

Department of Contracts
Notre Dame Ravelin
Floriana

To Heads of Department
and Parastatal Bodies

29th March 2006

**READY MIXED CONCRETE FOR GENERAL/MARITIME USE -
MALTA (North and South) 2006**

1. Heads of Department and Accounting Officers are requested to note that the contract for the supply and delivery of Ready Mixed Concrete for General and Maritime Use has been placed with the contractor shown below at the prices indicated on the attached Schedules 'A', 'B', 'C' and 'D' for North area and 'A', 'B', 'C', and 'D' for South area. Prices, are inclusive of all charges and all taxes, including 18% VAT and delivery costs.

C & F Building Contractors Ltd.
Hal Far
B'Bugia BBG 07

Tel: 21658152/6
VAT No. MT 1021 – 5012

2. Payments to the above contractor are to be made through:

HSBC – St Andrews

Quoting Bank Guarantee No.: 50-94/62.
3. This contract shall run from the 1st April 2006 up to the 31st December 2006.
4. The Specifications and Conditions regulating this contract are attached.
5. This contract is governed by the attached 'General Conditions of Contract for the Supply of Goods and Materials under a Running Period Contract.'

E.Zarb
Director General (Contracts)

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STRUCTURAL CONCRETE MIX SCHEDULE 'A'

NORTH REGION - (Mellieha, St.Paul's Bay, Mgarr, Mtarfa, Naxxar, Mdina, Burmarrad, Bugibba, Mosta, Maghtab, Rabat, Dingli, Lija, Balzan, Attard as well as the confines of their respective towns and villages)

			Item 1	Item 2	Item 3	Item 4	Item 5
MIX DESCRIPTION			REINFORCED CONCRETE				
Type of Mix			Designed	Designed	Designed	Designed	Designed
Type of Cement		To B.S.	12 (OP)	12 (OP)	12 (OP)	12 (OP)	12 (OP)
Type of Aggregate	Coarse	To B.S.	882, 1201	882, 1201	882, 1201	882, 1201	882, 1201
	Fine	To B.S.	882, 1201	882, 1201	882, 1201	882, 1201	882, 1201
Nominal Maximum Aggregate Size (mm)			20	20	20	20	20
Concrete Grade			C20	C25	C30	C35	C40
Minimum Cement Content		kg/m ³	240	260	275	300	325
Sampling Rate		#/m ³	20	20	20	20	20
Workability	Slump	mm	40-70	40-70	40-70	40-70	40-70
	Flow	mm					
Maximum Free Water / Cement Ratio			0.8	0.7	0.65	0.6	0.55
Admixtures	Prohibited		Yes	Yes	Yes	Yes	Yes
	Specified						
Density of Concrete	Minimum	kg/m ³	2250	2250	2250	2250	2250

Mix Cement Content	kg/m ³	262	314	373	430	450
Mix Fine Aggregate	kg/m ³	800	686	583	483	477
Mix Coarse Aggregate	kg/m ³	978	1030	1084	1127	1113
Water Content	l/m ³	210	220	210	210	210
Admixtures	l/m ³	N/A	N/A	N/A	N/A	N/A
Rate**	Lm/m ³	16.75	18.00	20.00	22.00	24.00

- # Four cubes per sample: 2 tested at 7 days and 2 tested at 28 days
- N/A Not Applicable
- (a) Superplasticiser
- (b) Accelerating
- (c) Retarding
- (d) Water-Reducing
- (e) Air-entraining

STRUCTURAL CONCRETE MIX SCHEDULE 'B'

NORTH REGION - (Mellieha, St.Paul's Bay, Mgarr, Mtarfa, Naxxar, Mdina, Burmarrad, Bugibba, Mosta, Maghtab, Rabat, Dingli, Lija, Balzan, Attard as well as the confines of their respective towns and villages)

			Item 1	Item 2	Item 3
MIX DESCRIPTION					
Type of Mix			Designed	Designed	Designed
Type of Cement		To B.S.	12 (OP)	12 (OP)	12 (OP)
Type of Aggregate	Coarse	To B.S.	882, 1201	882, 1201	882, 1201
	Fine	To B.S.	882, 1201	882, 1201	882, 1201
Nominal Maximum Aggregate Size (mm)			20	20	20
Concrete Grade			C30	C35	C40
Minimum Cement Content		kg/m ³	275	300	325
Sampling Rate		#/m ³	20	20	20
Workability	Slump	mm			
	Flow	mm	510-620	510-620	510-620
Maximum Free Water / Cement Ratio			0.65	0.6	0.5
Admixtures	Prohibited		No	No	No
	Specified		(a)	(a)	(a)
Density of Concrete	Minimum	kg/m ³	2250	2250	2250

