

Appendix H. Option Cost Estimates



OPTION COMPARISON ESTIMATES (PHASE 2)

Scheme Name	N53 Hackballscross to Rasan				TII Ref	TBC			
Road Authority	Louth County Council				Phase	2 - Option Selection	X-Sec	Type 1 Single	
Possible Mid-Construction Date	2023	Current Year	2019	Inflation-Construction	3%	Inflation Land & Property	3%	% Prog. Risk	5%
Route Option Number / Reference	RED	GREEN	BLUE	PURPLE	BROWN				
Mainline Length	3.062	2.992	2.990	3.340	3.350				
Grade Separated Junctions									
No. of Bridges (Ordinary)									
No. Viaducts / Signature Structures									

ROUTE OPTIONS COSTS

BASE COSTS (Incl VAT & Project Specific Risk Contingencies) - €million

Main Contract Construction	9.289	9.185	9.323	9.969	10.195				
Main Contract Supervision	0.581	0.574	0.583	0.623	0.637				
Archaeology	0.111	0.110	0.112	0.120	0.122				
Advance Works & Other Contracts	0.204	0.202	0.205	0.219	0.224				
Residual Network	0.051	0.051	0.051	0.055	0.056				
Land & Property	1.481	2.142	2.439	1.614	1.753				
Planning & Design	0.511	0.505	0.513	0.548	0.561				
Subtotal	12.229	12.768	13.226	13.148	13.549				
<i>Total Inflation Allowance</i>	1.458	1.522	1.577	1.568	1.615				
<i>NRA Programme Risk</i>	0.611	0.638	0.661	0.657	0.677				
Option Comparison Estimate	14.299	14.929	15.464	15.373	15.842				

Signatures

Regional Manager

Head of Major
Projects

RED	GREEN	BLUE	PURPLE	BROWN
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		RED	GREEN	BLUE	PURPLE	BROWN
1	A Site Clearance	€16,250.00	€19,750.00	€17,500.00	€17,500.00	€17,500.00
	B Fencing	€187,680.40	€181,972.00	€182,240.00	€214,400.00	€195,640.00
	C Safety Barrier and Pedestrian Guardrail	€23,464.31	€22,727.78	€22,720.70	€24,660.61	€24,614.10
	D Drainage and Service Ducts	€1,642,501.35	€1,590,944.25	€1,590,449.00	€1,726,242.70	€1,722,986.65
	E Earthworks	€1,137,006.55	€1,241,433.10	€1,381,203.30	€1,339,929.50	€1,565,785.90
	F Pavement	€2,346,430.50	€2,272,777.50	€2,272,070.00	€2,466,061.00	€2,461,409.50
	G Kerbs Footways and Paved Areas	€316,768.12	€306,824.96	€306,729.45	€332,918.24	€332,290.28
	H Traffic Signs	€187,714.44	€181,822.20	€181,765.60	€197,284.88	€196,912.76
	J Roadmarkings	€63,353.62	€61,364.99	€61,345.89	€66,583.65	€66,458.06
	K Lighting and Electrical	€0.00	€0.00	€0.00	€0.00	€0.00
	L Landscaping and Environmental Structures (Including Tunnels to be separately identified)	€58,660.76	€56,819.44	€56,801.75	€61,651.53	€61,535.24
	M Accomodation Works	€58,660.76	€56,819.44	€56,801.75	€61,651.53	€61,535.24
	P Statutory Authorities & Utilities	€375,428.88	€363,644.40	€363,531.20	€394,569.76	€393,825.52
	Q Any Other Obligations and Liabilities of the Contractor	€0.00	€0.00	€0.00	€0.00	€0.00
	R Preliminaries	€970,487.95	€959,535.01	€973,973.80	€1,041,518.01	€1,065,073.99
	Total Base Cost for Main Construction Contract (Excluding VAT)	€7,440,407.64	€7,356,435.06	€7,467,132.44	€7,984,971.39	€8,165,567.22
	Add Project Specific Risk Contingency 10.0%	€8,184,448.41	€8,092,078.57	€8,213,845.68	€8,783,468.53	€8,982,123.95
	Total MCC Base Cost plus Project Specific Risk Contingency (add VAT) 13.5%	€9,289,348.94	€9,184,509.18	€9,322,714.85	€9,969,236.78	€10,194,710.68
	Control - From Cost formatted	€8,517,122.51	€8,412,164.12	€8,532,210.47	€9,130,733.12	€9,325,926.27
	Control II - From MCC	€8,517,122.51	€8,412,164.12	€8,532,210.47	€9,130,733.12	€9,325,926.27
	Total MCC Cost / km	€3,033,752.10	€3,069,688.90	€3,117,964.83	€2,984,801.43	€3,043,197.22
	Average			€3,049,880.90		
	Diff. From Average	-0.53%	0.65%	2.23%	-2.13%	-0.22%

RED	GREEN	BLUE	PURPLE	BROWN
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2	Land and Property - All-In Costs		€1,346,652.29	€1,947,020.61	€2,217,629.71	€1,466,855.87	€1,594,044.06
	Add Project Specific Risk Contingency	10.0%	€1,481,317.52	€2,141,722.68	€2,439,392.69	€1,613,541.45	€1,753,448.46
3	Planning and Design	5.0%	€464,467.45	€459,225.46	€466,135.74	€498,461.84	€509,735.53
	Add Project Specific Risk Contingency	10.0%	€510,914.19	€505,148.00	€512,749.32	€548,308.02	€560,709.09
4	Archaeology	1.0%	€92,893.49	€91,845.09	€93,227.15	€99,692.37	€101,947.11
	Add Project Specific Risk Contingency	20.0%	€111,472.19	€110,214.11	€111,872.58	€119,630.84	€122,336.53
5	Advance Works and Other Contracts	2.0%	€185,786.98	€183,690.18	€186,454.30	€199,384.74	€203,894.21
	Add Project Specific Risk Contingency	10.0%	€204,365.68	€202,059.20	€205,099.73	€219,323.21	€224,283.63
6	Main Contract Supervision (Employer's Cost)	5.0%	€464,467.45	€459,225.46	€466,135.74	€498,461.84	€509,735.53
	Add Project Specific Risk Contingency	25.0%	€580,584.31	€574,031.82	€582,669.68	€623,077.30	€637,169.42
7	Residual Network (Provision to be subject to the approval of the TII Regional Manager)	0.5%	€46,446.74	€45,922.55	€46,613.57	€49,846.18	€50,973.55
	Add Project Specific Risk Contingency	10.0%	€51,091.42	€50,514.80	€51,274.93	€54,830.80	€56,070.91

TOTAL ESTIMATE INCLUSIVE OF VAT	€12,229,094.24	€12,768,199.79	€13,225,773.76	€13,147,948.41	€13,548,728.72
Control Total - From cost formatted	€11,335,628.26	€11,874,596.57	€12,311,160.20	€12,177,799.67	€12,543,545.16
Length [km]	3.062	2.992	2.99	3.34	3.35
TOTAL COST / KM	€3,993,825.68	€4,267,446.45	€4,423,335.71	€3,936,511.50	€4,044,396.63
Pavement Cost / km	€766,306.50	€759,618.15	€759,889.63	€738,341.62	€734,749.10
Earthwork	€371,328.07	€414,917.48	€461,940.90	€401,176.50	€467,398.78

