

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 1500

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>15,00</b>	<b>ACCOMMODATION OF TRAFFIC</b>				
15,01	Accommodating traffic and maintaining temporary deviations	km	3,00		
15,02	Earthworks for temporary deviations				
	(a) Shaping of temporary deviations	km	3,00		
	(b) Cut and borrow to fill	m <sup>3</sup>	550		
	(c) Cut to spoil	m <sup>3</sup>	550		
15,03	Temporary traffic-control facilities				
	(a) Flagmen	man-day	1080		
	(b) Portable STOP and GO-RY signs	No	8		
	(e) Road signs R and TR series (as shown on drawings)	No	8		
	(f) Road signs TW series (as shown on drawings)	No	8		
	(g) Road signs, STW,DTG,TGS AND TG Series	No	8		
	(h) Delineators (DTG50J) (250 mm x 1000 mm):				
	(i) Single	No	60		
	(j) Traffic cones (750 mm)	No	75		
15,04	Relocation of traffic-control facilities	Lump Sum	2		
15,05	Gravelling and repair of temporary deviations and existing gravel shoulders used as temporary deviations:				
	(a) Temporary deviations	m <sup>3</sup>	350		
15,06	Watering of temporary deviations	kl	1 550		
15,07	Blading by road grader of:				
	(a) Temporary deviations	km-pass	14,0		
15/16.02	(d) Overhaul on excavated material carted to spoil, for haul in excess of a free-haul distance of 1,0 km	m <sup>3</sup> -km	450		
B15.14	The provision and maintenance of rotating lights, etc. for the use of the Engineer and his staff				
	(a) Rotating lights	No.	2		
	(b) Safety vests	No.	4		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					<b>R -</b>

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 1700

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>17,00</b>	<b>CLEARING AND GRUBBING</b>				
17,01	Clearing and grubbing	ha	2,00		
17,02	Removal and grubbing of large trees and tree stumps (a) Girth exceeding 1m up to and including 2m	no	9		
17,03	Re-clearing of surfaces (on the written instructions of the Engineer only)	ha	1,0		
17,04	Clearing and grubbing at inlets and outlets of hydraulic structures	m <sup>2</sup>	100		
17,05	Cleaning out of hydraulic structures				
	(a) Pipes with an internal diameter up to and including 750mm	m <sup>3</sup>	50		
	(b) Pipes with an internal diameter exceeding 750mm	m <sup>3</sup>	20		
	(d) Box Culverts exceeding 1.5m vertical dimentions	m <sup>3</sup>	5		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 2100

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>21,00</b>	<b>DRAINS</b>				
21,01	Excavation for open drains: (a) Excavating soft material situated within the following depth ranges below the surfaces level:  (i) 0 m up to 1,5 m	m <sup>3</sup>	435		
	(b) Extra over subitem 21.01(a) for excavation in hard material, irrespective of depth	m <sup>3</sup>	125		
21,02	Clearing and shaping existing open drains	m <sup>3</sup>	25		
21,03	Excavation for subsoil drainage systems: (a) Excavating soft material situated within the following depth ranges below the surfaces level:  (i) 0 m up to 1,5 m	m <sup>3</sup>	160		
	(b) Extra over subitem 21.01(a) for excavation in hard material, irrespective of depth	m <sup>3</sup>	85		
21,06	Natural permeable material in subsoil drainage system (Crushed stone) (a) Crushed stone obtained from commercial sources  (i) 13mm aggregate	m <sup>3</sup>	120		
	(ii) 6.7mm aggregate	m <sup>3</sup>	120		
21,07	Natural permeable material in subsoil drainage system (Sand) Sand obtained from commercial sources (river sand)	m <sup>3</sup>	160		
21,08	Pipes in subsoil drainage systems:  (b) Unplasticized PVC pipes and fittings, normal duty, complete with couplings  (i) 110mm perforated	m	80		
	(ii) 160mm perforated	m	650		
21,10	Synthetic-fibre filter fabric (a) Non-woven Kaymay U24 geotextile or similar approved	m <sup>2</sup>	450		
21,14	Repairing or replacing existing drainage systems	m	50		
21,12	Concrete outlet structures, manhole boxes, junction boxes and cleaning eyes for subsoil drainage systems  (a) Outlet structures	no	2		
	(b) Manhole boxes	no	2		
	(c) Junction boxes	no	3		
	(d) Cleaning eyes	no	3		
21,19	Selected backfill material under concrete-lined side drains compacted to 93% of modified AASHTO density	m <sup>3</sup>	175		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 2200

