

BILL OF QUANTITY

SYNTHETIC ATHLETIC TRACK

The units of measurement indicated in the Bill of Quantities are metric units.
The following abbreviations may appear in the Bill of Quantities:

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m ²	=	square metre
m ² -pass	=	square metre-pass
ha	=	hectare
m ³	=	cubic metre
m ³ -km	=	cubic metre-kilometre
kW	=	kilowatt
kN	=	kilonewton
kg	=	kilogram
t	=	ton (1 000 kg)
%	=	per cent
MN	=	meganeutron
MN-m	=	meganeutron-metre
PC Sum	=	Prime Cost Sum
Prov Sum	=	Provisional Sum

PHASE 1 - PRELIMINARY & GENERAL							
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
	1	Establishment of Facilities on the Site: Synthetic Surfacing <u>Facilities for Specialist Synthetic Contractor</u>					
1.1		a) Establish Plant & Equipment	Sum	1			
1.2		b) Transport	Sum	1			
1.3		c) Living Accommodation	Sum	1			
1.4		Supervision for Duration of Construction	Sum	1			
1.5		Company and Head Office Overhead Costs for the Duration of Contact	Sum	1			
TOTAL CARRIED TO SUMMARY PHASE 1: MODULE A: PART 1 GENERAL							

PHASE 1 - MODULE 8: FIELD ITEMS					PART 2: FIELD ITEMS		
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
	2	ANCILLARY ATHLETIC EQUIPMENT FOR FIELD ITEMS					
	2.2	Construction of field items complete as shown on the drawings					
2.1		<u>1) Pole Vault boxes complete as detailed on the drawings, including:</u>					
2.1.1		Pole Vault Box	No	2			
2.1.2		a) 25 mm dia drainage pipes	m	1			
2.1.3		a) 50 mm dia drainage pipes	m	8			
2.1.4		b) Concrete Class 25/19	m3	2			
2.1.5		b) 19 mm Stone Aggregate	m3	1			
2.2		<u>2) Pole Vault stand</u>					
2.2.1		Pole Vault stand foundations					
2.2.2		4 No Off Pole Vault stand foundations 2.0 m x 0.88m x 200 mm thick, Concrete Class 25/19	m3	1.4			
2.2.3		Pole Vault adjustable rails, installed	No	4			
2.3		<u>3) Take-off boards with inserts</u>					
2.3.1		Supply and install take-off boards as detailed on the drawings	No	10			
2.3.2		Supply and install inserts as detailed on the drawings	No	10			
2.3.3		a) 50 mm dia drainage pipes	m	30			
2.3.4		b) Concrete Class 25/19	m3	2			
2.3.5		Damp Proofing	m2	16			
TOTAL CARRIED TO SUMMARY PHASE 1: MODULE B: PART 2 FIELD ITEMS							

PHASE 1 - MODULE 1&2 : SYNTHETIC SURFACING					PART 3: SYNTHETIC SURFACING		
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
3.0	3 3.1	SYNTHETIC SURFACING SYNTHETIC SURFACING, <u>SURFACE PREPARATION AND</u> <u>REJUVENATION</u> Specialist Subcontractor to submit evidence on competence, accreditation certificates, etc with tender <u>SYNTHETIC AREAS</u> <i>Existing oval & straight</i> <i>Or alternatively: Existing oval & straight after channel removal</i> <i>Phase 2 Upgrade</i> <i>Existing Steeplechase</i> <i>Or alternatively: Existing steeplechase after channel removal</i> <i>Phase 2 Upgrade</i> <i>Existing Javelin North</i> <i>Existing Pole vault East</i> <i>Existing Water jump</i> <i>Or alternatively: Existing water jump area after Upgrade</i> <i>Existing High Jump</i> <i>Or alternatively: Existing high jump area after channel removal</i> <i>Phase 2 Upgrade</i> <i>Existing Javelin South</i> <i>Or alternatively: Existing Javelin South including Phase 2 Upgrade</i> <i>Existing Long- and Triple Jump area</i> Total Area Prior to Phase 2 Upgrade Total Area: Phase 2 Upgrade included with Phase 1 <u>Surface preparation by Specialist Subcontractor on existing shock-pad as per project specifications</u> <u>Level Corrections: Average grinding depth of 3.25 mm over existing shock-pad surface using an approved grinding machine</u>	 				

