



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Hywel Dda
University Health Board

**Canolbarth
a Gorllewin
Iachach**
Cenedlaethau'r
dyfodol yn byw
bywydau iach

Appendix A8
Comprehensive Investment Appraisal (CIA)
Cross Hands Health and Wellbeing Centre Project

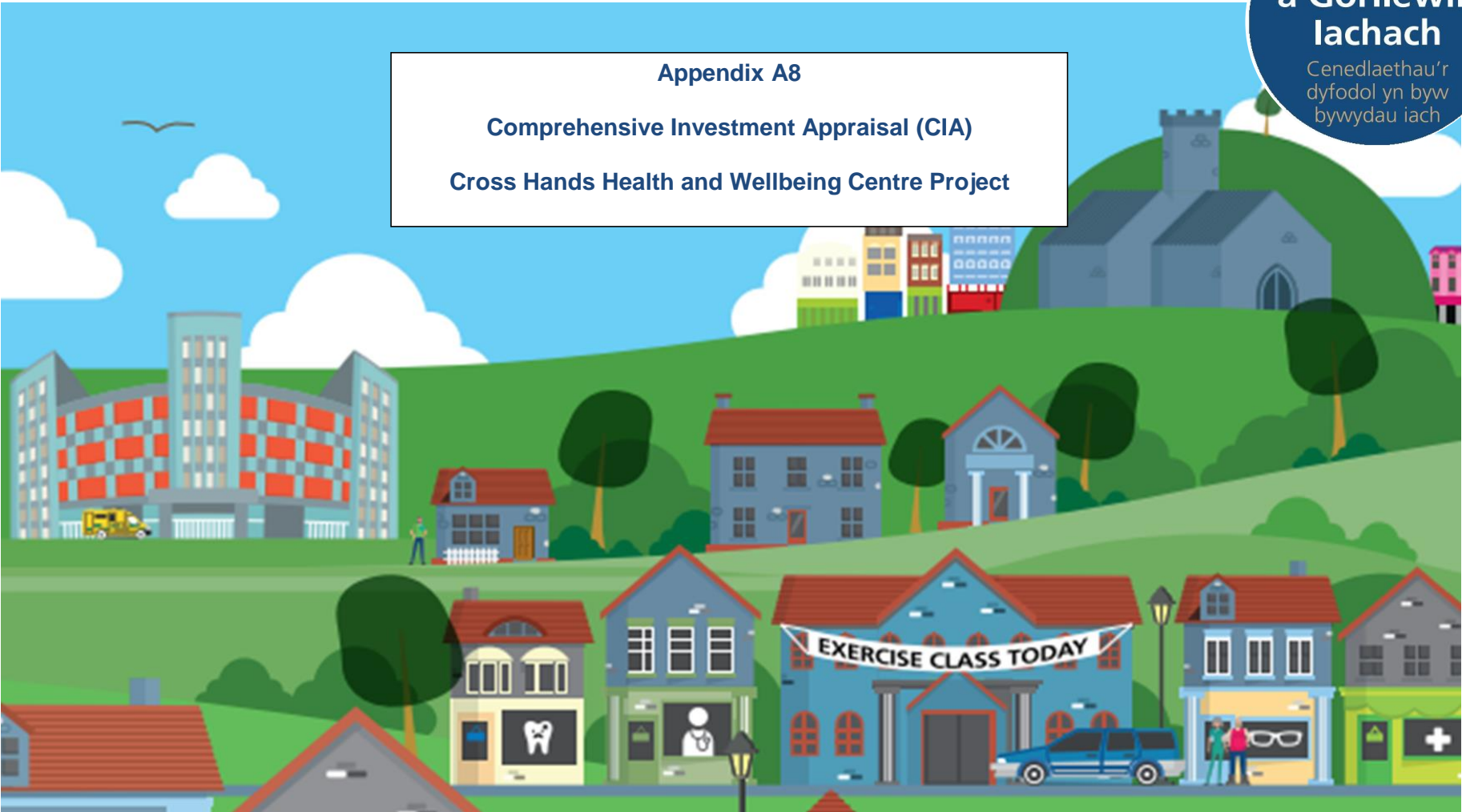


Table 7-1	Option 0 BAU	Option 1 Do Minimum	Option 2 Less Ambitious	Option 3 PWF
Works Cost	170,651	15,842,397	17,920,466	20,326,642
Fees	17,065	2,659,487	2,937,862	3,162,824
Non-works Costs	0	1,588,450	1,633,197	1,746,473
Equipment Costs	0	820,397	847,653	852,708
Quantified Risk Contingency	0	1,695,014	1,885,906	2,102,699
Initial capital costs	187,716	22,605,745	25,225,084	28,211,345