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>22,00</b>	<b>PREFABRICATED CULVERTS</b>				
22,01	Excavation (a) Excavating soft material situated within the following depth ranges below the surface level: (i) 0 m up to 1,5 m (ii) 1,5 m up to 3,0 m (b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	300 210 50		
22/ 61.03	Access and Drainage (b) Drainage	Lump Sum	1		
22,02	Backfilling: (a) Using the excavated material (b) Using imported selected material from commercial sources (c) Soil Cement	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	125 75 25		
22/ 62.08	Foundation fill consisting of: (a) Rock fill (b) Crushed Stone fill (d) Mass Concrete, Class 25/19	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	75 50 45		
22,03	Concrete Pipe Culverts (i) 600 mm dia class 100D concrete pipe culvert on class B bedding  (ii) 900 mm dia class 100D concrete pipe culvert on class B bedding	m  m	100  40		
22,07	Cast in situ concrete and formwork (a) In floor slab for catchpits, manholes excluding formwork, including class U2 surface finish (i) Class 25/19 concrete	m <sup>3</sup>	450		
22,10	Steel Reinforcement (a) Mild steel bars (b) High-tensile steel bars (c) Welded steel fabric (395 mesh ref)	ton ton ton	2 2 3		
22,11	Dowels for joining old and new concrete	kg	100		
22,12	Removing existing Concrete (a) Plain Concrete (b) Reinforced Concrete	m <sup>3</sup> m <sup>3</sup>	150 85		
22,17	Manholes, catchpits, precast inlet and outlet structures complete (a) Manhole boxes type as indicated in drawing (b) Catchpit type as indicated in drawing	no no	8 8		
22,18	Brickwork (b) 230mm brickwork	m <sup>2</sup>	200		
22,19	Plaster	m <sup>2</sup>	200		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 2300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
23,00	<b>CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS</b>				
23,01	Concrete kerbing				
	(a) Precast kerbing to SABS 927				
	(i) Figure 8b (Mountable)	m	4400		
	(ii) Figure 7 Kerb (semi Mountable)	m	150		
23,02	Concrete kerbing-channeling combination				
	(i) Figure 7 kerb (Non Mountable) Type B: with 300mm wide concrete channel	m	250		
	(ii) Figure 8B kerb (Mountable) Type C: with 300mm wide concrete channel	m	250		
23,07	Trimming of excavations for concrete-lined open drains				
	(a) In soft material	m <sup>2</sup>	550		
	(b) In hard material	m <sup>2</sup>	325		
B23.08	Concrete lining for open drains including formwork				
	(a) Cast in situ concrete lining class 25/19 for all types of open drains	m <sup>3</sup>	480		
	(b) Class U2 surface finish to cast in situ concrete for all types of open drain	m <sup>2</sup>	580		
23.12	Steel reinforcement				
	(a) Welded steel fabric (395 mesh ref)	ton	10		
23,13	Polyethylene sheeting 0,15 mm thick, or similar, approved material, for lining V-drainage systems	m <sup>2</sup>	350		
23/22.12	Removing existing Concrete				
	(a) Plain Concrete	m <sup>3</sup>	50		
	(b) Reinforced Concrete	m <sup>3</sup>	50		
<b>TOTAL CARRIED FORWARD</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 3300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>33.00</b>	<b>MASS EARTHWORKS</b>				
33.01	Cut and borrow to fill, including free-haul up to 0.5km (a) Gravel material in compacted layer thickness of 200 mm and less: (1) Material obtained from cut in the road prism and the road reserve areas; (i) Compacted to 90% of modified AASHTO density (c) Rock fill (as specified in subclause 3209(c))	m <sup>3</sup> m <sup>3</sup>	15 120 800		
33.03	Extra over item 33.01 for excavating and breaking down material in: (a) Intermediate excavation (b) Hard excavation	m <sup>3</sup> m <sup>3</sup>	1 350 1 600		
33.04	Cut to spoil, including free-haul up to 0,5 km. Material obtained from: (a) Soft excavation (b) Intermediate excavation (c) Hard excavation	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	5 670 1 350 1 600		
33.07	Removal of unsuitable material (including free-haul of 0.5 km):  <b>(a) In layer thicknesses of 200 mm and less:</b> (1) Stable material	m <sup>3</sup>	2835		
33.10	Roadbed preparation and the compaction of material (a) Compaction to 93% of modified AASHTO density	m <sup>3</sup>	3 045		
33.12	In situ treatment of roadbed (a) In situ treatment by blasting (chemically)	m <sup>3</sup>	8		
33.13	Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes	m <sup>2</sup>	450		
33/16.00	Overhaul				
33/16.01	Overhaul on material hauled in excess of a free-haul distance of 0.5km, for haul up to or through 1.0km (restricted overhaul)	m <sup>3</sup>	1 470		
33/16.02	Overhaul on material hauled in excess of 1.0km (ordinary overhaul)	m <sup>3</sup> -km	18 480		
33/32.06	Stockpiling of material	m <sup>3</sup>	1 700		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 3400