PHASE 1 - MODULE 1&2: SYNTHETIC SURFACING

PART 3: SYNTHETIC SURFACING

ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
3.5		<u>Surface sealing by Specialist Subcontractor of existing shock-pad as per project specifications</u> <u>Sealing of existing shock-pad with Pore Sealer & EPDM powder</u> Surface Sealing following Phase 2 Upgrade: Total shock-pad area <i>Material Consumption</i> <i>Pore Sealer: a solvent free, elastic, self-levelling, two component polyurethane coating @ 1kg / m2</i> <i>EPDM powder 0.0-0.5mm high quality @ 0.4kg / m2</i>	m2	5872			
			kg	5872			
			kg	2349			
3.6		Additional surface sealing prior to Phase 2 Upgrade <i>Material Consumption</i> <i>Pore Sealer: a solvent free, elastic, self-levelling, two component polyurethane coating @ 1kg / m2</i> <i>EPDM powder 0.0-0.5mm high quality @ 0.4kg / m2</i>	m2	172		Rate only	
			kg	172			
			kg	69			
AMOUNT CARRIED FORWARD:							

PHASE 1 - MODULE 1&2 : SYNTHETIC SURFACING					PART 3: SYNTHETIC SURFACING		
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
3.7		<p><u>Level corrections by Specialist Subcontractor of existing shock-pad as per project specifications</u></p> <p>Allowance for level corrections to an average of 5 mm with two component self-levelling polyurethane coating and recycled rubber granules <i>Applicable areas, thicknesses and material consumption will be checked on site</i></p> <p><i>Material Consumption</i> 1st Layer of 5mm thickness: Polyurethane coating: A solvent free, elastic, self-levelling, two component polyurethane coating @ 3.46 kg/m²</p> <p>Recycled rubber granules (1-4mm) @ 2.88 kg / m2 - net quantity excluding excess)</p> <p>Excess: Recycled rubber granules (1-4mm) @ 0.5 kg / m2</p>	m2	5614			
		<p><i>Material Consumption</i> 1st Layer of 5mm thickness: Polyurethane coating: A solvent free, elastic, self-levelling, two component polyurethane coating @ 3.46 kg/m²</p> <p>Recycled rubber granules (1-4mm) @ 2.88 kg / m2 - net quantity excluding excess)</p> <p>Excess: Recycled rubber granules (1-4mm) @ 0.5 kg / m2</p>	kg	19424			
		<p>Recycled rubber granules (1-4mm) @ 2.88 kg / m2 - net quantity excluding excess)</p> <p>Excess: Recycled rubber granules (1-4mm) @ 0.5 kg / m2</p>	kg	16168			
		<p>Excess: Recycled rubber granules (1-4mm) @ 0.5 kg / m2</p>	kg	2807			
3.8		<p>Allowance for level corrections to an average of 5 mm: Additional area prior to Phase 2 upgrade</p> <p><i>Material Consumption</i> Allowance for level corrections to an average of 5 mm with two component self-levelling polyurethane coating and recycled rubber granules</p> <p>Recycled rubber granules (1-4mm) @ 2.88 kg / m2 - net quantity excluding excess)</p> <p>Excess: Recycled rubber granules (1-4mm) @ 0.5 kg / m2</p>	m2	172		Rate only	
		<p><i>Material Consumption</i> Allowance for level corrections to an average of 5 mm with two component self-levelling polyurethane coating and recycled rubber granules</p> <p>Recycled rubber granules (1-4mm) @ 2.88 kg / m2 - net quantity excluding excess)</p> <p>Excess: Recycled rubber granules (1-4mm) @ 0.5 kg / m2</p>	kg	595			
		<p>Recycled rubber granules (1-4mm) @ 2.88 kg / m2 - net quantity excluding excess)</p> <p>Excess: Recycled rubber granules (1-4mm) @ 0.5 kg / m2</p>	kg	495			
		<p>Excess: Recycled rubber granules (1-4mm) @ 0.5 kg / m2</p>	kg	86			
AMOUNT CARRIED FORWARD:							

