment

Build new 1.1m high flood wall to tie into high ground at Sub Station (4.7mOD).

To provide 1:50 Standard Of Protection to 2115

Install 2nr Flood Gates across entrances. 10m and 6m widths.

	Intervention at 2051: to 1 in 50 up to 2115	
	Defence Height to 2115	4.7
	Coping	0.1
	Freeboard	0.15
	Raise height by 270mm	***4.95***
	Handrail Requirement Assessment	
to 2050	Highest wall height at Seamens Hospital Gardens = 1.40	
to 2050	Lowest wall height opposite 33 Church Street = 0.73	
	Handrails not required - raise wall low spots to min 1.1m	
2051 to 2115	Highest wall height at Seamens Hospital Gardens = 1.67	
2051 to 2115	Lowest wall height opposite 33 Church Street = 1.0	
	Handrails not required - raise wall low spots to min 1.1m	
	Car Park Assessment	
to 2050	No flood wall required	
2051 to 2115	Replace brick walls with new (average) 1.18m high walls (above GL)	1.18
	Build new 1.1m high flood wall d/s of Fleece Inn (above GL)	1.1
	Raise plinth area at slipway	
	Install non-return valves	
	Install 1.1m high flood gate	
	Raise pontoon access and modify ramp	

Eskside Wharf Assessment

to 2050	Walls required in 2014 to provide 1:200 SOP (to tie in to high ground @4.70mOD).
2051 to 2115	Possible IPP required for Abraham's Quay and other properties. Costs not included in assessment.

Knight, P D (Paul): Costs for brick cladding and exposed aggregate finish.

Knight, P D (Paul): £2.5k allowance for artistic enhancements to Penny Hedge flood gate.

Option 3: Cost Breakdown

Knight, P D (Paul): Assumed that no ES is required.

2013: - Investigation, Design , Consultation & Planning

Site Investigation @ 7% of construction cost	£62,012.77
Design Fees @ 12.5% of construction cost	£110,737.09
SBC Costs @ 2.0% of construction cost	£17,717.93
ECI Contractor Costs	£5,000.00
Consultation, Permits & Licences (inc Planning Application and Environmental Reporting)	£3,500.00
Total 2013 Costs	**£198,967.80**

2014: - Construction Phase

Removal of handrails	£2,500.00
Construction of min 1.1m high wall from Fleece Inn to Eskside Wharf	£262,312.56
Fleece Inn works	£4,803.50
Modifications to pontoon access ramp in car park.	£2,240.00
Gardens Miscellaneous	£21,182.50
Gardens to Eskside Miscellaneous	£88,500.00
1.1m high wall from Eskside Wharf to Substation (100m)	£189,672.25
Environmental Mitigation	£41,187.80
Environmental Enhancements	£2,500.00
Construction costs	**£614,898.62**
Uplift of 1.16 from SPONS 2009 Q1 prices to 2012 Q3	£713,282.40
Prelims @ 15% of construction cost	£106,992.36
Profit @ 8% of construction cost	£65,621.98
Total Construction Costs	**£885,896.74**
Supervision @ 7% of construction cost	£62,012.77
SBC Costs @ 2.5% of construction cost	£22,147.42
ECC PM Costs @ 4.0 % of construction cost	£35,435.87
Compensation	£25,000.00
Total 2014 Costs	**£1,030,492.80**

2051: - First Intervention

Design Fees @ 10% of construction cost	£50,585.24
SBC Costs @ 2% of construction cost	£10,117.05
Replacement of flood gates	£107,500.00
Raising of walls by 270mm (to a minimum of 1.1m)	£30,518.64
Construction of 1.18m high flood wall in car park & misc works	£138,781.18
Construction of 1.1m high flood wall d/s of Fleece Inn	£43,767.52
Raise wall at Fleece Inn	£4,803.50
Car Park Flood Gate & NRV's & Misc	£25,740.00
Construction Costs	**£351,110.84**
Uplift of 1.16 from SPONS 2009 Q1 prices to 2012 Q3	£407,288.57
Prelims @ 15% of construction cost	£61,093.29
Profit @ 8% of construction cost	£37,470.55
Total Construction Costs	**£505,852.41**
Supervision @ 7% of construction cost	£35,409.67
SBC Costs @ 2.5% of construction cost	£12,646.31
ECC PM Costs @ 4.0 % of construction cost	£20,234.10
Total 2051 Costs	**£634,844.77**

Knight, P D (Paul): Note: 5% increase in costs to allow for min wall height of 1.1, but increasing to 1.4 at low spots.

