

Coleraine - Derry Renewals Project - Cost Plan (Economic Appraisal) - Summary of Options

Scenario	Description	QRA %	OB %	Total Risk %	Total Cost (Q3 2011)	Total Cost (Q3 2023)
Baseline	Coleraine / Derry Cost Plan (Economic Appraisal) with overall QRA and OB equal to 20% Omitting Bellarena Loop	6.4%	13.6%	20.0%	£ 76,313,238	N/A
Baseline (Option A)	Coleraine / Derry Cost Plan (Economic Appraisal) with overall QRA and OB equal to 20% Omitting Bellarena Loop and bridge works	6.6%	13.4%	20.0%	£ 73,457,596	N/A
Option 1	Coleraine / Derry Cost Plan (Economic Appraisal) with overall QRA and OB equal to 20% Including Bellarena loop with DDA compliant station to facilitate half hourly future service	6.0%	14.0%	20.0%	£ 81,573,017	N/A
Option 1 (Option A)	Coleraine / Derry Cost Plan (Economic Appraisal) with overall QRA and OB equal to 20% Including Bellarena loop with DDA compliant station to facilitate half hourly future service Omitting bridge works	6.2%	13.8%	20.0%	£ 78,718,652	N/A
Heavy Maintenance	Coleraine / Derry Cost Plan (Economic Appraisal) with QRA and with OB equal to 20% Heavy Maintenance Option	10.7%	20.0%	30.7%	£ 63,826,659	N/A
Heavy Maintenance Year 12	Cost at Year 12 to meet Baseline scenario (at Q3 2009 cost) Cost at Year 12 to meet Option 1 scenario (at Q3 2009 cost)	13.6% 12.9%	20.0% 20.0%	33.6% 32.9%	£ 51,688,697 £ 57,053,249	£ 73,695,723 £ 81,344,291

Scope and conceptual estimate

The Project Brief sets out the baseline scope and Conceptual Estimate as follows: -

Renewal of track and signalling infrastructure.
Restore PSR to 2001 levels (i.e. 70mph).
Upgrade line speed to 90mph where possible.
Provide infrastructure for hourly service.
Complete essential works on Portrush Branch.

The conceptual estimate, prepared for the NTT Project Economic Appraisal was £73.2m at 2012 prices and excluded the following items: -

Future proofing the half hourly capacity.
Works to the Portrush Branch.
Works in connection with station relocations.

Heavy Maintenance Option

The Heavy Maintenance option assumes the following: -

Full renewal between Coleraine & Castlerock due to poor formation
Remaining route will utilise "crop and weld" option except at Eglinton Loop
Eglinton Loop will be constructed as full relay; no loop at Bellarena
No S&C replacement at Coleraine
Assume full signalling renewal
No future proofing for station relocations

Year 12 at Q3 2023 assume 3% inflation for 12 years from Q3 2011 costs

Coleraine / Derry Cost Plan (For Economic Appraisal)

Baseline with overall QRA and OB equal to 20%

		Arup
Advance Works (excl ducting & weld)		Inc below
P Way		
Remove existing Rails & Sleepers		£ 288,369
Excavate Ballast		£ 1,785,980
Bottom Ballast		£ 1,561,492
Lay Sleepers		£ 6,749,214
Lay Rail CWR		£ 8,054,181
Welding		£ 1,442,321
Top Ballast		£ 5,386,106
Tamping / Stressing		£ 1,127,168
Single passing loops (Eglinton, Bellarena)		Inc above
Switches and Crossings		£ 709,009
Slab Track at CODA		£ 61,388
Follow-up Works		
Remove Loop (Bellarena)		-£ 818,252
Civils Works		
Remove Castlerock loop		£ 41,073
UWCs & LC works		£ 1,379,554
Ducts / Trunking		£ 2,647,319
Drainage - materials		£ 1,349,561
Cess Walkway		£ 1,202,825
Culverts		£ 87,549
REB's		Inc below
Fencing		£ 106,120
Bridges		£ 1,684,466
Tunnels		£ -
Property		
Bellarena Station (Demolition works)		£ -
Bellarena Halt (New construction)		£ -
Castlerock Station		£ 29,129
Temporary Relocation of Signalling		£ 79,590
Derry Extended Platform		£ -
Park and ride facility		£ -
Labour		Inc rates above
Sub-total		£ 34,954,160
Electrification & Plant		£ 185,709
Telecommunications		£ 1,704,280
Sub-total		£ 36,844,149
Signalling		
Signalling costs		£ 9,005,497
Civils, provide bases for signals incl		inc. above
Sub-total		£ 45,849,647
Preliminaries - Civils works	15.00%	£ 5,243,124
Method Related Charges	1.0%	£ 349,542
Testing & Commissioning	0.5%	£ 174,771
Training		£ 50,000
Spares	1.0%	£ 349,542
Unmeasured Items	1.0%	£ 349,542
Preliminaries - Signalling works incl above		inc. above
Sub-total		£ 52,366,166
Contractor's Fee	10%	£ 5,236,617
Sub-total		£ 57,602,783
Design allowance for proposed new station / ILEX		inc. below
Design Consultant		inc. below
Other Consultants - PM / CM		inc. below
Preparation @	6%	£ 3,456,167
Supervision @	2%	£ 1,152,056
Provision of temporary bus service		£ 926,355
Land costs		£ -
Other Employer's costs		£ -
Tamper Purchase		Not required
Sub-total		£ 63,137,360
Risk @ P50	6.4%	£ 4,024,983
TOTAL		£ 67,162,343
Optimism Bias	13.6%	£ 9,150,895
TOTAL INCLUDING OPTIMISM BIAS Q3 2011		£ 76,313,238