25/07/2019

TII PMG Phase 2 - RED ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Mainline Section Type:	Type 1 Single	Mainline Length:		3.062
Link Roads Section Type:	Single	Link Roads Length:		0.583
1 Main Construction Contract	Quantity	Unit	Rate €	Total €
a Site Clearance	various	various	various	16,250.00
b Fencing	various	various	various	187,680.40
c Safety barriers and Pedestrian Guardrail	various	various	various	23,464.31
d Drainage and Service Ducts	various	various	various	1,642,501.35
e Earthworks	various	various	various	1,137,006.55
f Pavement	various	various	various	2,346,430.50
g Kerbs	various	various	various	316,768.12
h Traffic Signs	various	various	various	187,714.44
j Roadmarkings	various	various	various	63,353.62
k Lighting and Electrical	various	various	various	0.00
l Landscaping and Environmental	various	various	various	58,660.76
m Structures (Including Tunnels - to be separately identified)	various	various	various	56,000.00
n Accomodation Works	various	various	various	58,660.76
p Statutory Authorities & Utilities	various	various	various	375,428.88
q Other Costs	various	various	various	0.00
r Preliminaries	various	various	various	351,964.58
Total Base Cost for Main Construction Contract (Excluding VAT)				6,821,884.27
Add Project Specific Risk Contingency		10	%	682,188.43
Sub-Total exclusive of VAT				7,504,072.69
Add VAT at		13.5	%	1,013,049.81
Total MCC Base Cost plus Project Specific Risk Contingency				8,517,122.51
2 Land and Property - All-In Costs	Quantity	Unit	Rate €	Total €
a Mainline and Link Roads - Agricultural landtake	22.385	acre	20,000.00	447,704.84
a.1 Severance		item		112,005.40
a.2 Disruption (percentage uplift on "2a" and "2a.1")	20	%		111,942.05
b Mainline and Link Roads - Zoned/Other		Ha.		0
c Junction/Interchanges - Agricultural - Included above		Ha.		0
d Junction/Interchanges - Zoned		Ha.		0
e Properties				
e.1 Profound Negative Impact	0	no.	300,000.00	0.00
e.2 Significant Neg. Impact	2	no.	150,000.00	300,000.00
e.3 Moderate Neg. Impact	3	no.	75,000.00	225,000.00
e.4 Slightly Neg. Impact	3	no.	50,000.00	150,000.00
Total Base Cost for Land and Property				1,346,652.29
Add Project Specific Risk Contingency		10	%	134,665.23
Total L&P Base Cost plus Project Specific Risk Contingency				1,481,317.52
3 Planning and Design				
Provision based on percentage of Main Construction Contract Base Cost		5	%	425,856.13
Add Project Specific Risk Contingency		10	%	42,585.61
Total P&D Base Cost plus Project Specific Risk Contingency				468,441.74

4	Archaeology			
	Provision based on percentage of Main Construction Contract Base Cost	1	%	85,171.23
	Add Project Specific Risk Contingency	20	%	17,034.25
	Total Archaeology Base Cost plus Project Specific Risk Contingency			102,205.47
5	Advance Works and Other Contracts			
	Provision based on percentage of Main Construction Contract Base Cost	2	%	170,342.45
	Add Project Specific Risk Contingency	10	%	17,034.25
	Total Advance Works and Other Contracts Base Cost plus Project Specific Risk Contingency			187,376.70
6	Main Contract Supervision (Employer's Cost)			
	Provision based on percentage of Main Construction Contract Base Cost	5	%	425,856.13
	Add Project Specific Risk Contingency	25	%	106,464.03
	Total MC Supervision (Employer's Costs) Base Cost plus Project Specific Risk Contingency			532,320.16
7	Residual Network (Provision to be subject to the approval of the TII Regional Manager)			
	Provision based on percentage of Main Construction Contract Base Cost	0.5	%	42,585.61
	Add Project Specific Risk Contingency	10	%	4,258.56
	Total Residual Network Base Cost plus Project Specific Risk Contingency			46,844.17

TOTAL LEVEL 2 ESTIMATE INCLUSIVE OF VAT				€11,335,628.26
Mainline Length	3.062	km	Rate per km	€3,702,034.05

N.B. Figures above are INCLUSIVE of VAT - VAT rates utilised are: {PLEASE INSERT RATES HERE FOR EACH COST HEADING}

Figures above are EXCLUSIVE of provision for Inflation - base due to be stated if different from date of estimate.

Total base costs to include for ALL qualifying costs under each cost heading.

Refer to TII Cost Management Manual for information on coverage.

See attached Budget Assumptions Sheet for Further Scheme Information.

25/07/2019

TII PMG Phase 2 - RED ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Schedule of Works	Quantity	Unit	Rate/Price	
A Site Clearance				
A.1 General Site Clearance	13	Ha	€1,250.00	€16,250.00
A.2 Demolition of Buildings	0	Nr.	€4,750.00	€0.00
Site Clearance Total to Summary				€16,250.00
B Fencing				
B.1 Permanent Boundary Fencing	7003.0	m	€26.80	€187,680.40
B.2 Temporary Fencing		m		€0.00
B.3 Mammal Fencing		m		€0.00
B.4 Other Fencing (e.g. Palisade Security Fencing)		m		€0.00
Fencing Total to Summary				€187,680.40
C Safety Barrier and Pedestrian Guardrail				
C.1 Safety Barrier and Pedestrian Guardrail Based on ...	1.0%	sum	€2,346,430.50	€23,464.31
Safety Barrier and Pedestrian Guardrail Total to Summary				€23,464.31
D Drainage and Service Ducts				
D.1a Drainage and Service Ducts based on ...	70.0%	sum	€2,346,430.50	€1,642,501.35
Drainage and Service Ducts Total to Summary				€1,642,501.35
E Earthworks				
Mainline & Link Roads				
E.1 Excavation - Topsoil	15900	m3	€1.75	€27,825.00
E.2 Excavation - Acceptable	67930	m3	€1.75	€118,877.50
E.3 Excavation - U1	7650	m3	€1.50	€11,475.00
E.4 Excavation - U2	765	m3	€3.96	€3,029.40
E.5 Extra Over Excavation for Hard Material	13590	m3	€9.00	€122,310.00
E.6 Processing (Specify source and end use)	13590	m3	€3.63	€49,331.70
E.7 Disposal - U1	7650	m3	€4.00	€30,600.00
E.8 Disposal - U2	765	m3	€215.03	€164,497.95
E.9 Import (Specify)	6100	m3	€7.15	€43,615.00
E.10 Compaction (Specify)	66850	m3	€1.00	€66,850.00
E.11 Sub-formation and Formation	79400	m2	€0.50	€39,700.00
E.12 Landscaping (accounted for in Section L)	48900	m2	€0.00	€0.00
E.13* Disposal - Topsoil	7550	m3	€3.20	€24,160.00
E.14* Import Capping	16300	m3	€20.95	€341,485.00
E.15* Topsoiling 300mm - 10 degrees or less	18500	m2	€1.50	€27,750.00
E.16* Topsoiling 300mm - more than 10 degrees	23250	m2	€1.55	€36,037.50
E.17* Grass Seeding, 10 degrees or less	18500	m2	€0.65	€12,025.00
E.18* Grass Seeding, more than 10 degrees	23250	m2	€0.75	€17,437.50
E.19* Disposal - Acceptable				
Earthwork Sub-Total				€1,137,006.55
Junctions/Interchanges (N/A - accounted for in Mainline Works)				
Quantify works as per Mainline				
Earthworks Sub-Total				€0.00
Side Roads (N/A - accounted for in Mainline Works)				
Quantify works as per Mainline				
Earthworks Sub-Total				€0.00
Earthworks Total to Summary				€1,137,006.55

F Pavement				
Mainline				
F.1 Sub-Base and Capping (Specify)	22390	m3	€24.50	€548,555.00
F.2 Base Course (Specify)	39900	m2	€27.40	€1,093,260.00
F.3 Binder Course (Specify)	38650	m2	€8.09	€312,678.50
F.4 Surface Course (Specify)	38400	m2	€9.80	€376,320.00
F.5* Double Surface Dressing	3220	m2	€4.85	€15,617.00
Pavement Sub-Total				€2,346,430.50
Interchanges (N/A - accounted for in Mainline Works)				
Quantify works as per Mainline				
Pavement Sub-Total				€0.00
Side Roads (N/A - accounted for in Mainline Works)				
Quantify works as per Mainline				
Pavement Sub-Total				€0.00
Pavement Total to Summary				€2,346,430.50
G Kerbs Footways and Paved Areas				
Concrete footway on sub-base foundation	13.5%	sum	€2,346,430.50	€316,768.12
H Traffic Signs				
Allowance based on scheme scope and historical costs	8.0%	sum	€2,346,430.50	€187,714.44
J Roadmarkings				
Allowance based on scheme scope and historical costs	2.7%	sum	€2,346,430.50	€63,353.62
K Lighting and Electrical				
Allowance based on scheme scope and historical costs	0.0%	sum	€2,346,430.50	€0.00
L Landscaping and Environmental				
Allowance based on scheme scope and historical costs	2.5%	sum	€2,346,430.50	€58,660.76
M Structures (Including Tunnels to be separately identified)				
Structure A - Culvert		sum		€36,000.00
Structure B - Culvert		sum		€20,000.00
Structures Total to Summary				€56,000.00
N Accommodation Works				
Allowance based on scheme scope and historical costs	2.5%	sum	€2,346,430.50	€58,660.76
P Statutory Authorities & Utilities				
Allowance based on scheme scope and historical costs	16.0%	sum	€2,346,430.50	€375,428.88
Q Any Other Obligations and Liabilities of the Contractor				
Allowance based on scheme scope and historical costs	0.0%	sum	€2,346,430.50	€0.00
R Preliminaries				
R.1 Temporary Works including Traffic Management (Specify)	15.0%	sum	€6,469,919.69	€970,487.95
R.1 All other Preliminary Items	0.0%	sum	€6,469,919.69	€0.00
Preliminaries Total to Summary				€970,487.95
N.B. Figures are exclusive of VAT except where expressly stated above				
Figures above are EXCLUSIVE of provision for Inflation - base due to be stated if different from date of estimate.				
Total base costs to include for ALL qualifying costs under each cost heading.				
Refer to TII Cost Management Manual for information on coverage and format of back-up.				
See attached Budget Assumptions Sheet for Further Scheme Information.				