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>3400</b>	<b>PAVEMENT LAYERS OF GRAVEL MATERIAL</b>				
B34.01	Pavement layers constructed from gravel from commercial sources				
	<b>(a) 300 mm Gravel selected layer compacted to:</b>				
	(1) 93% of modified AASHTO density	m <sup>3</sup>	6 090		
	<b>(d) 150 mm Gravel subbase (natural gravel) compacted to:</b>				
	(1) 95% of modified AASHTO density	m <sup>3</sup>	3 045		
	<b>(f) 150mm Gravel base (stabilized gravel)(C3) compacted to:</b>				
	(1) 97% of modified AASHTO density	m <sup>3</sup>	3 045		
34,01	Pavement layers constructed from gravel from cut or borrow, including free-haul up to 1,0km				
	<b>(a) 150 mm Gravel selected layer compacted to:</b>				
	(1) 93% of modified AASHTO density	m <sup>3</sup>	240		
	<b>(d) 150 mm Gravel subbase (natural gravel) compacted to:</b>				
	(1) 95% of modified AASHTO density	m <sup>3</sup>	240		
	<b>(f) 125mm Gravel base (stabilized gravel)(C3) compacted to:</b>				
	(1) 97% of modified AASHTO density	m <sup>3</sup>	240		
34.02	Extra over item 34.01 for excavation of material in:				
	(a) Intermediate excavation	m <sup>3</sup>	630		
	(b) Hard excavation	m <sup>3</sup>	210		
34/16.00	Overhaul				
34/16.01	Overhaul on material hauled in excess of a free-haul distance of 0.5km, for haul up to or through 1.0km (restricted overhaul)	m <sup>3</sup>	1 050		
34/16.02	Overhaul on material hauled in excess of 1.0km (ordinary overhaul)	m <sup>3</sup> -km	8 760		
34/32.04	Removal of oversize pavement material	m <sup>3</sup>	420		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 3500

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>35,00</b>	<b>STABILIZATION</b>				
35,01	Chemical stabilization extra over unstabilized compacted layers				
	(a) 150mm Base	m <sup>3</sup>	3 045		
35,02	Chemical stabilizing agent:				
	(a) Ordinary portland cement CEM 42.5 (3% )	t	192		
35,04	Provision and application of water for curing	kl	3500		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 5200

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
52,00	<b>GABIONS</b>				
52,01	Foundation trench excavation and backfilling:				
	(a) In all other classes of material	m <sup>3</sup>	10		
52,02	Surface preparation for bedding the gabions	m <sup>2</sup>	35		
52,03	Gabions:				
	(a) Galvanised gabion boxes:				
	(i) 1,0 m x 1,0 m x 1,0 m with 80 mm x 100mm mesh and 2,7mm dia mesh wire	m <sup>3</sup>	10		
	(ii) 2,0 m x 1,0 m x 1,0 m with 80 mm x 100mm mesh and 2,7mm dia mesh wire	m <sup>3</sup>	10		
	(b) Galvanized gabion reno mattresses,				
	(i) 2.0m x 1,0m x 0,3m hexagonal Woven mesh with aperture of 80 mm x 100mm mesh and diaphragms at 1,0m centres and 2,7 mm dia mesh wire	m <sup>3</sup>	20		
52,04	Filter fabric				
	(a) Geotextile Filter Fabric , Bidium grade A4 or approved equivalent or similar	m <sup>2</sup>	60		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 5600