Table 7-2	Option 0 BAU	Option 1 Do Minimum	Option 2 Less Ambitious	Option 3 PWF
Lifecycle costs	0	11,937,726	13,895,307	16,144,404

Table 7-3	Option 0 BAU	Option 1 Do Minimum	Option 2 Less Ambitious	Option 3 PWF
Actual % Upper Bound for this project	46.0%	47.0%	47.0%	47.0%
Mitigated Optimism Bias % for this project	25.3%	22.6%	21.6%	20.2%

Table 7-4	Option 0 BAU	Option 1 Do Minimum	Option 2 Less Ambitious	Option 3 PWF
Equipment Maintenance	0	10,286	10,286	10,286
IT Costs	0	53,231	53,231	53,231
Pay Costs - Estates	31,438	81,192	91,493	107,463
Building Costs - Health Board	9,351	150,139	172,616	207,463
Building Costs - GMS	59,126	37,241	41,046	44,860
Rent	232,835	0	0	0
Income	0	0	-37,403	-69,663
Annual Revenue Costs (2026/27)	332,750	332,689	331,268	353,639

Table 7-XX	Option 0 BAU	Option 1 Do Minimum	Option 2 Less Ambitious	Option 3 PWF
Demand increases at a higher level than anticipated	7,290,758	6,601,092	5,280,873	2,640,437
Unable to continue to deliver current range of services at a local level - GMS sustainability	740,000	335,000	268,000	67,000
Unable to continue to deliver service model and the vision to the required equitable standard	7,290,758	9,901,638	7,921,310	660,109
Workforce unable to adopt new ways of working required to deliver integration and agile working - scale of change	0	2,271,354	3,023,841	3,928,653
Unable to recruit and retain GMS staff	592,000	402,000	402,000	134,000
Unable to recruit and retain key staff to deliver model of care	5,832,607	7,921,310	5,280,873	2,640,437
Disrupt to business cases and procurement processes impact on overall project timescales	0	37,856	57,597	81,847
Unable to secure adequate capital and revenue funding	0	6,309	14,399	24,554
Total Risk Value (Appraisal Period)	21,746,123	27,432,394	22,176,698	10,070,635

	Option 0 BAU	Option 1 Do Minimum	Option 2 Less Ambitious	Option 3 PWF
Opportunity Costs	165,000	165,000	165,000	165,000
Total Opportunity Costs	165,000	165,000	165,000	165,000
Initial Capital Costs	187,716	22,605,745	25,225,084	28,211,345
Lifecycle Costs	0	11,937,726	13,895,307	16,144,404
Residual Value	0	660,000	660,000	660,000
Total Capital Costs	187,716	33,883,471	38,460,391	43,695,749
Recurring revenue costs	12,311,746	22,337,636	24,538,682	27,822,529
Total Revenue Costs	12,311,746	22,337,636	24,538,682	27,822,529
Optimism Bias	47,492	7,793,007	8,457,829	8,964,297
Expected Risk Value	21,746,123	27,432,394	22,176,698	10,070,635
Total Risk Value	21,793,615	35,225,401	30,634,727	19,034,932
Total Risk-Adjusted Costs	34,458,077	91,611,509	93,798,800	90,718,210
Cash releasing benefits	0	30,022,628	34,224,860	38,874,399
Non-cash releasing benefits	0	30,022,628	34,224,860	38,874,399
Total Benefits	0	30,022,628	34,224,860	38,874,399
Total Net Present Cost (Undiscounted)	34,458,077	61,588,881	59,573,940	51,843,811

Total Opportunity Costs	165,000	165,000	165,000	165,000
Total Capital Costs	152,707	22,352,563	25,098,013	28,094,194
Total Revenue Costs	7,094,918	9,094,723	9,861,392	10,998,506
Total Optimism Bias	38,635	5,061,042	5,443,731	5,694,233
Total Expected Risk	12,114,213	10,670,089	8,586,812	3,811,843
Total Risk-Adjusted Costs	19,565,473	47,343,416	49,154,948	48,763,777
Total Benefits	0	10,307,374	11,735,838	13,316,355
Total Net Present Cost (Discounted)	19,565,473	37,036,042	37,419,111	35,447,422
Appraisal period (years)	37	67	67	67
Equivalent annual cost	528,797	552,777	558,494	529,068
Options ranked (Discounted NPC)	1	3	4	2
Benefit Cost Ratio	0.09	0.22	0.24	0.27
Options ranked (Benefit Cost Ratio)	4	3	2	1