25/07/2019

TII PMG Phase 2 - RED ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Main Construction Cost - Base Cost Estimate**Summary**

A	Site Clearance		€16,250.00
B	Fencing		€187,680.40
C	safety Barriers and Pedestrian Guardrails		€23,464.31
D	Drainage and Service Ducts		€1,642,501.35
E	Earthworks		€1,137,006.55
F	Pavement		€2,346,430.50
G	Kerbs, Footways and Paved Areas		€316,768.12
H	Traffic Signs		€187,714.44
J	Roadmarking		€63,353.62
K	Lighting and Electrical		€0.00
L	Landscaping and Environmental		€58,660.76
M	Structures (Including Tunnels to be separately identified)		€56,000.00
N	Accomodation Works		€58,660.76
P	Statutory Authorities & Utilities		€375,428.88
Q	Any Other Obligations and Liabilities of the Contractor		€0.00
	Sub-Total		€6,469,919.69
R	Preliminaries		€351,964.58
	MCC Base Cost Total excluding Project Specific Risk Contingency		€6,821,884.27
	Add Project Specific Risk Contingency	10.0%	€682,188.43
	MCC Base Cost Total including Project Specific Risk Contingency		€7,504,072.69
	Add VAT at	13.5%	€1,013,049.81
	MCC Base Cost Total including Project Specific Risk Contingency and VAT		€8,517,122.51
	Mainline Length	3.062	
	MCC Cost per km based on Mainline Length Only	€2,781,555.36	
	Mainline plus Link Road Length	3.645	
	MCC Cost per km based on Mainline plus Link Road Length	€2,336,659.12	

25/07/2019

TII PMG Phase 2 - GREEN ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Mainline Section Type:	Type 1 Single	Mainline Length:		2.992
Link Roads Section Type:	Single	Link Roads Length:		0.516
1 Main Construction Contract	Quantity	Unit	Rate €	Total €
a Site Clearance	various	various	various	19,750.00
b Fencing	various	various	various	181,972.00
c Safety barriers and Pedestrian Guardrail	various	various	various	22,727.78
d Drainage and Service Ducts	various	various	various	1,590,944.25
e Earthworks	various	various	various	1,241,433.10
f Pavement	various	various	various	2,272,777.50
g Kerbs	various	various	various	306,824.96
h Traffic Signs	various	various	various	181,822.20
j Roadmarkings	various	various	various	61,364.99
k Lighting and Electrical	various	various	various	0.00
l Landscaping and Environmental	various	various	various	56,819.44
m Structures (Including Tunnels - to be separately identified)	various	various	various	40,000.00
n Accomodation Works	various	various	various	56,819.44
p Statutory Authorities & Utilities	various	various	various	363,644.40
q Other Costs	various	various	various	0.00
r Preliminaries	various	various	various	340,916.63
Total Base Cost for Main Construction Contract (Excluding VAT)				6,737,816.68
Add Project Specific Risk Contingency		10	%	673,781.67
Sub-Total exclusive of VAT				7,411,598.35
Add VAT at		13.5	%	1,000,565.78
Total MCC Base Cost plus Project Specific Risk Contingency				8,412,164.12
2 Land and Property - All-In Costs	Quantity	Unit	Rate €	Total €
a Mainline and Link Roads - Agricultural	24.538	acre	20,000.00	490,755.47
a.1 Severance		item		152,595.04
a.2 Disruption (percentage uplift on "2a" and "2a.1")	20	%		128,670.10
b Mainline and Link Roads - Zoned/Other		Ha.		0
c Junction/Interchanges - Agricultural		Ha.		0
d Junction/Interchanges - Zoned		Ha.		0
e Properties				
e.1 Profound Negative Impact	1	no.	300,000.00	300,000.00
e.2 Significant Neg. Impact	4	no.	150,000.00	600,000.00
e.3 Moderate Neg. Impact	1	no.	75,000.00	75,000.00
e.4 Slightly Neg. Impact	4	no.	50,000.00	200,000.00
Total Base Cost for Land and Property				1,947,020.61
Add Project Specific Risk Contingency		10	%	194,702.06
Total L&P Base Cost plus Project Specific Risk Contingency				2,141,722.68
3 Planning and Design				
Provision based on percentage of Main Construction Contract Base Cost		5	%	420,608.21
Add Project Specific Risk Contingency		10	%	42,060.82
Total P&D Base Cost plus Project Specific Risk Contingency				462,669.03

4	Archaeology			
	Provision based on percentage of Main Construction Contract Base Cost	1	%	84,121.64
	Add Project Specific Risk Contingency	20	%	16,824.33
	Total Archaeology Base Cost plus Project Specific Risk Contingency			100,945.97
5	Advance Works and Other Contracts			
	Provision based on percentage of Main Construction Contract Base Cost	2	%	168,243.28
	Add Project Specific Risk Contingency	10	%	16,824.33
	Total Advance Works and Other Contracts Base Cost plus Project Specific Risk Contingency			185,067.61
6	Main Contract Supervision (Employer's Cost)			
	Provision based on percentage of Main Construction Contract Base Cost	5	%	420,608.21
	Add Project Specific Risk Contingency	25	%	105,152.05
	Total MC Supervision (Employer's Costs) Base Cost plus Project Specific Risk Contingency			525,760.26
7	Residual Network (Provision to be subject to the approval of the TII Regional Manager)			
	Provision based on percentage of Main Construction Contract Base Cost	0.5	%	42,060.82
	Add Project Specific Risk Contingency	10	%	4,206.08
	Total Residual Network Base Cost plus Project Specific Risk Contingency			46,266.90

TOTAL LEVEL 2 ESTIMATE INCLUSIVE OF VAT				€11,874,596.57
Mainline Length	2.992	km	Rate per km	€3,968,782.28

N.B. Figures above are INCLUSIVE of VAT - VAT rates utilised are: {PLEASE INSERT RATES HERE FOR EACH COST HEADING}

Figures above are EXCLUSIVE of provision for Inflation - base due to be stated if different from date of estimate.

Total base costs to include for ALL qualifying costs under each cost heading.

Refer to TII Cost Management Manual for information on coverage.

See attached Budget Assumptions Sheet for Further Scheme Information.

25/07/2019

TII PMG Phase 2 - GREEN ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By: Shane Tobin