Knight, P D (Paul): Dervived from use of Museum Car Park - loss of 41 spaces @ £1k per annum revenue. Plus £4.5k for compensation to businesses/fishermen.

Knight, P D (Paul): Note proportional reduction in wall raising height and also 3% allowance for raising low spots to 1.1m

Knight, P D (Paul): Note - reduction in cost proportional to reduction in wall height.

Option 3: Maintenance & Annual Inspection Costs

Inspection	2 persons @ 4hrs each twice per year @ £50 per hr & Expenses & mileage		£450.00
Maintenance 2014 to 2051	**Typical annual works;**		
	Repointing and repairs to facing and copings	4 days	£3,020.00
	Maintenance of flood gates	1 day	£830.00
	Replacement of joint seals	2 days	£1,660.00
	Cleaning of steps	1/2 day	£440.00
	Total annual maintenance & inspection costs		£5,950.00
Maintenance 2051 to 2115	**Typical annual works;**		
	Repointing and repairs to facing and copings	6 days	£4,380.00
	Maintenance of flood gates	2 days	£1,510.00
	Replacement of joint seals	4 days	£3,020.00
	Cleaning of steps	1/2 day	£440.00
	Total annual maintenance & inspection costs		£9,350.00

Notes

1 Based on weekly labour costs of £1,500 per week per person plus additional allowance of £400 per week for a vehicle plus material costs where appropriate.

Option 4: Notes

1.1m High Consistent Wall Height

	Initial Construction Height	
	Wall Height to 2050	0.85
	Coping	0.1
	Freeboard	0.15
	Construction height (above GL)	***1.1***
	Intervention at 2051	
	Defence Height to 2115	1.15
	Coping	0.1
	Freeboard	0.15
	Raise height by 300mm	***1.4***
	Handrail Requirement Assessment	
	Handrails not required	
	Car Park Assessment	
to 2050	No flood wall required	
2051 to 2115	Wall required;	
	Replace brick walls with new (average) 1.18m high walls (above GL)	1.18
	Build new 1.1m high flood wall d/s of Fleece Inn	
	Raise plinth area at slipway	
	Install non-return valves	
	Install 1.1m high flood gate	
	Raise pontoon access and modify ramp	
	Eskside Wharf Assessment	
to 2050	No flood wall required	
2051 to 2115	Build new 1.1m high flood wall to tie into high ground at Sub Station (4.7mOD).	
	To provide 1:50 Standard Of Protection to 2115	
	Install 2nr Flood Gates across entrances. 10m and 6m widths.	

Knight, P D (Paul): Costs for brick cladding and exposed aggregate finish.

Knight, P D (Paul): £2.5k allowance for artistic enhancements to Penny Hedge flood gate.11

Knight, P D (Paul): Assumed that no ES is required.

Option 4: Cost Breakdown

2013: - Investigation, Design , Consultation & Planning

Site Investigation @ 7% of construction cost	£41,426.72
Design Fees @ 12.5% of construction cost	£73,976.28
SBC Costs @ 2.0% of construction cost	£11,836.21
ECI Contractor Costs	£4,000.00
Consultation, Permits & Licences (inc Planning Application and Environmental Reporting)	£3,500.00
Total 2013 Costs	**£134,739.21**

2014: - Construction Phase

Removal of handrails	£2,500.00
Construction of 1.1m high wall from Fleece Inn to Eskside Wharf	£249,821.49
Fleece Inn works	£4,803.50
Modifications to pontoon access ramp in car park.	£2,240.00
Gardens Miscellaneous	£21,182.50
Gardens to Eskside Miscellaneous	£88,500.00
Environmental Mitigation	£39,226.48
Environmental Enhancements	£2,500.00
Construction costs	**£410,773.97**
Uplift of 1.16 from SPONS 2009 Q1 prices to 2012 Q3	£476,497.81
Prelims @ 15% of construction cost	£71,474.67
Profit @ 8% of construction cost	£43,837.80
Total Construction Costs	**£591,810.28**
Supervision @ 7% of construction cost	£41,426.72
SBC Costs @ 2.5% of construction cost	£14,795.26
ECC PM Costs @ 4.0 % of construction cost	£23,672.41
Compensation	£25,000.00
Total 2014 Costs	**£696,704.66**

Knight, P D (Paul): Dervived from use of Museum Car Park - loss of 41 spaces @ £1k per annum revenue. Plus £4.5k for compensation to businesses/fishermen.