Baseline Estimate

To enable comparison the baseline estimate contains the same exclusions as the conceptual estimate. Options are provided to allow the inclusion of the additional works as set out within the Project Brief.

Baseline Estimate = £76.4m

Full renewal of track and signalling between Coleraine and Derry
 Nominal 70mph running with 90mph between Downhill and Foyle Bridge.
 Passing loop at Eglinton to allow hourly service.
 Retain existing station at Bellarena

Coleraine / Derry Cost Plan (For Economic Appraisal)

Baseline with overall QRA and OB equal to 20%

Bridge Works removed

		Arup
Advance Works (excl ducting & weld)		Inc below
P Way		
Remove existing Rails & Sleepers		£ 288,369
Excavate Ballast		£ 1,785,980
Bottom Ballast		£ 1,561,492
Lay Sleepers		£ 6,749,214
Lay Rail CWR		£ 8,054,181
Welding		£ 1,442,321
Top Ballast		£ 5,386,106
Tamping / Stressing		£ 1,127,168
Single passing loops (Eglinton, Bellarena)		Inc above
Switches and Crossings		£ 709,009
Slab Track at CODA		£ 61,388
Follow-up Works		
Remove Loop (Bellarena)		-£ 818,252
Civils Works		
Remove Castlerock loop		£ 41,073
UWCs & LC works		£ 1,379,554
Ducts / Trunking		£ 2,647,319
Drainage - materials		£ 1,349,561
Cess Walkway		£ 1,202,825
Culverts		£ 87,549
REB's		Inc below
Fencing		£ 106,120
Bridges		£ -
Tunnels		£ -
Property		
Bellarena Station (Demolition works)		£ -
Bellarena Halt (New construction)		£ -
Castlerock Station		£ 29,129
Temporary Relocation of Signalling		£ 79,590
Derry Extended Platform		£ -
Park and ride facility		£ -
Labour		Inc rates above
Sub-total		£ 33,269,694
Electrification & Plant		£ 185,709
Telecommunications		£ 1,704,280
Sub-total		£ 35,159,684
Signalling		
Signalling costs		£ 9,005,497
Civils, provide bases for signals incl		inc. above
Sub-total		£ 44,165,181
Preliminaries - Civils works	15.00%	£ 4,990,454
Method Related Charges	1.0%	£ 332,697
Testing & Commissioning	0.5%	£ 166,348
Training		£ 50,000
Spares	1.0%	£ 332,697
Unmeasured Items	1.0%	£ 332,697
Preliminaries - Signalling works incl above		inc. above
Sub-total		£ 50,370,075
Contractor's Fee	10%	£ 5,037,007
Sub-total		£ 55,407,082
Design allowance for proposed new station / ILEX		inc. below
Design Consultant		inc. below
Other Consultants - PM / CM		inc. below
Preparation @	6%	£ 3,324,425
Supervision @	2%	£ 1,108,142
Provision of temporary bus service		£ 926,355
Land costs		£ -
Other Employer's costs		£ -
Tamper Purchase		Not required
Sub-total		£ 60,766,004
Risk @ P50	6.6%	£ 4,024,983
TOTAL		£ 64,790,987
Optimism Bias	13.4%	£ 8,666,610
TOTAL INCLUDING OPTIMISM BIAS Q3 2011		£ 73,457,596

Baseline Option A Estimate

To enable comparison the baseline estimate contains the same exclusions as the conceptual estimate. Options are provided to allow the inclusion of the additional works as set out within the Project Brief.