Mix Cement Content	kg/m ³	373	430	450
Mix Fine Aggregate	kg/m ³	587	567	560
Mix Coarse Aggregate	kg/m ³	1090	1053	1040
Water Content	l/m ³	200	200	200
Admixtures	l/m ³	3.7	4.3	4.5
Rate**	Lm/m ³	18.50	19.50	21.00

Four cubes per sample: 2 tested at 7 days and 2 tested at 28 days
 N/A Not Applicable

- (a) Superplasticiser
- (b) Accelerating
- (c) Retarding
- (d) Water-Reducing
- (e) Air-entraining

STRUCTURAL CONCRETE MIX SCHEDULE 'C'

NORTH REGION - (Mellieha, St.Paul's Bay, Mgarr, Mtarfa, Naxxar, Mdina, Burmarrad, Bugibba, Mosta, Maghtab, Rabat, Dingli, Lija, Balzan, Attard as well as the confines of their respective towns and villages)

			Item 1	Item 2	Item 3
MIX DESCRIPTION			MASS CONCRETE		
Type of Mix			Designed	Designed	Designed
Type of Cement		To B.S.	12 (OP)	12 (OP)	12 (OP)
Type of Aggregate	Coarse	To B.S.	882, 1201	882, 1201	882, 1201
	Fine	To B.S.	882, 1201	882, 1201	882, 1201
Nominal Maximum Aggregate Size (mm)			40	20	40
Concrete Grade			C15	C20	C20
Minimum Cement Content		kg/m ³	175	180	150
Sampling Rate		#/m ³	100	100	100
Workability	Slump	mm	40-70	40-70	40-70
Maximum Free Water / Cement Ratio			0.7	0.6	0.6
Admixtures	Prohibited		Yes	Yes	Yes
	Specified				
Density of Concrete	Minimum	kg/m ³	2200	2200	2200

Mix Cement Content	kg/m ³	200	262	240
Mix Fine Aggregate	kg/m ³	1116	890	726
Mix Coarse Aggregate	kg/m ³	744	890	1090
Water Content	l/m ³	140	157	144
Admixtures	l/m ³	N/A	N/A	N/A
Rate**	Lm/m ³	12.80	13.00	12.80

Four cubes per sample: 2 tested at 7 days and 2 tested at 28 days
 N/A Not Applicable

- (a) Superplasticiser
- (b) Accelerating
- (c) Retarding
- (d) Water-Reducing
- (e) Air-entraining

STRUCTURAL CONCRETE MIX SCHEDULE 'D'

NORTH REGION - (Mellieha, St.Paul's Bay, Mgarr, Mtarfa, Naxxar, Mdina, Burmarrad, Bugibba, Mosta, Maghtab, Rabat, Dingli, Lija, Balzan, Attard as well as the confines of their respective towns and villages)

			Item 1	Item 2	Item 3
MIX DESCRIPTION			UNDERWATER CONCRETE		
Type of Mix			Designed	Designed	Designed
Type of Cement		To B.S.	12 (OP)	12 (OP)	12 (OP)
Type of Aggregate	Coarse	To B.S.	882, 1201	882, 1201	882, 1201
	Fine	To B.S.	882, 1201	882, 1201	882, 1201
Nominal Maximum Aggregate Size (mm)			40	40	20
Concrete Grade			C20	C20	C25
Minimum Cement Content		kg/m ³	350	350	350
Sampling Rate		#/m ³	100	100	100
Workability	Slump	mm	125	125	
	Flow	mm			510-620
Maximum Free Water / Cement Ratio					
Admixtures	Prohibited		Yes	Yes	No
	Specified				(d)
Density of Concrete	Minimum	kg/m ³	2300	2300	2300

Mix Cement Content	kg/m ³	350	350	400
Mix Fine Aggregate	kg/m ³	870	870	760
Mix Coarse Aggregate	kg/m ³	870	870	930
Water Content	l/m ³	210	210	210
Admixtures	l/m ³	N/A	N/A	4.0
Rate**	Lm/m ³	18.50	18.50	20.00