2051: - First Intervention

Design Fees @ 10% of construction cost	£64,360.62
SBC Costs @ 2% of construction cost	£12,872.12
Replacement of flood gates	£27,500.00
Raising of walls by 300mm	£16,460.97
Construction of 1.18m high flood wall in car park & misc works	£138,781.18
Construction of 1.1m high flood wall d/s of Fleece Inn	£43,767.52
Raise wall at Fleece Inn	£4,803.50
Car Park Flood Gate & NRV's & Misc	£25,740.00
1.1m high wall from Eskside Wharf to Substation (100m)	£189,672.25
Construction Costs	**£446,725.42**
Uplift of 1.16 from SPONS 2009 Q1 prices to 2012 Q3	£518,201.48
Prelims @ 15% of construction cost	£77,730.22
Profit @ 8% of construction cost	£47,674.54
Total Construction Costs	**£643,606.24**
Supervision @ 7% of construction cost	£45,052.44
SBC Costs @ 2.5% of construction cost	£16,090.16
ECC PM Costs @ 4.0 % of construction cost	£25,744.25
Total 2051 Costs	**£807,725.83**

Knight, P D (Paul): Note; cost reduced by 50% to take account of the need to only raise the low spots to 4.95mOD. i.e. only 50% of the wall length will require raising.

Option 4: Maintenance & Annual Inspection Costs

Inspection	2 persons @ 4hrs each twice per year @ £50 per hr & Expenses & mileage		£450.00
Maintenance 2014 to 2051	**Typical annual works;**		
	Repointing and repairs to facing and copings	2 days	£1,660.00
	Maintenance of flood gates	1/2 day	£490.00
	Replacement of joint seals	1 day	£980.00
	Cleaning of steps	1/2 day	£440.00
	Total annual maintenance & inspection costs		£3,570.00
Maintenance 2051 to 2115	**Typical annual works;**		
	Repointing and repairs to facing and copings	6 days	£4,380.00
	Maintenance of flood gates	2 days	£1,510.00
	Replacement of joint seals	4 days	£3,020.00
	Cleaning of steps	1/2 day	£440.00
	Total annual maintenance & inspection costs		£9,350.00

Notes

1 Based on weekly labour costs of £1,500 per week per person plus additional allowance of £400 per week for a vehicle plus material costs where appropriate.