PHASE 1 - MODULE 1&2 : SYNTHETIC						PART 3: SYNTHETIC SURFACING	
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
3.9		<u>Re-topping by Specialist Subcontractor of existing shock-pad as per project specifications</u> Top Layer: 4.3 mm Full Pour Retopping, Polyurethane coating with EPDM granules (RAL 5010 Colour Dark Blue & RAL 5012 Colour Light Blue) <i>Synthetic surfacing colours:</i> RAL 5010 Colour Dark Blue RAL 5012 Colour Light Blue <i>Material Consumption</i> 2nd (Top) Layer of 4.3 mm thickness: Polyurethane coating: A solvent free, elastic, self-levelling, two component polyurethane coating @ 3.0 kg/m² EPDM granules (1-4mm) @ 2.8 kg / m2 - net quantity excluding excess) Excess: EPDM granules (1-4mm) @ 1.2 kg / m2	m2	5872			
			m2	5027			
			m2	845			
			kg	17616			
			kg	16442			
			kg	7046			
3.10		Top Layer: Additional area prior to Phase 2 upgrade <i>Material Consumption</i> 2nd (Top) Layer of 4.3 mm thickness: Polyurethane coating: A solvent free, elastic, self-levelling, two component polyurethane coating @ 3.0 kg/m² EPDM granules (1-4mm) @ 2.8 kg / m2 - net quantity excluding excess) Excess: EPDM granules (1-4mm) @ 1.2 kg / m2	m2	172		Rate only	
			kg	516			
			kg	482			
			kg	206			
AMOUNT CARRIED FORWARD:							

PHASE 1 - MODULE 1&2: SYNTHETIC SURFACING

PART 3: SYNTHETIC SURFACING

ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
3.11		<p><u>Provisional allowance for additional level corrections in low areas</u></p> <p>Allowance for additional level correction layer: 5mm layer with two component self-levelling polyurethane coating and recycled rubber granules <i>Applicable areas, thicknesses and material consumption will be checked on site</i></p> <p><i>Material Consumption</i></p> <p>1st Layer of 5mm thickness: Polyurethane coating: A solvent free, elastic, self-levelling, two component polyurethane coating @ 3.46 kg/m² Recycled rubber granules (1-4mm) @ 2.88 kg / m2 - net quantity excluding excess) Excess: Recycled rubber granules (1-4mm) @ 0.5 kg / m2</p>	m2	10			
			kg	35			
			kg	29			
			kg	5			
3.12		<p>UV PROTECTION: weathering resistant, highly elastic sealing lacquer - a pigmented solvent containing, low viscous, highly elastic, two component PUR satin finish sealing lacquer. Polyurethane sealer, 10-year product insurance guarantee (RAL 5010 Colour Dark Blue & RAL 5012 Colour Light Blue) applied @ 0.3g/m2</p> <p><i>Material Consumption</i></p> <p>Two component PUR satin finish sealing lacquer part A (RAL 5010 Colour Dark Blue & RAL 5012 Colour Light Blue)</p> <p>Two component PUR satin finish sealing lacquer part B (RAL 5010 Colour Dark Blue & RAL 5012 Colour Light Blue)</p>	m2	5890			
			kg	1473			
			kg	295			
AMOUNT CARRIED FORWARD:							