Switching analysis

	Option 1 Do Minimum	Option 2 Less Ambitious
Net Present Cost Actual	37,036,042	37,419,111
Net Present Cost required	35,447,422	35,447,422
Variance	-1,588,620	-1,971,688
NPC	-4.3%	-5.3%
Benefits actual	(10,307,374)	(11,735,838)
Benefits required	(11,895,394)	(13,707,526)
Variance	-1,588,620	-1,971,688
benefits	15.4%	16.8%
Total costs actual	47,343,416	49,154,948
Total costs required	45,754,796	47,163,290
Variance	-1,588,620	-1,971,688
costs	-3.4%	-4.0%
Actual capital	22,352,563	25,098,013
Required capital	20,763,943	23,126,292
Variance	-1,588,620	-1,971,688
capital	-7.1%	-7.9%
Actual revenue	9,094,723	9,861,392
Required revenue	7,506,102	7,889,704
Variance	-1,588,620	-1,971,688
revenue	-17.5%	-20.0%
Actual risks	10,670,089	8,586,812
Required risks	9,081,469	6,615,124
Variance	-1,588,620	-1,971,688
risks	-14.9%	-23.0%

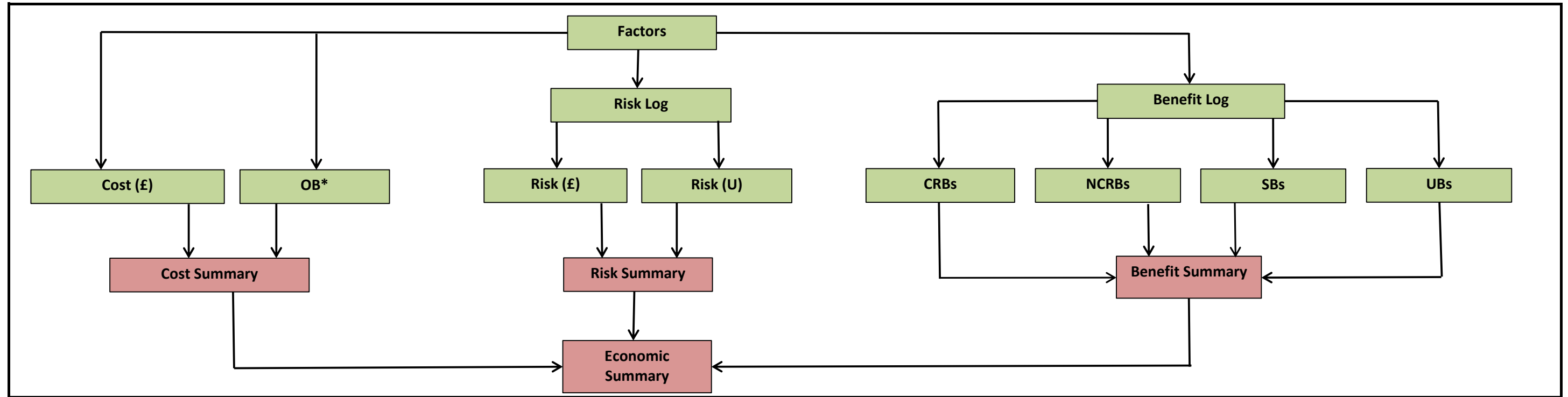
Switching analysis

	Option 1 Do Minimum	Option 2 Less Ambitious
Discounted Net Present Cost (NPC)	-4.3%	-5.3%
Initial capital costs	-7.1%	-7.9%
Total revenue costs	-17.5%	-20.0%
Total financial benefits	15.4%	16.8%
Expected risk value	-14.9%	-23.0%

Sensitivity analysis

Discounted	Option 0 BAU	Option 1 Do Minimum	Option 2 Less Ambitious	Option 3 PWF
Equivalent annual cost	528,797	552,777	558,494	529,068
Options ranked (Discounted NPC)	1	3	4	2
Financial benefits		-10,307,374	-11,735,838	-13,316,355
Options 1 and 3 equal to Option 3		-13,316,355	-13,316,355	-13,316,355
Impact on NPC (Scenario 1)		3,089,881	1,589,517	0
Equivalent annual cost (Scenario 1)	528,797	507,367	534,904	529,068
Options ranked (Scenario 1)	2	1	4	3
Expected risk value		10,670,089	8,586,812	3,811,843
Options 1 and 3 equal to Option 3		3,811,843	3,811,843	3,811,843
Impact on NPC (Scenario 2)		6,858,246	4,774,869	0
Equivalent annual cost (Scenario 2)	528,797	450,415	487,226	529,068
Options ranked (Scenario 2)	3	1	2	4

User Input Required
No Input Required



* the OB worksheets should only be filled out if Optimism Bias percentages are being calculated within the CIA Model. If they are being calculated outside of the model, the Optimism Bias uplift (£) should be added to the Cost sheet under Optimism Bias.