Discounting Calculations of Costs

				Option 1: 50yr SoP				Option 2: 100yr SoP				Option 3: 200yr SoP				Option 4: Consistent Wall Height				Floodcell 2 Revised Strategy Implementation Costs			
	Year	Discount %	Discount Factor	Capital	Maintenance	Other	PV	Capital	Maintenance	Other	PV	Capital	Maintenance	Other	PV	Capital	Maintenance	Other	PV	Capital	Maintenance	Other	PV
2012	0	3.5	1				£0.00				£0.00				£0.00				£0.00	0	£0.00	£0.00	£0.00
2013	1	3.5	0.966			£120,466.99	£116,393.23			£131,862.23	£127,403.12			£198,967.80	£192,239.42			£134,739.21	£130,182.81	0	£5,800.00	£131,862.23	£133,006.99
2014	2	3.5	0.934	£621,360.65			£580,046.81	£681,516.89			£636,203.31	£1,030,492.80			£961,976.05	£696,704.66			£650,381.26	£785,516.89	£174,800.00	£0.00	£896,466.09
2015	3	3.5	0.902		£5,880.00		£5,303.42		£5,880.00		£5,303.42		£6,400.00		£5,772.43		£4,020.00		£3,625.81	0	£11,680.00	£0.00	£10,534.69
2016	4	3.5	0.871		£5,880.00		£5,124.08		£5,880.00		£5,124.08		£6,400.00		£5,577.23		£4,020.00		£3,503.20	0	£11,680.00	£0.00	£10,178.45
2017	5	3.5	0.842		£5,880.00		£4,950.80		£5,880.00		£4,950.80		£6,400.00		£5,388.63		£4,020.00		£3,384.73	0	£11,680.00	£0.00	£9,834.25
2018	6	3.5	0.814		£5,880.00		£4,783.38		£5,880.00		£4,783.38		£6,400.00		£5,206.40		£4,020.00		£3,270.27	0	£11,680.00	£0.00	£9,501.69
2019	7	3.5	0.786		£5,880.00		£4,621.63		£5,880.00		£4,621.63		£6,400.00		£5,030.34		£4,020.00		£3,159.68	0	£11,680.00	£0.00	£9,180.37
2020	8	3.5	0.759		£5,880.00		£4,465.34		£5,880.00		£4,465.34		£6,400.00		£4,860.23		£4,020.00		£3,052.83	0	£11,680.00	£0.00	£8,869.93
2021	9	3.5	0.734		£5,880.00		£4,314.34		£5,880.00		£4,314.34		£6,400.00		£4,695.88		£4,020.00		£2,949.60	0	£11,680.00	£0.00	£8,569.98
2022	10	3.5	0.709		£5,880.00		£4,168.44		£5,880.00		£4,168.44		£6,400.00		£4,537.08		£4,020.00		£2,849.85	0	£11,680.00	£0.00	£8,280.17
2023	11	3.5	0.685		£5,880.00		£4,027.48		£5,880.00		£4,027.48		£6,400.00		£4,383.65		£4,020.00		£2,753.48	0	£11,680.00	£0.00	£8,000.17
2024	12	3.5	0.662		£5,880.00		£3,891.29		£5,880.00		£3,891.29		£6,400.00		£4,235.41		£4,020.00		£2,660.37	0	£11,680.00	£0.00	£7,729.63
2025	13	3.5	0.639		£5,880.00		£3,759.70		£5,880.00		£3,759.70		£6,400.00		£4,092.19		£4,020.00		£2,570.40	0	£11,680.00	£0.00	£7,468.24
2026	14	3.5	0.618		£5,880.00		£3,632.56		£5,880.00		£3,632.56		£6,400.00		£3,953.80		£4,020.00		£2,483.48	0	£11,680.00	£0.00	£7,215.69
2027	15	3.5	0.597		£5,880.00		£3,509.72		£5,880.00		£3,509.72		£6,400.00		£3,820.10		£4,020.00		£2,399.50	0	£11,680.00	£0.00	£6,971.68
2028	16	3.5	0.577		£5,880.00		£3,391.03		£5,880.00		£3,391.03		£6,400.00		£3,690.92		£4,020.00		£2,318.36	0	£11,680.00	£0.00	£6,735.93
2029	17	3.5	0.557		£5,880.00		£3,276.36		£5,880.00		£3,276.36		£6,400.00		£3,566.10		£4,020.00		£2,239.96	0	£11,680.00	£0.00	£6,508.14
2030	18	3.5	0.538		£5,880.00		£3,165.56		£5,880.00		£3,165.56		£6,400.00		£3,445.51		£4,020.00		£2,164.21	0	£11,680.00	£0.00	£6,288.06