Bridge works removed

Baseline Estimate = £73.5m

Full renewal of track and signalling between Coleraine and Derry

Nominal 70mph running with 90mph between Downhill and Foyle Bridge.

Passing loop at Eglinton to allow hourly service.

Retain existing station at Bellarena

Coleraine / Derry Cost Plan (For Economic Appraisal)

Option 1 with overall QRA and OB equal to 20%

		Arup
Advance Works (excl ducting & weld)		Inc below
P Way		
Remove existing Rails & Sleepers		£ 288,369
Excavate Ballast		£ 1,785,980
Bottom Ballast		£ 1,561,492
Lay Sleepers		£ 6,749,214
Lay Rail CWR		£ 8,054,181
Welding		£ 1,442,321
Top Ballast		£ 5,386,106
Tamping / Stressing		£ 1,127,168
Single passing loops (Eglinton, Bellarena)		Inc above
Switches and Crossings		£ 709,009
Slab Track at CODA		£ 61,388
Follow-up Works		
Civils Works		
Remove Castlerock loop		£ 41,073
UWCs & LC works		£ 1,379,554
Ducts / Trunking		£ 2,647,319
Drainage - materials		£ 1,349,561
Cess Walkway		£ 1,202,825
Culverts		£ 87,549
REB's		Inc below
Fencing		£ 106,120
Bridges		£ 1,684,466
Tunnels		£ -
Property		
Bellarena Station (Demolition works)		£ 45,523
Bellarena Halt (New construction)		£ 1,176,500
Castlerock Station		£ 29,129
Temporary Relocation of Signalling		£ 79,590
Derry Extended Platform		£ -
Park and ride facility		£ -
Labour		Inc rates above
Sub-total		£ 36,994,435
Electrification & Plant		£ 185,709
Telecommunications		£ 1,704,280
Sub-total		£ 38,884,424
Signalling		
Signalling costs		£ 10,265,648
Civils, provide bases for signals incl		inc. above
Sub-total		£ 49,150,072
Preliminaries - Civils works	15.00%	£ 5,549,165
Method Related Charges	1.0%	£ 369,944
Testing & Commissioning	0.5%	£ 184,972
Training		£ 50,000
Spares	1.0%	£ 369,944
Unmeasured Items	1.0%	£ 369,944
Preliminaries - Signalling works incl above		inc. above
Sub-total		£ 56,044,043
Contractor's Fee	10%	£ 5,604,404
Sub-total		£ 61,648,447
Design allowance for proposed new station / ILEX		inc. below
Design Consultant		inc. below
Other Consultants - PM / CM		inc. below
Preparation @	6%	£ 3,698,907
Supervision @	2%	£ 1,232,969
Provision of temporary bus service		£ 926,347
Land costs		£ -
Other Employer's costs		£ -
Tamper Purchase		Not required
Sub-total		£ 67,506,670
Risk @ P50	6.0%	£ 4,024,983
TOTAL		£ 71,531,653
Optimism Bias		14.0%
TOTAL INCLUDING OPTIMISM BIAS Q3 2011		£ 81,573,017

Option 1 estimate = £81.6m

As Baseline but including additional loop and signalling at Bellarena to facilitate future half hourly service and construction of a twin platform DDA compliant halt

Note 1: requires upgrading of current AHB to Full Barrier CCTV Crossing at Bellarena.