Checked: U O'Higgins

Schedule of Works	Quantity	Unit	Rate/Price	
A Site Clearance				
A.1 General Site Clearance	12	Ha	€1,250.00	€15,000.00
A.2 Demolition of Buildings	1	Nr.	€4,750.00	€4,750.00
Site Clearance Total to Summary				€19,750.00
B Fencing				
B.1 Permanent Boundary Fencing	6790.0	m	€26.80	€181,972.00
B.2 Temporary Fencing		m		€0.00
B.3 Mammal Fencing		m		€0.00
B.4 Other Fencing (e.g. Palisade Security Fencing)		m		€0.00
Fencing Total to Summary				€181,972.00
C Safety Barrier and Pedestrian Guardrail				
C.1 Safety Barrier and Pedestrian Guardrail Based on ...	1.0%	sum	€2,272,777.50	€22,727.78
Safety Barrier and Pedestrian Guardrail Total to Summary				€22,727.78
D Drainage and Service Ducts				
D.1a Drainage and Service Ducts based on ...	70.0%	sum	€2,272,777.50	€1,590,944.25
Drainage and Service Ducts Total to Summary				€1,590,944.25
E Earthworks				
Mainline & Link Roads				
E.1 Excavation - Topsoil	15800	m3	€1.75	€27,650.00
E.2 Excavation - Acceptable	89950	m3	€1.75	€157,412.50
E.3 Excavation - U1	10000	m3	€1.50	€15,000.00
E.4 Excavation - U2	1000	m3	€3.96	€3,960.00
E.5 Extra Over Excavation for Hard Material	17990	m3	€9.00	€161,910.00
E.6 Processing (Specify source and end use)	17990	m3	€3.63	€65,303.70
E.7 Disposal - U1	8300	m3	€4.00	€33,200.00
E.8 Disposal - U2	830	m3	€215.03	€178,474.90
E.9 Import (Specify)	5880	m3	€7.15	€42,042.00
E.10 Compaction (Specify)	65250	m3	€1.00	€65,250.00
E.11 Sub-formation and Formation	79100	m2	€0.50	€39,550.00
E.12 Landscaping (accounted for in Section L)	44900	m2	€0.00	€0.00
E.13* Disposal - Topsoil	7000	m3	€3.20	€22,400.00
E.14* Import Capping	15800	m3	€20.95	€331,010.00
E.15* Topsoiling 300mm - 10 degrees or less	18000	m2	€1.50	€27,000.00
E.16* Topsoiling 300mm - more than 10 degrees	25900	m2	€1.55	€40,145.00
E.17* Grass Seeding, 10 degrees or less	18000	m2	€0.65	€11,700.00
E.18* Grass Seeding, more than 10 degrees	25900	m2	€0.75	€19,425.00
E.19* Disposal - Acceptable				
Earthwork Sub-Total				€1,241,433.10
Junctions/Interchanges (N/A - accounted for in Mainline Works)				
Quantify works as per Mainline				
Earthworks Sub-Total				€0.00
Side Roads (N/A - accounted for in Mainline Works)				
Quantify works as per Mainline				

Earthworks Sub-Total					€0.00
Earthworks Total to Summary					€1,241,433.10
F Pavement					
Mainline					
F.1 Sub-Base and Capping (Specify)	21700	m3	€24.50		€531,650.00
F.2 Base Course (Specify)	38400	m2	€27.40		€1,052,160.00
F.3 Binder Course (Specify)	37800	m2	€8.09		€305,802.00
F.4 Surface Course (Specify)	37500	m2	€9.80		€367,500.00
F.5* Double Surface Dressing	3230	m2	€4.85		€15,665.50
Pavement Sub-Total					€2,272,777.50
Interchanges (N/A - accounted for in Mainline Works)					
Quantify works as per Mainline					
Pavement Sub-Total					€0.00
Side Roads (N/A - accounted for in Mainline Works)					
Quantify works as per Mainline					
Pavement Sub-Total					€0.00
Pavement Total to Summary					€2,272,777.50
G Kerbs Footways and Paved Areas					
Concrete footway on sub-base foundation	13.5%	sum	€2,272,777.50		€306,824.96
H Traffic Signs					
Allowance based on scheme scope and historical costs	8.0%	sum	€2,272,777.50		€181,822.20
J Roadmarkings					
Allowance based on scheme scope and historical costs	2.7%	sum	€2,272,777.50		€61,364.99
K Lighting and Electrical					
Allowance based on scheme scope and historical costs	0.0%	sum	€2,272,777.50		€0.00
L Landscaping and Environmental					
Allowance based on scheme scope and historical costs	2.5%	sum	€2,272,777.50		€56,819.44
M Structures (Including Tunnels to be separately identified)					
Structure A - Culvert		sum			€40,000.00
-					€0.00
Structures Total to Summary					€40,000.00
N Accommodation Works					
Allowance based on scheme scope and historical costs	2.5%	sum	€2,272,777.50		€56,819.44
P Statutory Authorities & Utilities					
Allowance based on scheme scope and historical costs	16.0%	sum	€2,272,777.50		€363,644.40
Q Any Other Obligations and Liabilities of the Contractor					
Allowance based on scheme scope and historical costs	0.0%	sum	€2,272,777.50		€0.00
R Preliminaries					
R.1 Temporary Works including Traffic Management (Specify)	15.0%	sum	€6,396,900.06		€959,535.01
R.1 All other Preliminary Items	0.0%	sum	€6,396,900.06		€0.00
Preliminaries Total to Summary					€959,535.01
N.B. Figures are exclusive of VAT except where expressly stated above					
Figures above are EXCLUSIVE of provision for Inflation - base due to be stated if different from date of estimate.					
Total base costs to include for ALL qualifying costs under each cost heading.					
Refer to TII Cost Management Manual for information on coverage and format of back-up.					
See attached Budget Assumptions Sheet for Further Scheme Information.					

25/07/2019

TII PMG Phase 2 - GREEN ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Main Construction Cost - Base Cost Estimate**Summary**

A	Site Clearance		€19,750.00
B	Fencing		€181,972.00
C	safety Barriers and Pedestrian Guardrails		€22,727.78
D	Drainage and Service Ducts		€1,590,944.25
E	Earthworks		€1,241,433.10
F	Pavement		€2,272,777.50
G	Kerbs, Footways and Paved Areas		€306,824.96
H	Traffic Signs		€181,822.20
J	Roadmarking		€61,364.99
K	Lighting and Electrical		€0.00
L	Landscaping and Environmental		€56,819.44
M	Structures (Including Tunnels to be separately identified)		€40,000.00
N	Accomodation Works		€56,819.44
P	Statutory Authorities & Utilities		€363,644.40
Q	Any Other Obligations and Liabilities of the Contractor		€0.00
	Sub-Total		€6,396,900.06
R	Preliminaries		€340,916.63
	MCC Base Cost Total excluding Project Specific Risk Contingency		€6,737,816.68
	Add Project Specific Risk Contingency	10.0%	€673,781.67
	MCC Base Cost Total including Project Specific Risk Contingency		€7,411,598.35
	Add VAT at	13.5%	€1,000,565.78
	MCC Base Cost Total including Project Specific Risk Contingency and VAT		€8,412,164.12
	Mainline Length	2.992	
	MCC Cost per km based on Mainline Length Only	€2,811,552.18	
	Mainline plus Link Road Length	3.508	
	MCC Cost per km based on Mainline plus Link Road Length	€2,397,994.33	

25/07/2019

TII PMG Phase 2 - BLUE ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Mainline Section Type:	Type 1 Single	Mainline Length:		2.99
Link Roads Section Type:	Single	Link Roads Length:		0.542
1 Main Construction Contract	Quantity	Unit	Rate €	Total €
a Site Clearance	various	various	various	17,500.00
b Fencing	various	various	various	182,240.00
c Safety barriers and Pedestrian Guardrail	various	various	various	22,720.70
d Drainage and Service Ducts	various	various	various	1,590,449.00
e Earthworks	various	various	various	1,381,203.30
f Pavement	various	various	various	2,272,070.00
g Kerbs	various	various	various	306,729.45
h Traffic Signs	various	various	various	181,765.60
j Roadmarkings	various	various	various	61,345.89
k Lighting and Electrical	various	various	various	0.00
l Landscaping and Environmental	various	various	various	56,801.75
m Structures (Including Tunnels - to be separately identified)	various	various	various	0.00
n Accomodation Works	various	various	various	56,801.75
p Statutory Authorities & Utilities	various	various	various	363,531.20
q Other Costs	various	various	various	0.00
r Preliminaries	various	various	various	340,810.50
Total Base Cost for Main Construction Contract (Excluding VAT)				6,833,969.14
Add Project Specific Risk Contingency		10	%	683,396.91
Sub-Total exclusive of VAT				7,517,366.05
Add VAT at		13.5	%	1,014,844.42
Total MCC Base Cost plus Project Specific Risk Contingency				8,532,210.47
2 Land and Property - All-In Costs	Quantity	Unit	Rate €	Total €
a Mainline and Link Roads - Agricultural	19.09	acre	20,000.00	381,816.76
a.1 Severance		item		91,208.00
a.2 Disruption (percentage uplift on "2a" and "2a.1")	20	%		94,604.95
b Mainline and Link Roads - Zoned/Other		Ha.		0
c Junction/Interchanges - Agricultural		Ha.		0
d Junction/Interchanges - Zoned		Ha.		0
e Properties				
e.1 Profound Negative Impact	1	no.	300,000.00	300,000.00
e.2 Significant Neg. Impact	7	no.	150,000.00	1,050,000.00
e.3 Moderate Neg. Impact	2	no.	75,000.00	150,000.00
e.4 Slightly Neg. Impact	3	no.	50,000.00	150,000.00
Total Base Cost for Land and Property				2,217,629.71
Add Project Specific Risk Contingency		10	%	221,762.97
Total L&P Base Cost plus Project Specific Risk Contingency				2,439,392.69
3 Planning and Design				
Provision based on percentage of Main Construction Contract Base Cost		5	%	426,610.52
Add Project Specific Risk Contingency		10	%	42,661.05
Total P&D Base Cost plus Project Specific Risk Contingency				469,271.58