2031	19	3.5	0.520		£5,880.00		£3,058.52		£5,880.00		£3,058.52		£6,400.00		£3,329.00		£4,020.00		£2,091.03	0	£11,680.00	£0.00	£6,075.42
2032	20	3.5	0.503		£5,880.00		£2,955.09		£5,880.00		£2,955.09		£6,400.00		£3,216.42		£4,020.00		£2,020.31	822799.6	£11,680.00	£0.00	£419,380.98
2033	21	3.5	0.486		£5,880.00		£2,855.16		£5,880.00		£2,855.16		£6,400.00		£3,107.65		£4,020.00		£1,952.00	0	£11,680.00	£0.00	£5,671.47
2034	22	3.5	0.469		£5,880.00		£2,758.61		£5,880.00		£2,758.61		£6,400.00		£3,002.56		£4,020.00		£1,885.99	0	£11,680.00	£0.00	£5,479.68
2035	23	3.5	0.453		£5,880.00		£2,665.32		£5,880.00		£2,665.32		£6,400.00		£2,901.03		£4,020.00		£1,822.21	0	£11,680.00	£0.00	£5,294.38
2036	24	3.5	0.438		£5,880.00		£2,575.19		£5,880.00		£2,575.19		£6,400.00		£2,802.93		£4,020.00		£1,760.59	0	£11,680.00	£0.00	£5,115.34
2037	25	3.5	0.423		£5,880.00		£2,488.10		£5,880.00		£2,488.10		£6,400.00		£2,708.14		£4,020.00		£1,701.05	0	£11,680.00	£0.00	£4,942.36
2038	26	3.5	0.409		£5,880.00		£2,403.97		£5,880.00		£2,403.97		£6,400.00		£2,616.56		£4,020.00		£1,643.53	0	£11,680.00	£0.00	£4,775.22
2039	27	3.5	0.395		£5,880.00		£2,322.67		£5,880.00		£2,322.67		£6,400.00		£2,528.08		£4,020.00		£1,587.95	0	£11,680.00	£0.00	£4,613.74
2040	28	3.5	0.382		£5,880.00		£2,244.13		£5,880.00		£2,244.13		£6,400.00		£2,442.59		£4,020.00		£1,534.25	0	£11,680.00	£0.00	£4,457.72
2041	29	3.5	0.369		£5,880.00		£2,168.24		£5,880.00		£2,168.24		£6,400.00		£2,359.99		£4,020.00		£1,482.37	0	£11,680.00	£0.00	£4,306.98
2042	30	3.5	0.356		£5,880.00		£2,094.92		£5,880.00		£2,094.92		£6,400.00		£2,280.18		£4,020.00		£1,432.24	0	£11,680.00	£0.00	£4,161.33
2043	31	3	0.346		£5,880.00		£2,033.90		£5,880.00		£2,033.90		£6,400.00		£2,213.77		£4,020.00		£1,390.52	2293200	£11,680.00	£0.00	£797,261.15
2044	32	3	0.336		£5,880.00		£1,974.66		£5,880.00		£1,974.66		£6,400.00		£2,149.29		£4,020.00		£1,350.02	0	£11,680.00	£0.00	£3,922.45
2045	33	3	0.326		£5,880.00		£1,917.15		£5,880.00		£1,917.15		£6,400.00		£2,086.69		£4,020.00		£1,310.70	0	£11,680.00	£0.00	£3,808.21
2046	34	3	0.317		£5,880.00		£1,861.31		£5,880.00		£1,861.31		£6,400.00		£2,025.91		£4,020.00		£1,272.53	0	£11,680.00	£0.00	£3,697.29
2047	35	3	0.307		£5,880.00		£1,807.09		£5,880.00		£1,807.09		£6,400.00		£1,966.90		£4,020.00		£1,235.46	0	£11,680.00	£0.00	£3,589.60
2048	36	3	0.298		£5,880.00		£1,754.46		£5,880.00		£1,754.46		£6,400.00		£1,909.62		£4,020.00		£1,199.48	0	£11,680.00	£0.00	£3,485.05
2049	37	3	0.290		£5,880.00		£1,703.36		£5,880.00		£1,703.36		£6,400.00		£1,854.00		£4,020.00		£1,164.54	0	£11,680.00	£0.00	£3,383.54
2050	38	3	0.281		£5,880.00		£1,653.75		£5,880.00		£1,653.75		£6,400.00		£1,800.00		£4,020.00		£1,130.62	0	£11,680.00	£0.00	£3,284.99
2051	39	3	0.273	£803,776.44	£5,880.00	£84,980.77	£244,287.61	£777,899.98	£5,880.00	£82,244.93	£236,474.80	£574,142.48	£6,400.00	£60,702.29	£175,096.84	£730,493.08	£4,020.00	£77,232.75	£221,653.48	£1,089,059.97	£11,680.00	£115,142.90	£332,006.22