Note 2: includes the demolition of the existing Bellarena Station which will be replaced by a new station

Coleraine / Derry Cost Plan (For Economic Appraisal)**Option 1 with overall QRA and OB equal to 20%****Bridge Works removed**

	Arup	
Advance Works (excl ducting & weld)	Inc below	
P Way		
Remove existing Rails & Sleepers	£	288,369
Excavate Ballast	£	1,785,980
Bottom Ballast	£	1,561,492
Lay Sleepers	£	6,749,214
Lay Rail CWR	£	8,054,181
Welding	£	1,442,321
Top Ballast	£	5,386,106
Tamping / Stressing	£	1,127,168
Single passing loops (Eglinton, Bellarena)	Inc above	
Switches and Crossings	£	709,009
Slab Track at CODA	£	61,388
Follow-up Works		
Civils Works		
Remove Castlerock loop	£	41,073
UWCs & LC works	£	1,379,554
Ducts / Trunking	£	2,647,319
Drainage - materials	£	1,349,561
Cess Walkway	£	1,202,825
Culverts	£	87,549
REB's	Inc below	
Fencing	£	106,120
Bridges	£	-
Tunnels	£	-
Property		
Bellarena Station (Demolition works)	£	45,523
Bellarena Halt (New construction)	£	1,176,500
Castlerock Station	£	29,129
Temporary Relocation of Signalling	£	79,590
Derry Extended Platform	£	-
Park and ride facility	£	-
Labour	Inc rates above	
Sub-total	£	35,309,969
Electrification & Plant	£	185,709
Telecommunications	£	1,704,280
Sub-total	£	37,199,959
Signalling		
Signalling costs	£	10,265,648
Civils, provide bases for signals incl	inc. above	
Sub-total	£	47,465,607
Preliminaries - Civils works	15.00%	£ 5,296,495
Method Related Charges	1.0%	£ 353,100
Testing & Commissioning	0.5%	£ 176,550
Training		£ 50,000
Spares	1.0%	£ 353,100
Unmeasured Items	1.0%	£ 353,100
Preliminaries - Signalling works incl above	inc. above	
Sub-total	£	54,047,951
Contractor's Fee	10%	£ 5,404,795
Sub-total	£	59,452,746
Design allowance for proposed new station / ILEX	inc. below	
Design Consultant	inc. below	
Other Consultants - PM / CM	inc. below	
Preparation @	6%	£ 3,567,165
Supervision @	2%	£ 1,189,055
Provision of temporary bus service		£ 926,347
Land costs		£ -
Other Employer's costs		£ -
Tamper Purchase	Not required	
Sub-total	£	65,135,313
Risk @ P50	6.2%	£ 4,024,983
TOTAL	£	69,160,296
Optimism Bias	13.8%	£ 9,558,356
TOTAL INCLUDING OPTIMISM BIAS Q3 2011	£	78,718,652

Option 1 estimate = £78.8m

As Baseline but including additional loop and signalling at Bellarena to facilitate future half hourly service and construction of a twin platform DDA compliant halt

Bridge works removed

Note 1: requires upgrading of current AHB to Full Barrier CCTV Crossing at Bellarena.

Note 2: includes the demolition of the existing Bellarena Station which will be replaced by a new station

Coleraine / Derry Cost Plan (For Economic Appraisal) Heavy Maintenance Option

		Arup
Advance Works (excl ducting & weld)		inc. below
P Way - New Construction		
Remove existing Rails & Sleepers		£ 56,800
Excavate Ballast		£ 351,784
Bottom Ballast		£ 307,567
Lay Sleepers		£ 1,329,391
Lay Rail CWR		£ 1,586,430
Welding		£ 284,094
Top Ballast		£ 1,060,900
Tamping / Stressing		£ 222,018
Single passing loops (Eglinton, Bellarena)		
Switches and Crossings		£ 354,504
Slab Track at CODA		£ 61,388
Follow-up Works		
P Way - Crop & Weld		
Crop and weld works with new ballast		£ 11,920,787
Civils Works		
Remove Castlerock loop		£ 41,073
UWCs & LC works		£ 1,379,554
Ducts / Trunking		£ 2,647,319
Drainage - materials		£ 265,823
Cess Walkway		£ 1,202,825
Culverts		£ 87,549
REB's		
Fencing		£ 106,120
Bridges		£ 92,672
Tunnels		£ -
Property		
Bellarena Station		£ -
Bellarena Halt		£ -
Castlerock Station		£ 29,129
Temporary Relocation of Signalling		£ 79,590
Derry Extended Platform		£ -
Park and ride facility		£ -
Labour		Inc rates above
Sub-total		£ 23,467,313
Electrification & Plant		£ 185,709
Telecommunications		£ 1,704,280
Sub-total		£ 25,357,302
Signalling		
Signalling costs		£ 9,005,497
Civils, provide bases for signals incl		
Sub-total		£ 34,362,799
Preliminaries - Civils works	15.00%	£ 3,520,097
Method Related Charges	1.0%	£ 234,673
Testing & Commissioning	0.5%	£ 117,337
Training		£ 50,000
Spares	1.0%	£ 234,673
Unmeasured Items	1.0%	£ 234,673
Preliminaries - Signalling works incl above		
Sub-total		£ 38,754,252
Contractor's Fee	10%	£ 3,875,425
Sub-total		£ 42,629,677
Design allowance for proposed new station / ILEX		inc. below
Design Consultant		inc. below
Other Consultants - PM / CM		inc. below
Preparation @	7.5%	£ 3,197,226
Supervision @	3.0%	£ 1,278,890
Provision of temporary bus service		£ 926,355
Land costs		£ -
Other Employer's costs		£ -
Tamper Purchase		Not required
Sub-total		£ 48,032,148
Risk @ P50	10.7%	£ 5,156,735
TOTAL		£ 53,188,883
Optimism Bias @ 20%	20.0%	£ 10,637,777
TOTAL INCLUDING OPTIMISM BIAS Q3 2011		£ 63,826,659