Four cubes per sample: 2 tested at 7 days and 2 tested at 28 days
 N/A Not Applicable

- (a) Superplasticiser
- (b) Accelerating
- (c) Retarding
- (d) Water-Reducing
- (e) Air-entraining

STRUCTURAL CONCRETE MIX SCHEDULE 'A'

SOUTH REGION - (B'Kara, Pembroke, St.Julians, Sliema, Gzira, San Gwann, Manoel Island, Ta'Xbiex, Msida, Pieta, Marsa, Hamrun, Qormi, Zebbug, Siggiewi, Qrendi, Luqa, M'Xlokk, Paola, Gudja, Ghaxaq, B'Bugia, Zejtun, Zabbar, Cottonera, Valletta and Floriana as well as the confines of their respective towns and villages)

			Item 1	Item 2	Item 3	Item 4	Item 5
MIX DESCRIPTION			REINFORCED CONCRETE				
Type of Mix			Designed	Designed	Designed	Designed	Designed
Type of Cement		To B.S.	12 (OP)	12 (OP)	12 (OP)	12 (OP)	12 (OP)
Type of Aggregate	Coarse	To B.S.	882, 1201	882, 1201	882, 1201	882, 1201	882, 1201
	Fine	To B.S.	882, 1201	882, 1201	882, 1201	882, 1201	882, 1201
Nominal Maximum Aggregate Size (mm)			20	20	20	20	20
Concrete Grade			C20	C25	C30	C35	C40
Minimum Cement Content		kg/m ³	240	260	275	300	325
Sampling Rate		#/m ³	20	20	20	20	20
Workability	Slump	mm	40-70	40-70	40-70	40-70	40-70
	Flow	mm					
Maximum Free Water / Cement Ratio			0.8	0.7	0.65	0.6	0.55
Admixtures	Prohibited		Yes	Yes	Yes	Yes	Yes
	Specified						
Density of Concrete	Minimum	kg/m ³	2250	2250	2250	2250	2250

Mix Cement Content	kg/m ³	262	314	373	430	450
Mix Fine Aggregate	kg/m ³	800	686	583	483	477
Mix Coarse Aggregate	kg/m ³	978	1030	1084	1127	1113
Water Content	l/m ³	210	220	210	210	210
Admixtures	l/m ³	N/A	N/A	N/A	N/A	N/A
Rate**	Lm/m ³	16.00	16.70	17.70	18.75	19.90

- # Four cubes per sample: 2 tested at 7 days and 2 tested at 28 days
- N/A Not Applicable
- (a) Superplasticiser
- (b) Accelerating
- (c) Retarding
- (d) Water-Reducing
- (e) Air-entraining

STRUCTURAL CONCRETE MIX SCHEDULE 'B'

SOUTH REGION - (B'Kara, Pembroke, St.Julians, Sliema, Gzira, San Gwann, Manoel Island, Ta'Xbiex, Msida, Pieta, Marsa, Hamrun, Qormi, Zebbug, Siggiewi, Qrendi, Luqa, M'Xlokk, Paola, Gudja, Ghaxaq, B'Bugia, Zejtun, Zabbar, Cottonera, Valletta and Floriana as well as the confines of their respective towns and villages)

			Item 1	Item 2	Item 3
MIX DESCRIPTION					
Type of Mix			Designed	Designed	Designed
Type of Cement		To B.S.	12 (OP)	12 (OP)	12 (OP)
Type of Aggregate	Coarse	To B.S.	882, 1201	882, 1201	882, 1201
	Fine	To B.S.	882, 1201	882, 1201	882, 1201
Nominal Maximum Aggregate Size (mm)			20	20	20
Concrete Grade			C30	C35	C40
Minimum Cement Content		kg/m ³	275	300	325
Sampling Rate		#/m ³	20	20	20
Workability	Slump	mm			
	Flow	mm	510-620	510-620	510-620
Maximum Free Water / Cement Ratio			0.65	0.6	0.5
Admixtures	Prohibited		No	No	No
	Specified		(a)	(a)	(a)
Density of Concrete	Minimum	kg/m ³	2250	2250	2250

Mix Cement Content	kg/m ³	373	430	450
Mix Fine Aggregate	kg/m ³	587	567	560
Mix Coarse Aggregate	kg/m ³	1090	1053	1040
Water Content	l/m ³	200	200	200
Admixtures	l/m ³	3.7	4.3	4.5
Rate**	Lm/m ³	17.70	18.75	19.85