2052	40	3	0.265		£9,800.00		£2,598.03		£9,800.00		£2,598.03		£9,800.00		£2,598.03		£9,800.00		£2,598.03	0	£15,600.00	£0.00	£4,135.63
2053	41	3	0.257		£9,800.00		£2,522.35		£9,800.00		£2,522.35		£9,800.00		£2,522.35		£9,800.00		£2,522.35	0	£15,600.00	£0.00	£4,015.18
2054	42	3	0.250		£9,800.00		£2,448.89		£9,800.00		£2,448.89		£9,800.00		£2,448.89		£9,800.00		£2,448.89	0	£15,600.00	£0.00	£3,898.23
2055	43	3	0.243		£9,800.00		£2,377.56		£9,800.00		£2,377.56		£9,800.00		£2,377.56		£9,800.00		£2,377.56	0	£15,600.00	£0.00	£3,784.69
2056	44	3	0.236		£9,800.00		£2,308.31		£9,800.00		£2,308.31		£9,800.00		£2,308.31		£9,800.00		£2,308.31	0	£15,600.00	£0.00	£3,674.46
2057	45	3	0.229		£9,800.00		£2,241.08		£9,800.00		£2,241.08		£9,800.00		£2,241.08		£9,800.00		£2,241.08	0	£15,600.00	£0.00	£3,567.43
2058	46	3	0.222		£9,800.00		£2,175.81		£9,800.00		£2,175.81		£9,800.00		£2,175.81		£9,800.00		£2,175.81	0	£15,600.00	£0.00	£3,463.53
2059	47	3	0.216		£9,800.00		£2,112.43		£9,800.00		£2,112.43		£9,800.00		£2,112.43		£9,800.00		£2,112.43	0	£15,600.00	£0.00	£3,362.65
2060	48	3	0.209		£9,800.00		£2,050.90		£9,800.00		£2,050.90		£9,800.00		£2,050.90		£9,800.00		£2,050.90	0	£15,600.00	£0.00	£3,264.71
2061	49	3	0.203		£9,800.00		£1,991.17		£9,800.00		£1,991.17		£9,800.00		£1,991.17		£9,800.00		£1,991.17	0	£15,600.00	£0.00	£3,169.62
2062	50	3	0.197		£9,800.00		£1,933.17		£9,800.00		£1,933.17		£9,800.00		£1,933.17		£9,800.00		£1,933.17	0	£15,600.00	£0.00	£3,077.30
2063	51	3	0.192		£9,800.00		£1,876.87		£9,800.00		£1,876.87		£9,800.00		£1,876.87		£9,800.00		£1,876.87	0	£15,600.00	£0.00	£2,987.67
2064	52	3	0.186		£9,800.00		£1,822.20		£9,800.00		£1,822.20		£9,800.00		£1,822.20		£9,800.00		£1,822.20	0	£15,600.00	£0.00	£2,900.65
2065	53	3	0.181		£9,800.00		£1,769.13		£9,800.00		£1,769.13		£9,800.00		£1,769.13		£9,800.00		£1,769.13	0	£15,600.00	£0.00	£2,816.16
2066	54	3	0.175		£9,800.00		£1,717.60		£9,800.00		£1,717.60		£9,800.00		£1,717.60		£9,800.00		£1,717.60	0	£15,600.00	£0.00	£2,734.14
2067	55	3	0.170		£9,800.00		£1,667.57		£9,800.00		£1,667.57		£9,800.00		£1,667.57		£9,800.00		£1,667.57	0	£15,600.00	£0.00	£2,654.50
2068	56	3	0.165		£9,800.00		£1,619.00		£9,800.00		£1,619.00		£9,800.00		£1,619.00		£9,800.00		£1,619.00	0	£15,600.00	£0.00	£2,577.19
2069	57	3	0.160		£9,800.00		£1,571.85		£9,800.00		£1,571.85		£9,800.00		£1,571.85		£9,800.00		£1,571.85	0	£15,600.00	£0.00	£2,502.13
2070	58	3	0.156		£9,800.00		£1,526.07		£9,800.00		£1,526.07		£9,800.00		£1,526.07		£9,800.00		£1,526.07	0	£15,600.00	£0.00	£2,429.25
2071	59	3	0.151		£9,800.00		£1,481.62		£9,800.00		£1,481.62		£9,800.00		£1,481.62		£9,800.00		£1,481.62	0	£15,600.00	£0.00	£2,358.49
2072	60	3	0.147		£9,800.00		£1,438.46		£9,800.00		£1,438.46		£9,800.00		£1,438.46		£9,800.00		£1,438.46	0	£15,600.00	£0.00	£2,289.80
2073	61	3	0.143		£9,800.00		£1,396.57		£9,800.00		£1,396.57		£9,800.00		£1,396.57		£9,800.00		£1,396.57	0	£15,600.00	£0.00	£2,223.11