USER INSTRUCTIONS

To note:

- All values should be entered as a positive number, including costs and risks (the summary sheets will convert these to negative numbers where necessary)
- All values should be entered as real numbers (i.e excluding inflation)
- Cells in which data should be entered are unshaded whereas cells that should not be edited are shaded and locked
- If copying and pasting text or figures from another document, please ensure that data is pasted 'Matching destination formatting'. Otherwise the cells might become protected and impossible to edit in the future. If this happens accidentally, please use the 'undo' button
- If you have unused risk rows or unused years, simply leave the relevant cells blank
- The User Guide provides more information on the approaches that should be taken with economic appraisal, and provides further information on how to use this model

Worksheet	Explanation	Instructions
<u>User Instructions</u>	Summarises the purpose of each worksheet and provides guidance on how to complete them.	Use the hyperlinks (column A) to navigate the workbook; the "Back to User Instructions" hyperlinks located on each worksheet will allow the user to return to this worksheet.
<u>Model Structure</u>	Provides a visual guide to the structure of the model.	This worksheet requires no input from the user.
<u>Factors</u>	Used to insert specific values for various factors that are used throughout the workbook.	Insert values and information into unshaded cells. The information in shaded cells (e.g. discount rates) will feed into other worksheets automatically.
<u>Economic Summary</u>	Summarises the benefits, costs and risks worksheets, and concludes with an overall value for money position for all options assessed.	Do not edit this worksheet. All cells will be updated automatically from the costs, risks and benefits summary worksheets.
<u>Cost Summary</u>	Presents a summary of the economic costs, comparing each type of cost (opportunity, capital, revenue, transitional, externality & net contribution) for all options assessed.	Do not edit this worksheet. All cells will be updated automatically from cost worksheets.
<u>Cost Option 0</u>	Evaluate the economic costs for up to 6 options, assessed using undiscounted and discounted cashflows.	Enter cashflow description (column A) and values (column D onwards). Use one worksheet per option that is assessed - if you have just a single option then just use a single worksheet.
<u>Cost Option 1</u>		
<u>Cost Option 2</u>		
<u>Cost Option 3</u>		
<u>Cost Option 4</u>		
<u>Cost Option 5</u>		
<u>Cost Option 6</u>		
<u>OB Mitigation</u>	Provides information on how to apply mitigation factors.	For information, not for completion.
<u>OB Option 0</u>	Calculate optimism bias (OB) and apply mitigation factors.	Answer questions 1-5 by selecting from the drop down menus in column D. Apply mitigation factors (column I) with appropriate justification/evidence (column J). The OB worksheets should only be filled out if Optimism Bias percentages are being calculated within the CIA Model. If they are being calculated outside of the model, the Optimism Bias uplift (£) should be added to the Cost sheet under Optimism Bias.
<u>OB Option 1</u>		
<u>OB Option 2</u>		
<u>OB Option 3</u>		
<u>OB Option 4</u>		
<u>OB Option 5</u>		
<u>OB Option 6</u>		
<u>Risk Summary</u>	Presents a summary of the quantitative risks, comparing each type of risk (design, construction, performance, operating, revenue, termination, technology, control, residual value & other) for all options assessed.	Do not edit this worksheet. All cells will be updated automatically from risk worksheets.
<u>Risk Log</u>	Presents an overview of the quantitative risks before exploring each one in detail within the relevant risk worksheet [Risk (£) Option 0-6].	Populate columns C and D. There are some suggested risks included under each category. This is not an exhaustive list - there is space below to add additional risks (column B). If a suggested risk is not applicable then leave the row blank.
<u>Risk (£) Option 0</u>	Evaluate economic risks for each option using undiscounted and discounted cashflows of expected risk values.	Enter a percentage for each risk scenario (columns C-F) and a corresponding monetary value (columns H-J) to calculate an expected value per annum. Enter the year in which the risk commences (column M) and finishes (column N) to calculate the discounted risk value (column R).
<u>Risk (£) Option 1</u>		
<u>Risk (£) Option 2</u>		
<u>Risk (£) Option 3</u>		
<u>Risk (£) Option 4</u>		
<u>Risk (£) Option 5</u>		
<u>Risk (£) Option 6</u>		
<u>Risk (U)</u>	Evaluates unmonetisable risks for all options using a weighted scoring system.	Populate columns B-E to explain each unmonetised risk. Enter percentage values in the probability columns (e.g column K for option 1) and scores in the impact columns (e.g columns L - N for option 1) to calculate unmonetised risk scores for each option.
<u>Benefit Summary</u>	Presents a summary of the benefits, comparing each type of benefit (CRBs, NCRBs, SBs & UBs) for all options assessed.	Do not edit this worksheet. All cells will be updated automatically from benefit worksheets.
<u>Benefit Log</u>	Presents an overview of the economic benefits for all options assessed.	Populate columns B-H. This information will populate the subsequent benefit worksheets automatically.
<u>CRBs</u>	Evaluates economic cash releasing benefits (CRB) for all options using undiscounted and discounted values.	Enter monetised values for benefits in column G onwards.
<u>NCRBs</u>	Evaluates economic non-cash releasing benefits (NCRB) for all options using undiscounted and discounted values.	
<u>SBs</u>	Evaluates economic societal benefits (SB) for all options using undiscounted and discounted values.	
<u>UBs</u>	Evaluates unmonetisable benefits (UB) for all options using a weighted scoring system.	