PHASE 1 - MODULE 1&2 : SYNTHETIC SURFACING

PART 3: SYNTHETIC SURFACING

ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
3.13		UV Protection: Additional area prior to Phase 2 upgrade	m2	172		Rate only	
		<i>Material Consumption</i>					
		<i>Two component PUR satin finish sealing lacquer part A (RAL 5010 Colour Dark Blue & RAL 5012 Colour Light Blue)</i>	kg	43			
		<i>Two component PUR satin finish sealing lacquer part B (RAL 5010 Colour Dark Blue & RAL 5012 Colour Light Blue)</i>	kg	9			
3.14		Masking of kerbs to allow for 25mm wide seal strips on kerbs as detailed on the drawings	m	725			
3.15		25 mm Wide Kerb Seal: 4.3 mm thickness Retopping, including approved concrete primer - moisture curing, solvent containing, single component PUR primer with low viscosity and a solvent free, elastic, self-levelling, two component polyurethane coating with EPDM granules (RAL 5010 Colour Dark Blue)	m2	18			
		<i>Material Consumption</i>					
		<i>2nd (Top) Layer of 5 mm thickness: Polyurethane coating: A solvent free, elastic, self-levelling, two component polyurethane coating @ 3.0 kg/m²</i>	kg	54			
		<i>EPDM granules (1-4mm) @ 2.8 kg / m2 - net quantity excluding excess)</i>	kg	51			
		<i>Excess: EPDM granules (1-4mm) @ 1.2 kg / m2</i>	kg	22			
AMOUNT CARRIED FORWARD:							

PHASE 1 - MODULE 1&2: SYNTHETIC SURFACING				PART 3: SYNTHETIC SURFACING			
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
3.16		Setting-out and Painting of lines, stencil markings & symbols by an IAAF accredited surveyor	Sum	1			
		<i>Material Consumption</i>					
		<i>Component A RAL 5010</i>	kg	4			
		<i>Component B RAL 5010</i>	kg	0.8			
		<i>Component A RAL 1018</i>	kg	4			
		<i>Component B RAL 1018</i>	kg	0.8			
		<i>Component A RAL 6025</i>	kg	4			
		<i>Component B RAL 6025</i>	kg	0.8			
		<i>Component A BLACK</i>	kg	2			
		<i>Component B BLACK</i>	kg	0.4			
		<i>Component A RAL 3001</i>	kg	2			
		<i>Component B RAL 3001</i>	kg	0.4			
		<i>Component A RAL 8150 White</i>	kg	116			
		<i>Component B RAL 8150</i>	kg	23.2			
		<i>Summary imported content</i>	kg	75240			
		<i>Additional content prior to Phase 2 upgrade</i>					
		<i>Summary imported content</i>	kg	2221			
TOTAL CARRIED TO SUMMARY PHASE 1: MODULE 1&2: PART 3: SYNTHETIC SURFACING							

PHASE 2 - PRELIMINARY & GENERAL			PART 1: GENERAL				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
1.0	1200A	SECTION: GENERAL					
	2.1	<u>Fixed-charge and value-related items</u>					
1.1		<u>Contractual requirements</u>	Sum	1			
	2.1.2	Establishment of Facilities on the Site: Civil Works					
		<u>Facilities for Engineer</u>					
1.2		a) Name boards and signs	Sum	0			
1.3		b) Survey equipment including survey assistants	Sum	1			
		<u>Facilities for Contractor:</u>					
1.4		a) Offices and Storage sheds	Sum	1			
1.5		b) Workshops	Sum	1			
1.6		c) Laboratories	Sum	1			
1.7		d) Living accommodations	Sum	1			
1.8		e) Ablution and toilet facilities	Sum	1			
1.9		f) Tools and equipment	Sum	1			
1.10		g) Water supply, electric power and communications	Sum	1			
1.11		h) Dealing with water	Sum	1			
1.12		i) Access	Sum	1			
1.13		j) Plant	Sum	1			
1.14		Other Fixed Charge Obligations	Sum	1			
1.15		Removal of site establishment	Sum	1			
AMOUNT CARRIED FORWARD:							