2074	62	3	0.138		£9,800.00		£1,355.89		£9,800.00		£1,355.89		£9,800.00		£1,355.89		£9,800.00		£1,355.89	0	£15,600.00	£0.00	£2,158.36
2075	63	3	0.134		£9,800.00		£1,316.40		£9,800.00		£1,316.40		£9,800.00		£1,316.40		£9,800.00		£1,316.40	0	£15,600.00	£0.00	£2,095.49
2076	64	3	0.130		£9,800.00		£1,278.06		£9,800.00		£1,278.06		£9,800.00		£1,278.06		£9,800.00		£1,278.06	0	£15,600.00	£0.00	£2,034.46
2077	65	3	0.127		£9,800.00		£1,240.83		£9,800.00		£1,240.83		£9,800.00		£1,240.83		£9,800.00		£1,240.83	0	£15,600.00	£0.00	£1,975.20
2078	66	3	0.123		£9,800.00		£1,204.69		£9,800.00		£1,204.69		£9,800.00		£1,204.69		£9,800.00		£1,204.69	0	£15,600.00	£0.00	£1,917.67
2079	67	3	0.119		£9,800.00		£1,169.60		£9,800.00		£1,169.60		£9,800.00		£1,169.60		£9,800.00		£1,169.60	0	£15,600.00	£0.00	£1,861.82
2080	68	3	0.116		£9,800.00		£1,135.54		£9,800.00		£1,135.54		£9,800.00		£1,135.54		£9,800.00		£1,135.54	0	£15,600.00	£0.00	£1,807.59
2081	69	3	0.112		£9,800.00		£1,102.46		£9,800.00		£1,102.46		£9,800.00		£1,102.46		£9,800.00		£1,102.46	0	£15,600.00	£0.00	£1,754.94
2082	70	3	0.109		£9,800.00		£1,070.35		£9,800.00		£1,070.35		£9,800.00		£1,070.35		£9,800.00		£1,070.35	822799.6	£15,600.00	£0.00	£91,569.66
2083	71	3	0.106		£9,800.00		£1,039.18		£9,800.00		£1,039.18		£9,800.00		£1,039.18		£9,800.00		£1,039.18	0	£15,600.00	£0.00	£1,654.20
2084	72	3	0.103		£9,800.00		£1,008.91		£9,800.00		£1,008.91		£9,800.00		£1,008.91		£9,800.00		£1,008.91	0	£15,600.00	£0.00	£1,606.02
2085	73	3	0.100		£9,800.00		£979.52		£9,800.00		£979.52		£9,800.00		£979.52		£9,800.00		£979.52	0	£15,600.00	£0.00	£1,559.24
2086	74	3	0.097		£9,800.00		£950.99		£9,800.00		£950.99		£9,800.00		£950.99		£9,800.00		£950.99	0	£15,600.00	£0.00	£1,513.83
2087	75	3	0.094		£9,800.00		£923.29		£9,800.00		£923.29		£9,800.00		£923.29		£9,800.00		£923.29	0	£15,600.00	£0.00	£1,469.73
2088	76	2.5	0.092		£9,800.00		£900.78		£9,800.00		£900.78		£9,800.00		£900.78		£9,800.00		£900.78	0	£15,600.00	£0.00	£1,433.89
2089	77	2.5	0.090		£9,800.00		£878.81		£9,800.00		£878.81		£9,800.00		£878.81		£9,800.00		£878.81	0	£15,600.00	£0.00	£1,398.91
2090	78	2.5	0.087		£9,800.00		£857.37		£9,800.00		£857.37		£9,800.00		£857.37		£9,800.00		£857.37	0	£15,600.00	£0.00	£1,364.79
2091	79	2.5	0.085		£9,800.00		£836.46		£9,800.00		£836.46		£9,800.00		£836.46		£9,800.00		£836.46	0	£15,600.00	£0.00	£1,331.51
2092	80	2.5	0.083		£9,800.00		£816.06		£9,800.00		£816.06		£9,800.00		£816.06		£9,800.00		£816.06	0	£15,600.00	£0.00	£1,299.03
2093	81	2.5	0.081		£9,800.00		£796.15		£9,800.00		£796.15		£9,800.00		£796.15		£9,800.00		£796.15	0	£15,600.00	£0.00	£1,267.35
2094	82	2.5	0.079		£9,800.00		£776.74		£9,800.00		£776.74		£9,800.00		£776.74		£9,800.00		£776.74	0	£15,600.00	£0.00	£1,236.44
2095	83	2.5	0.077		£9,800.00		£757.79		£9,800.00		£757.79		£9,800.00		£757.79		£9,800.00		£757.79	0	£15,600.00	£0.00	£1,206.28