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
56,00	<b>ROAD SIGNS</b>				
56,01	Road sign boards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class I retro-reflective material, where the sign board is constructed from: (c) Prepainted galvanised steel plate (chromadek or approved equivalent) (i) Area not exceeding 2m <sup>2</sup>	m <sup>2</sup>	45		
B56.01	Hazard plates (a) W401	No.	35		
56,03	Road sign supports (overhead road sign structures excluded): (a) Steel tubing (76mm X 2mm)	t	1		
56,05	Excavation and backfilling for road sign supports (not applicable to kilometre posts)	m <sup>3</sup>	15,0		
56,06	Extra over item 56.05 for cement-treated soil backfill	m <sup>3</sup>	12		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 5700

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
57,00	<b>ROAD MARKINGS</b>				
57,02	Retro-reflective road marking paint:				
	(a) White lines (broken or unbroken)				
	(1) 100 mm wide	km	3		
	(b) Yellow lines (broken or unbroken)				
	(1) 100 mm wide	km	6		
	(d) White lettering and symbols	m <sup>2</sup>	126		
	(e) Yellow lettering and symbols	m <sup>2</sup>	126		
	(f) Transverse lines, painted island and arrestor bed markings (any colour)	m <sup>2</sup>	0		
57,06	Setting out and premarking the lines (excluding traffic-island markings, lettering and symbols)	km	9		
57,07	Re-establishing the painting unit at the end of the maintenance period	Lump Sum	1		
B57.08	Traffic Calming devices Speed humps complete as indicated on drawing including road markings and signs				
	(i) Type 1	No	6		
	(i) Type 2	No	3		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 5900

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
59,00	<b>FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS</b>				
59,01	Finishing the road and road reserve: (b) Single carriageway road	km	3		
59,02	Treatment of old roads and temporary deviations	km		1500,00	Rate Only
59/56.08	Dismantling, storing and re-erecting household fencing	m	400		
59/39.00	<b>PATCHING AND REPAIRING EDGE BREAKS</b>				
59/39.01	Sawing Asphalt or Cemented pavement layers for patching (a) Sawing asphalt to an average depth: (i) Not exceeding 50mm (b) Sawing cemented pavement layers to an average depth: (i) Not exceeding 50mm (ii) Exceeding 50mm but not exceeding 100mm	m <sup>2</sup>	10		
59/39.02	Excavation in existing pavements for patching in: (a) Asphalt layers (b) Cemented layers	m <sup>3</sup>	20		
59/39.03	Backfilling of excavations for patching with (a) chemically stabilized pavement material (C4) for a patch with a surface area: (i) Not exceeding 5m <sup>2</sup> (ii) Exceeding 5m <sup>2</sup> but not exceeding 100m <sup>2</sup>	m <sup>3</sup>	10		
59/39.04	Compacting the floor of excavations for patching	m <sup>2</sup>	60		
59/42.04	Tack coat of 30% stable-grade emulsion	l	30		
59/42.20	Backfilling of excavation for patching with: (b)Asphalt surfacing	t	1,8		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF DUNDONALD ACCESS ROAD

SECTION 7300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
73,00	<b>CONCRETE BLOCK PAVING FOR ROADS</b>				
73,01	Concrete block paving				
	(a) 80mm Interlocking block paving	m <sup>2</sup>	18900		
	(b) 60mm block paving for pedestrian side walks	m <sup>2</sup>	500		
73,02	Cast in situ concrete edge and intermediate beams class 30/19 concrete (Formwork and clause U2 surface finish included)				
	(i) 200mm x 100mm	m	1500		
	(i) 100mm x 100mm	m	200		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

**CONSTRUCTION OF DUNDONALD ACCESS ROAD  
SUMMARY OF SCHEDULE OF QUANTITIES**

		AMOUNT
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
1400	HOUSING OFFICES AND LABORATORY FOR THE ENGINEER'S SITE PERSONNEL	
1500	ACCOMMODATION OF TRAFFIC	
1700	CLEARING AND GRUBBING	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE CHANNELING, CHUTES AND DOWN PIPES AND CONCRETE LININGS FOR OPEN DRAINS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
5200	GABIONS	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
7300	CONCRETE BLOCK PAVING FOR ROADS	
	<b>SUB-TOTAL 1</b>	
	<b>Contingency @10%</b>	
	<b>SUB-TOTAL 2</b>	
	<b>VAT @15%</b>	
	<b>GRAND TOTAL</b>	