PHASE 2 - PRELIMINARY & GENERAL			PART 1: GENERAL				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
1.16	2.2	<u>Time related items</u>					
		<u>Contractual requirements</u>	Sum	1			
1.17		<u>Operation and Maintenance of Facilities on Site for duration of Construction except where otherwise stated:</u>					
		<u>Facilities for Engineer</u>					
1.18		c) Name boards	Sum	1			
1.19		d) Survey equipment including survey assistants	Sum	1			
		<u>Facilities for Contractor:</u>					
1.20		a) Offices and Storage sheds	Sum	1			
1.21		b) Workshops	Sum	1			
1.22		c) Laboratories	Sum	1			
1.23		d) Living accommodations	Sum	1			
1.24		e) Ablution and toilet facilities	Sum	1			
1.25		f) Tools and equipment	Sum	1			
1.26		g) Water supply, electric power and communications	Sum	1			
1.27		h) Dealing with water	Sum	1			
1.28		i) Access	Sum	1			
1.29		j) Plant	Sum	1			
1.30		Supervision for Duration of Construction Company and Head Office Overhead Costs for the Duration of Contact	Sum	1			
1.31			Sum	1			
1.32		Other Time-Related Obligations	Sum	1			
AMOUNT CARRIED FORWARD:							

PHASE 2 - PRELIMINARY & GENERAL			PART 1: GENERAL				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
1.33		<u>SUMS STATED PROVISIONALLY BY ENGINEER</u> a) Additional tests ordered by the Engineer	Prov Sum	1			
1.34		b) Percentage charges on profit	%	10%			
1.35		c) Surveyor services to obtain as built information on existing infield as per specified requirements (results to be provided to Engineer in acceptable format)	Sum	1			
1.36		d) Surveys of levels and dimensions at each stage of construction of new synthetic surface (results to be provided to Engineer in acceptable format)	Sum	1			
		<u>Temporary Works</u>					
		<u>Existing Services</u>					
1.37		a) Excavate by hand in soft material to expose existing services	m ³	15			
1.38		b) Temporary protection of existing services	Sum	1			
1.39		<u>Items not scheduled separately or not included in Schedule of Quantities</u>					
1.40							
1.41							
1.42							
AMOUNT CARRIED FORWARD:							

PHASE 2 - PRELIMINARY & GENERAL			PART 1: GENERAL				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
	2.3	Establishment of Facilities on the Site: Synthetic Surfacing Facilities for Specialist Synthetic Contractor					
1.43		a) Establish Plant & Equipment	Sum	1			
1.44		b) Transport	Sum	1			
1.45		c) Living Accommodation	Sum	1			
1.46		Supervision for Duration of Construction	Sum	1			
1.47		Company and Head Office Overhead Costs for the Duration of Contact	Sum	1			
TOTAL CARRIED TO SUMMARY PHASE 2: MODULE A: PART 1 GENERAL							

PHASE 2 - MODULE 1&2: ATHLETICS TRACK			PART 2: SITE CLEARANCE				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
2.0	1200C	<u>SECTION: SITE CLEARANCE</u> <u>New synthetic areas: Javelin</u> <u>run-up north, extended straight</u> <u>run-out south, new javelin area</u> <u>south</u>					
2.1		Remove grass and maintain for re-use	m2	50			
2.2		a) Remove topsoil (plaster sand on infield areas) to a depth of 200 mm and stockpile for re-use	m3	6			
2.3		b) Remove topsoil to a nominal depth of 200 mm on outfield area and stockpile for re-use	m3	4			
2.4		Remove filter sand and drainage layer on infield area to a depth of 100 mm and stockpile for re-use	m3	3			
2.5		Remove paving blocks at new straight run-out extension	m2	5			
		<u>Demolish and remove structures</u>					
2.6		a) Remove existing kerbs and dispose off site	m	53			
2.7		b) Sawcut through asphalt and neat excavate to remove existing drainage channels and sumps without damage to existing services and dispose off site	m	398			
2.8		c) Remove existing synthetic surfacing & asphalt to a total depth of 73 mm, dispose off site (javelin south)	m2	44			
2.8		c) Remove existing base and subbase on infield area to a total depth of 227mm, stockpile for re-use (javelin south, portion on infield)	m3	2			
TOTAL CARRIED TO SUMMARY PHASE 2: MODULE 1&2: PART 2: SITE							