2096	84	2.5	0.075		£9,800.00		£739.31		£9,800.00		£739.31		£9,800.00		£739.31		£9,800.00		£739.31	0	£15,600.00	£0.00	£1,176.86
2097	85	2.5	0.074		£9,800.00		£721.28		£9,800.00		£721.28		£9,800.00		£721.28		£9,800.00		£721.28	0	£15,600.00	£0.00	£1,148.15
2098	86	2.5	0.072		£9,800.00		£703.68		£9,800.00		£703.68		£9,800.00		£703.68		£9,800.00		£703.68	0	£15,600.00	£0.00	£1,120.15
2099	87	2.5	0.070		£9,800.00		£686.52		£9,800.00		£686.52		£9,800.00		£686.52		£9,800.00		£686.52	0	£15,600.00	£0.00	£1,092.83
2100	88	2.5	0.068		£9,800.00		£669.78		£9,800.00		£669.78		£9,800.00		£669.78		£9,800.00		£669.78	0	£15,600.00	£0.00	£1,066.18
2101	89	2.5	0.067		£9,800.00		£653.44		£9,800.00		£653.44		£9,800.00		£653.44		£9,800.00		£653.44	0	£15,600.00	£0.00	£1,040.17
2102	90	2.5	0.065		£9,800.00		£637.50		£9,800.00		£637.50		£9,800.00		£637.50		£9,800.00		£637.50	0	£15,600.00	£0.00	£1,014.80
2103	91	2.5	0.063		£9,800.00		£621.95		£9,800.00		£621.95		£9,800.00		£621.95		£9,800.00		£621.95	0	£15,600.00	£0.00	£990.05
2104	92	2.5	0.062		£9,800.00		£606.78		£9,800.00		£606.78		£9,800.00		£606.78		£9,800.00		£606.78	0	£15,600.00	£0.00	£965.90
2105	93	2.5	0.060		£9,800.00		£591.99		£9,800.00		£591.99		£9,800.00		£591.99		£9,800.00		£591.99	0	£15,600.00	£0.00	£942.34
2106	94	2.5	0.059		£9,800.00		£577.55		£9,800.00		£577.55		£9,800.00		£577.55		£9,800.00		£577.55	0	£15,600.00	£0.00	£919.36
2107	95	2.5	0.057		£9,800.00		£563.46		£9,800.00		£563.46		£9,800.00		£563.46		£9,800.00		£563.46	0	£15,600.00	£0.00	£896.94
2108	96	2.5	0.056		£9,800.00		£549.72		£9,800.00		£549.72		£9,800.00		£549.72		£9,800.00		£549.72	0	£15,600.00	£0.00	£875.06
2109	97	2.5	0.055		£9,800.00		£536.31		£9,800.00		£536.31		£9,800.00		£536.31		£9,800.00		£536.31	0	£15,600.00	£0.00	£853.72
2110	98	2.5	0.053		£9,800.00		£523.23		£9,800.00		£523.23		£9,800.00		£523.23		£9,800.00		£523.23	0	£15,600.00	£0.00	£832.89
2111	99	2.5	0.052		£9,800.00		£510.47		£9,800.00		£510.47		£9,800.00		£510.47		£9,800.00		£510.47	0	£15,600.00	£0.00	£812.58
			Cost	£1,425,137.09	£805,560.00	£205,447.76	£1,127,343.83	£1,459,416.87	£805,560.00	£214,107.16	£1,186,697.41	£1,604,635.28	£824,800.00	£259,670.09	£1,525,805.02	£1,427,197.75	£736,740.00	£211,971.96	£1,153,506.16	£5,813,376.06	£1,548,760.00	£247,005.13	£2,999,204.14
			Optimism Bias @ 40%				£450,937.53				£474,678.96				£610,322.01				£461,402.46				
			Total				**£1,578,281.36**				**£1,661,376.37**				**£2,136,127.02**				**£1,614,908.62**				**£2,999,204.14**
			First Phase Costs (incl. 40% OB)	£ 621,360.65	£ 211,680.00	£ 120,466.99	£ 1,131,369.04	£ 681,516.89	£ 211,680.00	£ 131,862.23	£ 1,225,401.98	£ 1,030,492.80	£ 230,400.00	£ 198,967.80	£ 1,786,081.77	£ 696,704.66	£ 144,720.00	£ 134,739.21	£ 1,199,684.08	£ 3,901,516.49	£ 601,080.00	£ 131,862.23	£ 3,441,265.86
							£1,630,584.85 £ 1,630,584.85				£1,673,524.03 £ 1,673,524.03				£1,864,305.36 £ 1,864,305.36				£1,639,169.71 £ 1,639,169.71				£7,609,141.19 £6,060,381.19