Heavy Maintenance Option estimate = £63.9m

The Heavy Maintenance option provides a full renewal between Coleraine and Castlerock.

The remainder of the line will undergo HM using a "crop & weld" approach, except for the construction of a new passing loop at Eglinton to future proof for the hourly service.

Note 4

Proposal assumes that this will reinstate a maximum speed of 70mph between Coleraine and Derry/Londonderry.

Note 5

No future proofing to provide future loop or station at Bellarena
The existing facilities will be retained

Coleraine / Derry Cost Plan (For Economic Appraisal)

Heavy Maintenance Option - Year 12 costs to match Baseline Scenario

		Arup
Advance Works (excl ducting & weld)		inc.below
P Way - New Construction		
Remove existing Rails & Sleepers		£ 227,200
Excavate Ballast		£ 1,407,136
Bottom Ballast		£ 1,230,267
Lay Sleepers		£ 5,317,564
Lay Rail CWR		£ 6,345,720
Welding		£ 1,136,375
Top Ballast		£ 4,243,600
Tamping / Stressing		£ 888,072
Single passing loops (Eglinton, Bellarena)		
Switches and Crossings		£ 531,757
Slab Track at CODA		£ -
Follow-up Works		£ -
Delete Bellarena Loop (P-Way)		
P Way - Crop & Weld		
Crop and weld works with new ballast		£ -
Civils Works		
Remove Castlerock loop		£ -
UWCs & LC works		£ -
Ducts / Trunking		£ -
Drainage - materials		£ 1,063,291
Cess Walkway		£ 601,412
Culverts		£ 87,549
REB's		
Fencing		£ 106,120
Bridges		£ 1,684,466
Tunnels		£ -
Property		
Bellarena Station		£ -
Bellarena Halt		£ -
Castlerock Station		£ -
Temporary Relocation of Signalling		£ -
Derry Extended Platform		£ -
Park and ride facility		£ -
Labour		Inc rates above
Sub-total		£ 24,870,528
Electrification & Plant		£ 63,672
Telecommunications		£ -
Sub-total		£ 24,934,200
Signalling		
Signalling costs (Bellarena Loop)		£ -
Signalling costs (Reconnection & testing)		£ 847,352
Civils, provide bases for signals incl		
Sub-total		£ 25,781,552
Preliminaries - Civils works	15.00%	£ 3,730,579
Method Related Charges	1.00%	£ 248,705
Testing & Commissioning	0.50%	£ 124,353
Training		£ 50,000
Spares	1.00%	£ 248,705
Unmeasured Items	1.00%	£ 248,705
Preliminaries - Signalling works incl above		
Sub-total		£ 30,432,600
Contractor's Fee	10%	£ 3,043,260
Sub-total		£ 33,475,859
Design allowance for proposed new station / ILEX		inc. below
Design Consultant		inc. below
Other Consultants - PM / CM		inc. below
Preparation @	7.5%	£ 2,510,689
Supervision @	3.0%	£ 1,004,276
Provision of temporary bus service		£ 926,355
Land costs		£ -
Other Employer's costs		£ -
Tamper Purchase		Not required
Sub-total		£ 37,917,180
Risk @ P50	14%	£ 5,156,735
TOTAL		£ 43,073,914
Optimism Bias @ 20%	20%	£ 8,614,783
TOTAL INCLUDING OPTIMISM BIAS Q3 2011		£ 51,688,697