4	Archaeology			
	Provision based on percentage of Main Construction Contract Base Cost	1	%	85,322.10
	Add Project Specific Risk Contingency	20	%	17,064.42
	Total Archaeology Base Cost plus Project Specific Risk Contingency			102,386.53
5	Advance Works and Other Contracts			
	Provision based on percentage of Main Construction Contract Base Cost	2	%	170,644.21
	Add Project Specific Risk Contingency	10	%	17,064.42
	Total Advance Works and Other Contracts Base Cost plus Project Specific Risk Contingency			187,708.63
6	Main Contract Supervision (Employer's Cost)			
	Provision based on percentage of Main Construction Contract Base Cost	5	%	426,610.52
	Add Project Specific Risk Contingency	25	%	106,652.63
	Total MC Supervision (Employer's Costs) Base Cost plus Project Specific Risk Contingency			533,263.15
7	Residual Network (Provision to be subject to the approval of the TII Regional Manager)			
	Provision based on percentage of Main Construction Contract Base Cost	0.5	%	42,661.05
	Add Project Specific Risk Contingency	10	%	4,266.11
	Total Residual Network Base Cost plus Project Specific Risk Contingency			46,927.16

TOTAL LEVEL 2 ESTIMATE INCLUSIVE OF VAT				€12,311,160.20
Mainline Length	2.99	km	Rate per km	€4,117,444.88

N.B. Figures above are INCLUSIVE of VAT - VAT rates utilised are: {PLEASE INSERT RATES HERE FOR EACH COST HEADING}

Figures above are EXCLUSIVE of provision for Inflation - base due to be stated if different from date of estimate.

Total base costs to include for ALL qualifying costs under each cost heading.

Refer to TII Cost Management Manual for information on coverage.

See attached Budget Assumptions Sheet for Further Scheme Information.

25/07/2019

TII PMG Phase 2 - BLUE ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Schedule of Works	Quantity	Unit	Rate/Price	
A Site Clearance				
A.1 General Site Clearance	14	Ha	€1,250.00	€17,500.00
A.2 Demolition of Buildings	0	Nr.	€4,750.00	€0.00
Site Clearance Total to Summary				€17,500.00
B Fencing				
B.1 Permanent Boundary Fencing	6800.0	m	€26.80	€182,240.00
B.2 Temporary Fencing		m		€0.00
B.3 Mammal Fencing		m		€0.00
B.4 Other Fencing (e.g. Palisade Security Fencing)		m		€0.00
Fencing Total to Summary				€182,240.00
C Safety Barrier and Pedestrian Guardrail				
C.1 Safety Barrier and Pedestrian Guardrail Based on ...	1.0%	sum	€2,272,070.00	€22,720.70
Safety Barrier and Pedestrian Guardrail Total to Summary				€22,720.70
D Drainage and Service Ducts				
D.1a Drainage and Service Ducts based on ...	70.0%	sum	€2,272,070.00	€1,590,449.00
Drainage and Service Ducts Total to Summary				€1,590,449.00
E Earthworks				
Mainline & Link Roads				
E.1 Excavation - Topsoil	17900	m3	€1.75	€31,325.00
E.2 Excavation - Acceptable	74700	m3	€1.75	€130,725.00
E.3 Excavation - U1	8400	m3	€1.50	€12,600.00
E.4 Excavation - U2	840	m3	€3.96	€3,326.40
E.5 Extra Over Excavation for Hard Material	14940	m3	€9.00	€134,460.00
E.6 Processing (Specify source and end use)	14940	m3	€3.63	€54,232.20
E.7 Disposal - U1	8400	m3	€4.00	€33,600.00
E.8 Disposal - U2	840	m3	€215.03	€180,625.20
E.9 Import (Specify)	22900	m3	€7.15	€163,735.00
E.10 Compaction (Specify)	119500	m3	€1.00	€119,500.00
E.11 Sub-formation and Formation	89650	m2	€0.50	€44,825.00
E.12 Landscaping (accounted for in Section L)	45850	m2	€0.00	€0.00
E.13* Disposal - Topsoil	7460	m3	€3.20	€23,872.00
E.14* Import Capping	15800	m3	€20.95	€331,010.00
E.15* Topsoiling 300mm - 10 degrees or less	17950	m2	€1.50	€26,925.00
E.16* Topsoiling 300mm - more than 10 degrees	34250	m2	€1.55	€53,087.50
E.17* Grass Seeding, 10 degrees or less	17950	m2	€0.65	€11,667.50
E.18* Grass Seeding, more than 10 degrees	34250	m2	€0.75	€25,687.50
E.19* Disposal - Acceptable				
Earthwork Sub-Total				€1,381,203.30
Junctions/Interchanges (N/A - accounted for in Mainline Works)				
Quantify works as per Mainline				
Earthworks Sub-Total				€0.00
Side Roads (N/A - accounted for in Mainline Works)				
Quantify works as per Mainline				
Earthworks Sub-Total				€0.00

Earthworks Total to Summary					€1,381,203.30
F Pavement					
Mainline					
F.1 Sub-Base and Capping (Specify)	21700	m3	€24.50	€531,650.00	
F.2 Base Course (Specify)	38350	m2	€27.40	€1,050,790.00	
F.3 Binder Course (Specify)	37750	m2	€8.09	€305,397.50	
F.4 Surface Course (Specify)	37500	m2	€9.80	€367,500.00	
F.5* Double Surface Dressing	3450	m2	€4.85	€16,732.50	
Pavement Sub-Total					€2,272,070.00
Interchanges (N/A - accounted for in Mainline Works)					
Quantify works as per Mainline					
Pavement Sub-Total					€0.00
Side Roads (N/A - accounted for in Mainline Works)					
Quantify works as per Mainline					
Pavement Sub-Total					€0.00
Pavement Total to Summary					€2,272,070.00
G Kerbs Footways and Paved Areas					
Concrete footway on sub-base foundation	13.5%	sum	€2,272,070.00	€306,729.45	
H Traffic Signs					
Allowance based on scheme scope and historical costs	8.0%	sum	€2,272,070.00	€181,765.60	
J Roadmarkings					
Allowance based on scheme scope and historical costs	2.7%	sum	€2,272,070.00	€61,345.89	
K Lighting and Electrical					
Allowance based on scheme scope and historical costs	0.0%	sum	€2,272,070.00	€0.00	
L Landscaping and Environmental					
Allowance based on scheme scope and historical costs	2.5%	sum	€2,272,070.00	€56,801.75	
M Structures (Including Tunnels to be separately identified)					
None				€0.00	
-				€0.00	
Structures Total to Summary					€0.00
N Accommodation Works					
Allowance based on scheme scope and historical costs	2.5%	sum	€2,272,070.00	€56,801.75	
P Statutory Authorities & Utilities					
Allowance based on scheme scope and historical costs	16.0%	sum	€2,272,070.00	€363,531.20	
Q Any Other Obligations and Liabilities of the Contractor					
Allowance based on scheme scope and historical costs	0.0%	sum	€2,272,070.00	€0.00	
R Preliminaries					
R.1 Temporary Works including Traffic Management (Specify)	15.0%	sum	€6,493,158.64	€973,973.80	
R.1 All other Preliminary Items	0.0%	sum	€6,493,158.64	€0.00	
Preliminaries Total to Summary					€973,973.80
N.B. Figures are exclusive of VAT except where expressly stated above					
Figures above are EXCLUSIVE of provision for Inflation - base due to be stated if different from date of estimate.					
Total base costs to include for ALL qualifying costs under each cost heading.					
Refer to TII Cost Management Manual for information on coverage and format of back-up.					
See attached Budget Assumptions Sheet for Further Scheme Information.					