PHASE 2 - MODULE 1&2: ATHLETICS TRACK			PART 3: EARTHWORKS				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
3.1	1200D	<u>SECTION: EARTHWORKS:</u> <u>Bulk Excavations</u> New synthetic areas - Excavate in all materials and use for embankments or backfill or dispose as ordered: Run-out extension: Cut to form boxcut 385mm deep and dispose off site	m3	9			
3.2		Javelin Extensions: Cut to form boxcut 285mm deep and dispose off site	m3	9			
3.3		Neat excavate for drainage channel edging, Fig 12 kerb installation	m3	28			
3.4	1200D M	<u>SECTION: EARTHWORKS (ROADS, SUBGRADE)</u> <u>Treatment of road-bed - new synthetic areas</u> a) Roadbed Preparation rip and compact to 90 % MOD AASHTO	m2	55			
3.5		b) 150mm lower selected layer (G9) compacted to 93% of mod. AASHTO density	m3	8			
3.6		c) 150mm upper selected layer (G7) compacted to 93% of mod. AASHTO density	m3	8			
3.7		Process upper selected layer by means of stabilization	m3	8			
3.8		Stabilization agent b) Road lime	t	0.5			
TOTAL CARRIED TO SUMMARY PHASE 2: MODULE 1&2: PART 3: EARTHWORKS							

PHASE 2 - MODULE 1&2: ATHLETICS TRACK			PART 4: LAYERWORKS				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
4.1	1200M E	<u>SECTION: SUBBASE</u> Construct subbase course with material from commercial sources: <i>New synthetic areas</i> a) 150 mm Subbase Layer Graded crushed stone (G2) stabilized C2) Process subbase course by means of stabilization Stabilization agent	m3	37			
4.2		d) 3% OPC cement Construct subbase course with material from commercial sources: <i>Below new drainage channel</i>	t	2.2			
4.3		a) 133 mm Subbase layer (G5) stabilized C4) Process subbase course by means of stabilization Stabilization agent	m3	37			
4.4		d) 3% OPC cement	t	2.2			
4.5	1200M F	<u>SECTION: BASE</u> Construct base course with material from commercial sources: <i>New synthetic areas</i> a) 125 mm base layer (G1 graded crushed stone) compacted to 88 % apparent density	m3	7			
4.6		Construct base infill course with material from commercial sources: <i>Along new drainage channel</i> a) 147 mm base layer (G1 graded crushed stone) compacted to 88 % apparent density or soilcrete (4% cement)	m3	14			
TOTAL CARRIED TO SUMMARY PHASE 2: MODULE 1&2 : PART 4: LAYERWORKS							

PHASE 2 - MODULE 1&2: ATHLETICS TRACK			PART 5: ASPHALT				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
5.1	1200M H	<u>SECTION: ASPHALT BASE AND SURFACING New synthetic areas</u> Prime coat (0.7 l/m2)	m²	51			
5.2		MC-30 cutback bitumen Tack coat (0.5 l/m2) 30 % bitumen anionic stable grade emulsion					
5.3		<u>Asphalt</u> a) 35 mm thickness open-graded asphalt levelling layer	m²	51			
5.4		b) 25 mm thickness open-graded asphalt finishing layer					
5.5		<u>SECTION: ASPHALT BASE AND SURFACING</u> <i>Along new drainage channel</i> Prime coat (0.7 l/m2)	m²	116			
5.6		MC-30 cutback bitumen Tack coat (0.5 l/m2) 30 % bitumen anionic stable grade emulsion					
5.7		<u>Asphalt</u> a) 35 mm thickness open-graded asphalt levelling layer	m²	116			
5.8		b) 25 mm thickness open-graded asphalt finishing layer					
5.9		Cores for density determination by the Engineer	No	5			
5.10		Masking of kerbing and channelling with 150 micron PVC sheeting during application of primer and tack coats					
TOTAL CARRIED TO SUMMARY - PHASE 2: MODULE 1&2: PART 5: ASPHALT							