Heavy Maintenance Year 12 Additional Costs = £51.7m

This assumes track that was previously underwent Heavy Maintenance is now fully renewed.
No new loop is provided at Bellarena

Note 6

Assume that a further percentage of culverts will require work as per HM Option

Note 7

Figure for cess walkway assumes that 50% re-construction will be required following Year 12 Works

Note 8

Assumes that further fencing works will be required

Note 9

Assumes that further bridge waterproofing will be required

Note 10

Inflation is assumed to be 3%

Note 11

Assumes that bridge works deferred from Year 0 will be required at this stage

Coleraine / Derry Cost Plan (For Economic Appraisal)**Heavy Maintenance Option - Year 12 costs to match Option 1 Scenario**

		Arup
Advance Works (excl ducting & weld)		inc. below
P Way - New Construction		
Remove existing Rails & Sleepers		£ 227,200
Excavate Ballast		£ 1,407,136
Bottom Ballast		£ 1,230,267
Lay Sleepers		£ 5,317,564
Lay Rail CWR		£ 6,345,720
Welding		£ 1,136,375
Top Ballast		£ 4,243,600
Tamping / Stressing		£ 888,072
Single passing loops (Eglinton, Bellarena)		
Switches and Crossings		£ 531,757
Slab Track at CODA		£ -
Follow-up Works		£ -
Provide Bellarena Loop (P-Way)		£ 818,252
P Way - Crop & Weld		
Crop and weld works with new ballast		£ -
Civils Works		
Remove Castlerock loop		£ -
UWCs & LC works		£ -
Ducts / Trunking		£ -
Drainage - materials		£ 1,063,291
Cess Walkway		£ 601,412
Culverts		£ 87,549
REB's		
Fencing		£ 106,120
Bridges		£ 1,684,466
Tunnels		£ -
Property		
Bellarena Station		£ 45,523
Bellarena Halt		£ 1,176,500
Castlerock Station		£ -
Temporary Relocation of Signalling		£ -
Derry Extended Platform		£ -
Park and ride facility		£ -
Labour		Inc rates above
Sub-total		£ 26,910,803
Electrification & Plant		£ 63,672
Telecommunications		£ -
Sub-total		£ 26,974,475
Signalling		
Signalling costs (Bellarena Loop)		£ 1,260,151
Signalling costs (Reconnection & testing)		£ 847,352
Civils, provide bases for signals incl		
Sub-total		£ 29,081,978
Preliminaries - Civils works	15.00%	£ 4,036,620
Method Related Charges	1.0%	£ 269,108
Testing & Commissioning	0.5%	£ 134,554
Training		£ 50,000
Spares	1.0%	£ 269,108
Unmeasured Items	1.0%	£ 269,108
Preliminaries - Signalling works incl above		
Sub-total		£ 34,110,477
Contractor's Fee	10%	£ 3,411,048
Sub-total		£ 37,521,525
Design allowance for proposed new station / ILEX		inc. below
Design Consultant		inc. below
Other Consultants - PM / CM		inc. below
Preparation @	7.5%	£ 2,814,114
Supervision @	3.0%	£ 1,125,646
Provision of temporary bus service		£ 926,355
Land costs		£ -
Other Employer's costs		£ -
Tamper Purchase		Not required
Sub-total		£ 42,387,640
Risk @ P50	12%	£ 5,156,735
TOTAL		£ 47,544,374
Optimism Bias @ 20%	20%	£ 9,508,875
TOTAL INCLUDING OPTIMISM BIAS Q3 2011		£ 57,053,249

Heavy Maintenance Option estimate = £57m

This assumes track that was previously underwent Heavy Maintenance is now fully renewed.
This includes the provision of a new loop at Bellarena

Note 12

Assume that a further percentage of culverts will require work as per HM Option

Note 13

Figure for cess walkway assumes that 50% re-construction will be required following Year 12 Works

Note 14

Assumes that further fencing works will be required

Note 15

Assumes that further bridge waterproofing will be required

Note 16

Inflation is assumed to be 3%

Note 17

Assumes that bridge works deferred from Year 0 will be required at this stage