25/07/2019

TII PMG Phase 2 - BLUE ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Main Construction Cost - Base Cost Estimate**Summary**

A	Site Clearance		€17,500.00
B	Fencing		€182,240.00
C	safety Barriers and Pedestrian Guardrails		€22,720.70
D	Drainage and Service Ducts		€1,590,449.00
E	Earthworks		€1,381,203.30
F	Pavement		€2,272,070.00
G	Kerbs, Footways and Paved Areas		€306,729.45
H	Traffic Signs		€181,765.60
J	Roadmarking		€61,345.89
K	Lighting and Electrical		€0.00
L	Landscaping and Environmental		€56,801.75
M	Structures (Including Tunnels to be separately identified)		€0.00
N	Accomodation Works		€56,801.75
P	Statutory Authorities & Utilities		€363,531.20
Q	Any Other Obligations and Liabilities of the Contractor		€0.00
	Sub-Total		€6,493,158.64
R	Preliminaries		€340,810.50
	MCC Base Cost Total excluding Project Specific Risk Contingency		€6,833,969.14
	Add Project Specific Risk Contingency	10.0%	€683,396.91
	MCC Base Cost Total including Project Specific Risk Contingency		€7,517,366.05
	Add VAT at	13.5%	€1,014,844.42
	MCC Base Cost Total including Project Specific Risk Contingency and VAT		€8,532,210.47
	Mainline Length	2.99	
	MCC Cost per km based on Mainline Length Only	€2,853,582.10	
	Mainline plus Link Road Length	3.532	
	MCC Cost per km based on Mainline plus Link Road Length	€2,415,688.13	

25/07/2019

TII PMG Phase 2 - PURPLE ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Mainline Section Type:		Type 1 Single	Mainline Length:		3.34
Link Roads Section Type:		Single	Link Roads Length:		0.816
1	Main Construction Contract	Quantity	Unit	Rate €	Total €
	a Site Clearance	various	various	various	17,500.00
	b Fencing	various	various	various	214,400.00
	c Safety barriers and Pedestrian Guardrail	various	various	various	24,660.61
	d Drainage and Service Ducts	various	various	various	1,726,242.70
	e Earthworks	various	various	various	1,339,929.50
	f Pavement	various	various	various	2,466,061.00
	g Kerbs	various	various	various	332,918.24
	h Traffic Signs	various	various	various	197,284.88
	j Roadmarkings	various	various	various	66,583.65
	k Lighting and Electrical	various	various	various	0.00
	l Landscaping and Environmental	various	various	various	61,651.53
	m Structures (Including Tunnels - to be separately identified)	various	various	various	40,000.00
	n Accomodation Works	various	various	various	61,651.53
	p Statutory Authorities & Utilities	various	various	various	394,569.76
	q Other Costs	various	various	various	0.00
	r Preliminaries	various	various	various	369,909.15
Total Base Cost for Main Construction Contract (Excluding VAT)					7,313,362.53
Add Project Specific Risk Contingency			10	%	731,336.25
Sub-Total exclusive of VAT					8,044,698.79
Add VAT at			13.5	%	1,086,034.34
Total MCC Base Cost plus Project Specific Risk Contingency					9,130,733.12
2	Land and Property - All-In Costs	Quantity	Unit	Rate €	Total €
	a Mainline and Link Roads - Agricultural	28.77	acre	20,000.00	575,334.57
	a.1 Severance		item		167,878.65
	a.2 Disruption (percentage uplift on "2a" and "2a.1")	20	%		148,642.64
	b Mainline and Link Roads - Zoned/Other		Ha.		0
	c Junction/Interchanges - Agricultural		Ha.		0
	d Junction/Interchanges - Zoned		Ha.		0
	e Properties				
	e.1 Profound Negative Impact	0	no.	300,000.00	0.00
	e.2 Significant Neg. Impact	2	no.	150,000.00	300,000.00
	e.3 Moderate Neg. Impact	1	no.	75,000.00	75,000.00
	e.4 Slightly Neg. Impact	4	no.	50,000.00	200,000.00
Total Base Cost for Land and Property					1,466,855.87
Add Project Specific Risk Contingency			10	%	146,685.59
Total L&P Base Cost plus Project Specific Risk Contingency					1,613,541.45
3	Planning and Design				
Provision based on percentage of Main Construction Contract Base Cost			5	%	456,536.66
Add Project Specific Risk Contingency			10	%	45,653.67
Total P&D Base Cost plus Project Specific Risk Contingency					502,190.32

4	Archaeology			
	Provision based on percentage of Main Construction Contract Base Cost	1	%	91,307.33
	Add Project Specific Risk Contingency	20	%	18,261.47
	Total Archaeology Base Cost plus Project Specific Risk Contingency			109,568.80
5	Advance Works and Other Contracts			
	Provision based on percentage of Main Construction Contract Base Cost	2	%	182,614.66
	Add Project Specific Risk Contingency	10	%	18,261.47
	Total Advance Works and Other Contracts Base Cost plus Project Specific Risk Contingency			200,876.13
6	Main Contract Supervision (Employer's Cost)			
	Provision based on percentage of Main Construction Contract Base Cost	5	%	456,536.66
	Add Project Specific Risk Contingency	25	%	114,134.16
	Total MC Supervision (Employer's Costs) Base Cost plus Project Specific Risk Contingency			570,670.82
7	Residual Network (Provision to be subject to the approval of the TII Regional Manager)			
	Provision based on percentage of Main Construction Contract Base Cost	0.5	%	45,653.67
	Add Project Specific Risk Contingency	10	%	4,565.37
	Total Residual Network Base Cost plus Project Specific Risk Contingency			50,219.03

TOTAL LEVEL 2 ESTIMATE INCLUSIVE OF VAT	€12,177,799.67
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Mainline Length	3.34	km	Rate per km	€3,646,047.81
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N.B. Figures above are INCLUSIVE of VAT - VAT rates utilised are: {PLEASE INSERT RATES HERE FOR EACH COST HEADING}

Figures above are EXCLUSIVE of provision for Inflation - base due to be stated if different from date of estimate.

Total base costs to include for ALL qualifying costs under each cost heading.

Refer to TII Cost Management Manual for information on coverage.

See attached Budget Assumptions Sheet for Further Scheme Information.

25/07/2019

TII PMG Phase 2 - PURPLE ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Schedule of Works	Quantity	Unit	Rate/Price	
A Site Clearance				
A.1 General Site Clearance	14	Ha	€1,250.00	€17,500.00
A.2 Demolition of Buildings	0	Nr.	€4,750.00	€0.00
Site Clearance Total to Summary				€17,500.00
B Fencing				
B.1 Permanent Boundary Fencing	8000.0	m	€26.80	€214,400.00
B.2 Temporary Fencing		m		€0.00
B.3 Mammal Fencing		m		€0.00
B.4 Other Fencing (e.g. Palisade Security Fencing)		m		€0.00
Fencing Total to Summary				€214,400.00
C Safety Barrier and Pedestrian Guardrail				
C.1 Safety Barrier and Pedestrian Guardrail Based on ...	1.0%	sum	€2,466,061.00	€24,660.61
Safety Barrier and Pedestrian Guardrail Total to Summary				€24,660.61
D Drainage and Service Ducts				
D.1a Drainage and Service Ducts based on ...	70.0%	sum	€2,466,061.00	€1,726,242.70
Drainage and Service Ducts Total to Summary				€1,726,242.70
E Earthworks				
Mainline & Link Roads				
E.1 Excavation - Topsoil	16550	m3	€1.75	€28,962.50
E.2 Excavation - Acceptable	92450	m3	€1.75	€161,787.50
E.3 Excavation - U1	10400	m3	€1.50	€15,600.00
E.4 Excavation - U2	1040	m3	€3.96	€4,118.40
E.5 Extra Over Excavation for Hard Material	18490	m3	€9.00	€166,410.00
E.6 Processing (Specify source and end use)	18490	m3	€3.63	€67,118.70
E.7 Disposal - U1	8300	m3	€4.00	€33,200.00
E.8 Disposal - U2	830	m3	€215.03	€178,474.90
E.9 Import (Specify)	6400	m3	€7.15	€45,760.00
E.10 Compaction (Specify)	115900	m3	€1.00	€115,900.00
E.11 Sub-formation and Formation	82720	m2	€0.50	€41,360.00
E.12 Landscaping (accounted for in Section L)	55050	m2	€0.00	€0.00
E.13* Disposal - Topsoil	7750	m3	€3.20	€24,800.00
E.14* Import Capping	17100	m3	€20.95	€358,245.00
E.15* Topsoiling 300mm - 10 degrees or less	20050	m2	€1.50	€30,075.00
E.16* Topsoiling 300mm - more than 10 degrees	23950	m2	€1.55	€37,122.50
E.17* Grass Seeding, 10 degrees or less	20050	m2	€0.65	€13,032.50
E.18* Grass Seeding, more than 10 degrees	23950	m2	€0.75	€17,962.50
E.19* Disposal - Acceptable				
Earthwork Sub-Total				€1,339,929.50
Junctions/Interchanges (N/A - accounted for in Mainline Works)				
Quantify works as per Mainline				
Earthworks Sub-Total				€0.00
Side Roads (N/A - accounted for in Mainline Works)				
Quantify works as per Mainline				
Earthworks Sub-Total				€0.00
Earthworks Total to Summary				€1,339,929.50