PHASE 2 - MODULE 1&2: ATHLETICS TRACK			PART 6: KERBING AND CHANNELLING				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
6.1	1200M K	<u>SECTION: KERBING AND CHANNELLING</u> Concrete Kerbing: Precast concrete kerbing SABS 927-1969 Fig 5 including continuous bedding, continuous haunching and joints ii) for radii over 20m and straight	m	75			
6.2		<u>Supply and installation of local supply (modified by synthetic contractor) slotted drainage channel for radii of 36.35m and straight including continuous bedding and continuous haunching</u> (i) Type 1 - Synthetic to Grass including an additional 2m for cutting	m	289			
6.3		(ii) Type 2 - Synthetic to Synthetic including an additional 2m for cutting	m	113			
6.4		Drainage channel sump outlet including connection to storm water collector pipe	No	8			
6.5		Removable aluminium kerb with locating devices	m	397			
6.6		Drainage channel synthetic to grass edging: Precast concrete kerbing SABS 927-1969 Fig 12 including continuous bedding, continuous haunching and joints	m	287			
6.7		Paving block infill along track channel	m2	29			
6.8		Paving block infill blinding aggregate 20 mm	m3	1.0			
6.9		Land surveyor services	Sum	1			
TOTAL CARRIED TO SUMMARY PHASE 2: MODULE 1&2: PART 6: KERBING AND CHANNELLING							

PHASE 2 - MODULE 1&2: ATHLETICS TRACK			PART 7: SYNTHETIC SURFACING				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
7.0		SYNTHETIC SURFACING					
		<i>Development, manufacture and sale of reactive liquid plastics, pastes and solid plastics based on polyurethane, epoxy resins and rubber for synthetic outdoor sports flooring as well as construction and industry to comply with the following standards / regulations: SN EN ISO 9001: 2008 AND SN EN ISO 14001: 2004. Products to meet the requirements of the EC directive 2004/42/EC</i>					
		<i>Note: Recycled car tyres are not accepted for use in the synthetic surfacing components</i>					
7.1		13mm Sandwich system, 2-layer system (RAL 5010 Colour Dark Blue)	m2	209			
		<i>Material Consumption</i>					
		<i>Asphalt primer @ 0.15kg/m2 - a moisture curing, solvent containing, single component PUR primer with low viscosity</i>	kg	31.4			
		<i>Base mat of 10mm thickness:</i>					
		<i>Binder: A moisture curing, solvent free, unpigmented PUR binder of medium viscosity for recycled granules for in situ base mats @ 1.4 kg/m²</i>	kg	292.6			
		<i>Recycled rubber granules (1-4mm) @ 6.5 kg / m2)</i>	kg	1358.5			
		<i>Pore Sealer: a solvent free, elastic, self-levelling, two component polyurethane coating @ 1kg / m2</i>	kg	209.0			
		<i>EPDM powder 0.0-0.5mm high quality @ 0.4kg / m2</i>	kg	83.6			
		<i>Top Layer of 3 mm thickness:</i>					
		<i>Polyurethane coating: a solvent free, elastic, self-levelling, two component polyurethane coating part A @ 1.13 kg/m²</i>	kg	236.2			
		<i>Polyurethane coating: a solvent free, elastic, self-levelling, two component polyurethane coating part B @ 1.07 kg/m²</i>	kg	223.6			
		<i>EPDM granules (1-4mm): durable, flexible, high quality EPDM granules @ 2.8 kg / m2 - net quantity excluding excess)</i>	kg	585.2			
		<i>Excess: EPDM granules (1-4mm): durable, flexible, high quality EPDM granules @ 1.2 kg / m2</i>	kg	250.8			
		<i>Freight</i>	kg	1912.4			
AMOUNT CARRIED FORWARD:							