FACTORS USED WITHIN THE MODEL

Table with 2 columns: Field Name and Value. Fields include Organization Name, Name of Model User(s), Model Responsible Owner, and Contact Details.

Table with 2 columns: Field Name and Value. Fields include Currency and Base Year.

Table with 4 columns: Option number, Option description, Project life (years), and Final project year. Lists options for Core Clinical Services, Supplementary Services, and Other Services.

Table with 2 columns: Investment Objective and Investment Objective description. Lists objectives for R01, R02, R03, R04, R05, R06, R07, and R08.

Table with 3 columns: Discount Rate, Years 0-30, and Years 31-79. Lists Non-DALY and DALY discount rates.

Main data table with columns for years (Y1 to Y80) and Total (EAC). Contains multiple rows for different options (Option 0 to Option 6) and their associated metrics.

ECONOMIC SUMMARY - £

[Back to Model Structure](#)

[Back to User Instructions](#)

Economic Summary (Discounted) - £							
	Option 0 - Business as Usual	Option 1 - Core Clinical Services (Scope A)	Option 2 - Supplementary Services (Scope B)	Option 3 - Other Services (Scope C)	Option 4 - N/A	Option 5 - N/A	Option 6 - N/A
Incremental costs - total	£0.00	-£29,222,067.00	-£33,116,876.54	-£37,500,674.23	£0.00	£0.00	£0.00
Incremental benefits - total	£0.00	£11,751,497.38	£16,040,340.67	£23,052,388.65	£19,565,472.75	£19,565,472.75	£19,565,472.75
Risk-adjusted Net Present Social Value (NPSV)	£0.00	-£17,470,569.62	-£17,076,535.87	-£14,448,285.58	£19,565,472.75	£19,565,472.75	£19,565,472.75
Benefit-cost ratio		0.40	0.48	0.61	#DIV/0!	#DIV/0!	#DIV/0!