F Pavement					
Mainline					
F.1 Sub-Base and Capping (Specify)	23500	m3	€24.50	€575,750.00	
F.2 Base Course (Specify)	41510	m2	€27.40	€1,137,374.00	
F.3 Binder Course (Specify)	40850	m2	€8.09	€330,476.50	
F.4 Surface Course (Specify)	40510	m2	€9.80	€396,998.00	
F.5* Double Surface Dressing	5250	m2	€4.85	€25,462.50	
Pavement Sub-Total				€2,466,061.00	
Interchanges (N/A - accounted for in Mainline Works)					
Quantify works as per Mainline					
Pavement Sub-Total				€0.00	
Side Roads (N/A - accounted for in Mainline Works)					
Quantify works as per Mainline					
Pavement Sub-Total				€0.00	
Pavement Total to Summary				€2,466,061.00	
G Kerbs Footways and Paved Areas					
Concrete footway on sub-base foundation	13.5%	sum	€2,466,061.00	€332,918.24	
H Traffic Signs					
Allowance based on scheme scope and historical costs	8.0%	sum	€2,466,061.00	€197,284.88	
J Roadmarkings					
Allowance based on scheme scope and historical costs	2.7%	sum	€2,466,061.00	€66,583.65	
K Lighting and Electrical					
Allowance based on scheme scope and historical costs	0.0%	sum	€2,466,061.00	€0.00	
L Landscaping and Environmental					
Allowance based on scheme scope and historical costs	2.5%	sum	€2,466,061.00	€61,651.53	
M Structures (Including Tunnels to be separately identified)					
Structure A - Culvert				€40,000.00	
-				€0.00	
Structures Total to Summary				€40,000.00	
N Accomodation Works					
Allowance based on scheme scope and historical costs	2.5%	sum	€2,466,061.00	€61,651.53	
P Statutory Authorities & Utilities					
Allowance based on scheme scope and historical costs	16.0%	sum	€2,466,061.00	€394,569.76	
Q Any Other Obligations and Liabilities of the Contractor					
Allowance based on scheme scope and historical costs	0.0%	sum	€2,466,061.00	€0.00	
R Preliminaries					
R.1 Temporary Works including Traffic Management (Specify)	15.0%	sum	€6,943,453.38	€1,041,518.01	
R.1 All other Preliminary Items	0.0%	sum	€6,943,453.38	€0.00	
Preliminaries Total to Summary				€1,041,518.01	
N.B. Figures are exclusive of VAT except where expressly stated above					
Figures above are EXCLUSIVE of provision for Inflation - base due to be stated if different from date of estimate.					
Total base costs to include for ALL qualifying costs under each cost heading.					
Refer to TII Cost Management Manual for information on coverage and format of back-up.					
See attached Budget Assumptions Sheet for Further Scheme Information.					

25/07/2019

TII PMG Phase 2 - PURPLE ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Main Construction Cost - Base Cost Estimate**Summary**

A	Site Clearance		€17,500.00
B	Fencing		€214,400.00
C	safety Barriers and Pedestrian Guardrails		€24,660.61
D	Drainage and Service Ducts		€1,726,242.70
E	Earthworks		€1,339,929.50
F	Pavement		€2,466,061.00
G	Kerbs, Footways and Paved Areas		€332,918.24
H	Traffic Signs		€197,284.88
J	Roadmarking		€66,583.65
K	Lighting and Electrical		€0.00
L	Landscaping and Environmental		€61,651.53
M	Structures (Including Tunnels to be separately identified)		€40,000.00
N	Accomodation Works		€61,651.53
P	Statutory Authorities & Utilities		€394,569.76
Q	Any Other Obligations and Liabilities of the Contractor		€0.00
	Sub-Total		€6,943,453.38
R	Preliminaries		€369,909.15
	MCC Base Cost Total excluding Project Specific Risk Contingency		€7,313,362.53
	Add Project Specific Risk Contingency	10.0%	€731,336.25
	MCC Base Cost Total including Project Specific Risk Contingency		€8,044,698.79
	Add VAT at	13.5%	€1,086,034.34
	MCC Base Cost Total including Project Specific Risk Contingency and VAT		€9,130,733.12

Mainline Length

3.34

MCC Cost per km based on Mainline Length Only

€2,733,752.43

Mainline plus Link Road Length

4.156

MCC Cost per km based on Mainline plus Link Road Length

€2,197,000.27

25/07/2019

TII PMG Phase 2 - BROWN ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Mainline Section Type:		Type 1 Single	Mainline Length:		3.35
Link Roads Section Type:		Single	Link Roads Length:		0.394
1	Main Construction Contract	Quantity	Unit	Rate €	Total €
	a Site Clearance	various	various	various	17,500.00
	b Fencing	various	various	various	195,640.00
	c Safety barriers and Pedestrian Guardrail	various	various	various	24,614.10
	d Drainage and Service Ducts	various	various	various	1,722,986.65
	e Earthworks	various	various	various	1,565,785.90
	f Pavement	various	various	various	2,461,409.50
	g Kerbs	various	various	various	332,290.28
	h Traffic Signs	various	various	various	196,912.76
	j Roadmarkings	various	various	various	66,458.06
	k Lighting and Electrical	various	various	various	0.00
	l Landscaping and Environmental	various	various	various	61,535.24
	m Structures (Including Tunnels - to be separately identified)	various	various	various	0.00
	n Accomodation Works	various	various	various	61,535.24
	p Statutory Authorities & Utilities	various	various	various	393,825.52
	q Other Costs	various	various	various	0.00
	r Preliminaries	various	various	various	369,211.43
Total Base Cost for Main Construction Contract (Excluding VAT)					7,469,704.66
Add Project Specific Risk Contingency			10	%	746,970.47
Sub-Total exclusive of VAT					8,216,675.13
Add VAT at			13.5	%	1,109,251.14
Total MCC Base Cost plus Project Specific Risk Contingency					9,325,926.27
2	Land and Property - All-In Costs	Quantity	Unit	Rate €	Total €
	a Mainline and Link Roads - Agricultural	22.68	acre	20,000.00	453,694.66
	a.1 Severance		item		103,842.05
	a.2 Disruption (percentage uplift on "2a" and "2a.1")	20	%		111,507.34
	b Mainline and Link Roads - Zoned/Other		Ha.		0
	c Junction/Interchanges - Agricultural		Ha.		0
	d Junction/Interchanges - Zoned		Ha.		0
	e Properties				
	e.1 Profound Negative Impact	0	no.	300,000.00	0.00
	e.2 Significant Neg. Impact	4	no.	150,000.00	600,000.00
	e.3 Moderate Neg. Impact	3	no.	75,000.00	225,000.00
	e.4 Slightly Neg. Impact	2	no.	50,000.00	100,000.00
Total Base Cost for Land and Property					1,594,044.06
Add Project Specific Risk Contingency			10	%	159,404.41
Total L&P Base Cost plus Project Specific Risk Contingency					1,753,448.46
3	Planning and Design				
Provision based on percentage of Main Construction Contract Base Cost			5	%	466,296.31
Add Project Specific Risk Contingency			10	%	46,629.63
Total P&D Base Cost plus Project Specific Risk Contingency					512,925.95

4	Archaeology			
	Provision based on percentage of Main Construction Contract Base Cost	1	%	93,259.26
	Add Project Specific Risk Contingency	20	%	18,651.85
	Total Archaeology Base Cost plus Project Specific Risk Contingency			111,911.12
5	Advance Works and Other Contracts			
	Provision based on percentage of Main Construction Contract Base Cost	2	%	186,518.53
	Add Project Specific Risk Contingency	10	%	18,651.85
	Total Advance Works and Other Contracts Base Cost plus Project Specific Risk Contingency			205,170.38
6	Main Contract Supervision (Employer's Cost)			
	Provision based on percentage of Main Construction Contract Base Cost	5	%	466,296.31
	Add Project Specific Risk Contingency	25	%	116,574.08
	Total MC Supervision (Employer's Costs) Base Cost plus Project Specific Risk Contingency			582,870.39
7	Residual Network (Provision to be subject to the approval of the TII Regional Manager)			
	Provision based on percentage of Main Construction Contract Base Cost	0.5	%	46,629.63
	Add Project Specific Risk Contingency	10	%	4,662.96
	Total Residual Network Base Cost plus Project Specific Risk Contingency			51,292.59

TOTAL LEVEL 2 ESTIMATE INCLUSIVE OF VAT				€12,543,545.16
Mainline Length	3.35	km	Rate per km	€3,744,341.84

N.B. Figures above are INCLUSIVE of VAT - VAT rates utilised are: {PLEASE INSERT RATES HERE FOR EACH COST HEADING}

Figures above are EXCLUSIVE of provision for Inflation - base due to be stated if different from date of estimate.