- # Four cubes per sample: 2 tested at 7 days and 2 tested at 28 days
- N/A Not Applicable
- (a) Superplasticiser
- (b) Accelerating
- (c) Retarding
- (d) Water-Reducing
- (e) Air-entraining

STRUCTURAL CONCRETE MIX SCHEDULE 'C'

SOUTH REGION - (B'Kara, Pembroke, St.Julians, Sliema, Gzira, San Gwann, Manoel Island, Ta'Xbiex, Msida, Pieta, Marsa, Hamrun, Qormi, Zebbug, Siggiewi, Qrendi, Luqa, M'Xlokk, Paola, Gudja, Ghaxaq, B'Bugia, Zejtun, Zabbar, Cottonera, Valletta and Floriana as well as the confines of their respective towns and villages)

			Item 1	Item 2	Item 3
MIX DESCRIPTION			MASS CONCRETE		
Type of Mix			Designed	Designed	Designed
Type of Cement		To B.S.	12 (OP)	12 (OP)	12 (OP)
Type of Aggregate	Coarse	To B.S.	882, 1201	882, 1201	882, 1201
	Fine	To B.S.	882, 1201	882, 1201	882, 1201
Nominal Maximum Aggregate Size (mm)			40	20	40
Concrete Grade			C15	C20	C20
Minimum Cement Content		kg/m ³	175	180	150
Sampling Rate		#/m ³	100	100	100
Workability	Slump	mm	40-70	40-70	40-70
Maximum Free Water / Cement Ratio			0.7	0.6	0.6
Admixtures	Prohibited		Yes	Yes	Yes
	Specified				
Density of Concrete	Minimum	kg/m ³	2200	2200	2200

Mix Cement Content	kg/m ³	200	262	240
Mix Fine Aggregate	kg/m ³	1116	890	726
Mix Coarse Aggregate	kg/m ³	744	890	1090
Water Content	l/m ³	140	157	144
Admixtures	l/m ³	N/A	N/A	N/A
Rate**	Lm/m ³	12.75	13.00	12.75

Four cubes per sample: 2 tested at 7 days and 2 tested at 28 days
N/A Not Applicable

- (a) Superplasticiser
- (b) Accelerating
- (c) Retarding
- (d) Water-Reducing
- (e) Air-entraining

STRUCTURAL CONCRETE MIX SCHEDULE 'D'

SOUTH REGION - (B'Kara, Pembroke, St.Julians, Sliema, Gzira, San Gwann, Manoel Island, Ta'Xbiex, Msida, Pieta, Marsa, Hamrun, Qormi, Zebbug, Siggiewi, Qrendi, Luqa, M'Xlokk, Paola, Gudja, Ghaxaq, B'Bugia, Zejtun, Zabbar, Cottonera, Valletta and Floriana as well as the confines of their respective towns and villages)

			Item 1	Item 2	Item 3
MIX DESCRIPTION			UNDERWATER CONCRETE		
Type of Mix			Designed	Designed	Designed
Type of Cement		To B.S.	12 (OP)	12 (OP)	12 (OP)
Type of Aggregate	Coarse	To B.S.	882, 1201	882, 1201	882, 1201
	Fine	To B.S.	882, 1201	882, 1201	882, 1201
Nominal Maximum Aggregate Size (mm)			40	40	20
Concrete Grade			C20	C20	C25
Minimum Cement Content		kg/m ³	350	350	350
Sampling Rate		#/m ³	100	100	100
Workability	Slump	mm	125	125	
	Flow	mm			510-620
Maximum Free Water / Cement Ratio					
Admixtures	Prohibited		Yes	Yes	No
	Specified				(d)
Density of Concrete	Minimum	kg/m ³	2300	2300	2300

Mix Cement Content	kg/m ³	350	350	400
Mix Fine Aggregate	kg/m ³	870	870	760
Mix Coarse Aggregate	kg/m ³	870	870	930
Water Content	l/m ³	210	210	210
Admixtures	l/m ³	N/A	N/A	4.0
Rate**	Lm/m ³	18.35	18.35	19.15

Four cubes per sample: 2 tested at 7 days and 2 tested at 28 days
 N/A Not Applicable

- (a) Superplasticiser
- (b) Accelerating
- (c) Retarding
- (d) Water-Reducing
- (e) Air-entraining