Detailed Economic Summary (Discounted) - £							
	Option 0 - Business as Usual	Option 1 - Core Clinical Services (Scope A)	Option 2 - Supplementary Services (Scope B)	Option 3 - Other Services (Scope C)	Option 4 - N/A	Option 5 - N/A	Option 6 - N/A
Costs							
Incremental cost increase - opportunity cost	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost increase - capital (including optimism bias)	£0.00	-£27,222,262.19	-£30,350,402.16	-£33,597,085.84	£0.00	£0.00	£0.00
Incremental cost increase - revenue	£0.00	-£1,999,804.81	-£2,766,474.38	-£3,903,588.39	£0.00	£0.00	£0.00
Incremental cost increase - transitional	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost increase - externality	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost increase - net contribution	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost increase - risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental costs - total	£0.00	-£29,222,067.00	-£33,116,876.54	-£37,500,674.23	£0.00	£0.00	£0.00
Benefits							
Incremental cost reduction - opportunity cost	£0.00	£0.00	£0.00	£0.00	£165,000.00	£165,000.00	£165,000.00
Incremental cost reduction - capital (including optimism bias)	£0.00	£0.00	£0.00	£0.00	£191,341.98	£191,341.98	£191,341.98
Incremental cost reduction - revenue	£0.00	£0.00	£0.00	£0.00	£7,094,917.74	£7,094,917.74	£7,094,917.74
Incremental cost reduction - transitional	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost reduction - externality	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost reduction - net contribution	£0.00	£0.00	£777,102.10	£1,433,663.95	£0.00	£0.00	£0.00
Incremental cost reduction - risks	£0.00	£1,444,123.80	£3,527,400.93	£8,302,369.70	£12,114,213.03	£12,114,213.03	£12,114,213.03
Incremental benefit - cash releasing	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental benefit - non-cash releasing	£0.00	£10,307,373.58	£11,735,837.64	£13,316,355.01	£0.00	£0.00	£0.00
Incremental benefit - societal	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental benefits - total	£0.00	£11,751,497.38	£16,040,340.67	£23,052,388.65	£19,565,472.75	£19,565,472.75	£19,565,472.75
Value for Money							
Risk-adjusted Net Present Social Value (NPSV)		-£17,470,569.62	-£17,076,535.87	-£14,448,285.58	£19,565,472.75	£19,565,472.75	£19,565,472.75
Benefit-cost ratio		0.40	0.48	0.61	#DIV/0!	#DIV/0!	#DIV/0!

Cost and Risk Summary (Discounted) - £							
	Option 0 - Business as Usual	Option 1 - Core Clinical Services (Scope A)	Option 2 - Supplementary Services (Scope B)	Option 3 - Other Services (Scope C)	Option 4 - N/A	Option 5 - N/A	Option 6 - N/A
Present Cost	-£7,451,259.72	-£36,673,326.72	-£39,791,034.16	-£43,518,270.00	£0.00	£0.00	£0.00
Total Risk	-£12,114,213.03	-£10,670,089.24	-£8,586,812.11	-£3,811,843.34	£0.00	£0.00	£0.00
Risk-adjusted Present Cost	-£19,565,472.75	-£47,343,415.96	-£48,377,846.26	-£47,330,113.34	£0.00	£0.00	£0.00

Detailed Cost, Risk and Benefit Summary (Discounted) - £							
	Option 0 - Business as Usual	Option 1 - Core Clinical Services (Scope A)	Option 2 - Supplementary Services (Scope B)	Option 3 - Other Services (Scope C)	Option 4 - N/A	Option 5 - N/A	Option 6 - N/A
Opportunity Costs	-£165,000.00	-£165,000.00	-£165,000.00	-£165,000.00	£0.00	£0.00	£0.00
Capital Expenditure	-£152,707.09	-£22,352,562.61	-£25,098,012.95	-£28,094,194.33	£0.00	£0.00	£0.00
Capital Expenditure Optimism Bias Uplift	-£38,634.89	-£5,061,041.55	-£5,443,731.19	-£5,694,233.49	£0.00	£0.00	£0.00
Revenue Expenditure	-£7,094,917.74	-£9,094,722.55	-£9,861,392.12	-£10,998,506.13	£0.00	£0.00	£0.00
Transitional Costs	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Externality Costs	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Net Contribution Costs	£0.00	£0.00	-£777,102.10	-£1,433,663.95	£0.00	£0.00	£0.00
Present Cost	-£7,451,259.72	-£36,673,326.72	-£39,791,034.16	-£43,518,270.00	£0.00	£0.00	£0.00
Design Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Construction Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Performance Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Operating Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Revenue Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Termination Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Technology Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Control Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Residual Value Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Other Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Additional Risks	-£12,114,213.03	-£10,670,089.24	-£8,586,812.11	-£3,811,843.34	£0.00	£0.00	£0.00
Total Risk	-£12,114,213.03	-£10,670,089.24	-£8,586,812.11	-£3,811,843.34	£0.00	£0.00	£0.00
Unmonetised Risk Score	0	0	0	0	0	0	0
Risk-adjusted Present Cost	-£19,565,472.75	-£47,343,415.96	-£48,377,846.26	-£47,330,113.34	£0.00	£0.00	£0.00
Cash Releasing Benefits	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Non-Cash Releasing Benefits	£0.00	£10,307,373.58	£11,735,837.64	£13,316,355.01	£0.00	£0.00	£0.00
Societal Benefits	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Total Benefits	£0.00	£10,307,373.58	£11,735,837.64	£13,316,355.01	£0.00	£0.00	£0.00