Total base costs to include for ALL qualifying costs under each cost heading.

Refer to TII Cost Management Manual for information on coverage.

See attached Budget Assumptions Sheet for Further Scheme Information.

		25/07/2019			
TII PMG Phase 2 - BROWN ROUTE		BASE COST YEAR - 2019 (Current Year)			
ATKINS Ireland		By:	Checked:		
Schedule of Works		Quantity	Unit	Rate/Price	
A Site Clearance					
A.1 General Site Clearance		14	Ha	€1,250.00	€17,500.00
A.2 Demolition of Buildings		0	Nr.	€4,750.00	€0.00
Site Clearance Total to Summary				€17,500.00	
B Fencing					
B.1 Permanent Boundary Fencing		7300.0	m	€26.80	€195,640.00
B.2 Temporary Fencing			m		€0.00
B.3 Mammal Fencing			m		€0.00
B.4 Other Fencing (e.g. Palisade Security Fencing)			m		€0.00
Fencing Total to Summary				€195,640.00	
C Safety Barrier and Pedestrian Guardrail					
C.1 Safety Barrier and Pedestrian Guardrail Based on ...		1.0%	sum	€2,461,409.50	€24,614.10
Safety Barrier and Pedestrian Guardrail Total to Summary				€24,614.10	
D Drainage and Service Ducts					
D.1a Drainage and Service Ducts based on ...		70.0%	sum	€2,461,409.50	€1,722,986.65
Drainage and Service Ducts Total to Summary				€1,722,986.65	
E Earthworks					
Mainline & Link Roads					
E.1 Excavation - Topsoil		18700	m3	€1.75	€32,725.00
E.2 Excavation - Acceptable		67200	m3	€1.75	€117,600.00
E.3 Excavation - U1		7550	m3	€1.50	€11,325.00
E.4 Excavation - U2		755	m3	€3.96	€2,989.80
E.5 Extra Over Excavation for Hard Material		13440	m3	€9.00	€120,960.00
E.6 Processing (Specify source and end use)		13440	m3	€3.63	€48,787.20
E.7 Disposal - U1		6300	m3	€4.00	€25,200.00
E.8 Disposal - U2		630	m3	€215.03	€135,468.90
E.9 Import (Specify)		52800	m3	€7.15	€377,520.00
E.10 Compaction (Specify)		137150	m3	€1.00	€137,150.00
E.11 Sub-formation and Formation		93500	m2	€0.50	€46,750.00
E.12 Landscaping (accounted for in Section L)		48000	m2	€0.00	€0.00
E.13* Disposal - Topsoil		7600	m3	€3.20	€24,320.00
E.14* Import Capping		17200	m3	€20.95	€360,340.00
E.15* Topsoiling 300mm - 10 degrees or less		20000	m2	€1.50	€30,000.00
E.16* Topsoiling 300mm - more than 10 degrees		35500	m2	€1.55	€55,025.00
E.17* Grass Seeding, 10 degrees or less		20000	m2	€0.65	€13,000.00
E.18* Grass Seeding, more than 10 degrees		35500	m2	€0.75	€26,625.00
E.19* Disposal - Acceptable			m3		€0.00
Earthwork Sub-Total				€1,565,785.90	
Junctions/Interchanges (N/A - accounted for in Mainline Works)					
Quantify works as per Mainline					
Earthworks Sub-Total				€0.00	
Side Roads (N/A - accounted for in Mainline Works)					
Quantify works as per Mainline					
Earthworks Sub-Total				€0.00	
Earthworks Total to Summary				€1,565,785.90	

F Pavement					
Mainline					
F.1 Sub-Base and Capping (Specify)	23500	m3	€24.50	€575,750.00	
F.2 Base Course (Specify)	41700	m2	€27.40	€1,142,580.00	
F.3 Binder Course (Specify)	41050	m2	€8.09	€332,094.50	
F.4 Surface Course (Specify)	40700	m2	€9.80	€398,860.00	
F.5* Double Surface Dressing	2500	m2	€4.85	€12,125.00	
Pavement Sub-Total				€2,461,409.50	
Interchanges (N/A - accounted for in Mainline Works)					
Quantify works as per Mainline					
Pavement Sub-Total				€0.00	
Side Roads (N/A - accounted for in Mainline Works)					
Quantify works as per Mainline					
Pavement Sub-Total				€0.00	
Pavement Total to Summary				€2,461,409.50	
G Kerbs Footways and Paved Areas					
Concrete footway on sub-base foundation	13.5%	sum	€2,461,409.50	€332,290.28	
H Traffic Signs					
Allowance based on scheme scope and historical costs	8.0%	sum	€2,461,409.50	€196,912.76	
J Roadmarkings					
Allowance based on scheme scope and historical costs	2.7%	sum	€2,461,409.50	€66,458.06	
K Lighting and Electrical					
Allowance based on scheme scope and historical costs	0.0%	sum	€2,461,409.50	€0.00	
L Landscaping and Environmental					
Allowance based on scheme scope and historical costs	2.5%	sum	€2,461,409.50	€61,535.24	
M Structures (Including Tunnels to be separately identified)					
None				€0.00	
-				€0.00	
Structures Total to Summary				€0.00	
N Accommodation Works					
Allowance based on scheme scope and historical costs	2.5%	sum	€2,461,409.50	€61,535.24	
P Statutory Authorities & Utilities					
Allowance based on scheme scope and historical costs	16.0%	sum	€2,461,409.50	€393,825.52	
Q Any Other Obligations and Liabilities of the Contractor					
Allowance based on scheme scope and historical costs	0.0%	sum	€2,461,409.50	€0.00	
R Preliminaries					
R.1 Temporary Works including Traffic Management (Specify)	15.0%	sum	€7,100,493.24	€1,065,073.99	
R.1 All other Preliminary Items	0.0%	sum	€7,100,493.24	€0.00	
Preliminaries Total to Summary				€1,065,073.99	
N.B. Figures are exclusive of VAT except where expressly stated above					
Figures above are EXCLUSIVE of provision for Inflation - base due to be stated if different from date of estimate.					
Total base costs to include for ALL qualifying costs under each cost heading.					
Refer to TII Cost Management Manual for information on coverage and format of back-up.					
See attached Budget Assumptions Sheet for Further Scheme Information.					

25/07/2019

TII PMG Phase 2 - BROWN ROUTE

BASE COST YEAR - 2019 (Current Year)

ATKINS Ireland

By:

Checked:

Main Construction Cost - Base Cost Estimate**Summary**

A	Site Clearance		€17,500.00
B	Fencing		€195,640.00
C	safety Barriers and Pedestrian Guardrails		€24,614.10
D	Drainage and Service Ducts		€1,722,986.65
E	Earthworks		€1,565,785.90
F	Pavement		€2,461,409.50
G	Kerbs, Footways and Paved Areas		€332,290.28
H	Traffic Signs		€196,912.76
J	Roadmarking		€66,458.06
K	Lighting and Electrical		€0.00
L	Landscaping and Environmental		€61,535.24
M	Structures (Including Tunnels to be separately identified)		€0.00
N	Accomodation Works		€61,535.24
P	Statutory Authorities & Utilities		€393,825.52
Q	Any Other Obligations and Liabilities of the Contractor		€0.00
	Sub-Total		€7,100,493.24
R	Preliminaries		€369,211.43
	MCC Base Cost Total excluding Project Specific Risk Contingency		€7,469,704.66
	Add Project Specific Risk Contingency	10.0%	€746,970.47
	MCC Base Cost Total including Project Specific Risk Contingency		€8,216,675.13
	Add VAT at	13.5%	€1,109,251.14
	MCC Base Cost Total including Project Specific Risk Contingency and VAT		€9,325,926.27
	Mainline Length	3.35	
	MCC Cost per km based on Mainline Length Only	€2,783,858.59	
	Mainline plus Link Road Length	3.744	
	MCC Cost per km based on Mainline plus Link Road Length	€2,490,899.11	