PHASE 2 - MODULE 1&2: ATHLETICS TRACK			PART 7: SYNTHETIC SURFACING				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
7.2		UV PROTECTION: weathering resistant, highly elastic sealing lacquer - a pigmented solvent containing, low viscous, highly elastic, two component PUR satin finish sealing lacquer. Polyurethane sealer, 10-year product insurance guarantee (RAL 5010 Colour Dark Blue) applied @ 0.3g/m2	m2	232			
		Material Consumption					
		Two component PUR satin finish sealing lacquer part A (RAL 5010 Colour Dark Blue)	kg	58.0			
		Two component PUR satin finish sealing lacquer part B (RAL 5010 Colour Dark Blue)	kg	11.6			
7.3		Freight	kg	72.6			
		Masking of kerbs to allow for 25mm wide seal strips on kerbs as detailed on the drawings	m	430			
		Summary imported content	kg	2211			
AMOUNT CARRIED FORWARD:							

PHASE 2 - MODULE 1&2: ATHLETICS TRACK			PART 7: SYNTHETIC SURFACING				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
7.5		20mm Sandwich System Construction Surfacing (RAL 5010 Colour Dark Blue)	m2	21			
		<i>Material Consumption</i>					
		<i>Asphalt primer @ 0.15kg/m2 - a moisture curing, solvent containing, single component PUR primer with low viscosity</i>	kg	3			
		<i>Base mat of 17mm thickness: Binder: a moisture curing, solvent free, unpigmented PUR binder of medium viscosity for recycled granules for in situ base mats @ 2.38 kg/m²</i>	kg	50			
		<i>Recycled rubber granules (1-4mm) @ 11.05 kg / m2)</i>	kg	232			
		<i>Pore Sealer: a solvent free, elastic, self-levelling, two component polyurethane coating @ 1kg / m2</i>	kg	21			
		<i>EPDM powder 0.0-0.5mm high quality @ 0.4kg / m2</i>	kg	8			
		<i>Top Layer of 3 mm thickness: Polyurethane coating: a solvent free, elastic, self-levelling, two component polyurethane coating part A @ 1.13 kg/m²</i>	kg	24			
		<i>Polyurethane coating: a solvent free, elastic, self-levelling, two component polyurethane coating part B @ 1.07 kg/m²</i>	kg	22			
		<i>EPDM granules (1-4mm): durable, flexible, high quality EPDM granules @ 2.8 kg / m2 - net quantity excluding excess)</i>	kg	59			
		<i>Excess: EPDM granules (1-4mm): durable, flexible, high quality EPDM granules @ 1.2 kg / m2</i>	kg	25			
		<i>Asphalt Scabbling 7mm depth Freight</i>	m2	21			
			kg	213			
AMOUNT CARRIED FORWARD:							

PHASE 2 - MODULE 1&2: ATHLETICS TRACK			PART 7: SYNTHETIC SURFACING				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
7.6		Cutting and Installation of 20 x 25 key Full Polyurethane along all new kerbs	m	75			
7.7		Cutting and Installation of 10 x 25 key Full Polyurethane along all new channels	m	398			
7.8		25 mm Wide Kerb Seal: 4.3 mm thickness Retopping, including approved concrete primer - moisture curing, solvent containing, single component PUR primer with low viscosity and a solvent free, elastic, self-levelling, two component polyurethane coating with EPDM granules (RAL 5010 Colour Dark Blue)	m2	2			
		<i>Material Consumption</i>					
		<i>Top Layer of 5 mm thickness: solvent free, elastic, self-levelling, two component polyurethane coating @ 3.0 kg/m²</i>	kg	6			
		<i>EPDM granules (1-4mm): durable, flexible, high quality @ 2.8 kg / m2 - net quantity excluding excess)</i>	kg	5			
		<i>Excess: EPDM granules (1-4mm): durable, flexible, high quality @ 1.2 kg / m2</i>	kg	2			
		<i>Freight</i>	kg	13			
TOTAL CARRIED TO SUMMARY PHASE 2: MODULE 1&2: PART 7: SYNTHETIC SURFACING							

PHASE 2 - MODULE 4,6&7: FIELD ITEMS UPGRADE			PART 8: FIELD ITEMS				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
	PB	ANCILLARY ATHLETIC EQUIPMENT FOR FIELD ITEMS					
	PB-2	Construction of field items complete as shown on the drawings					
8.1		<u>1) Shot circle complete with stop boards as detailed on the drawings including stopboard</u>					
8.1.1		Shot Circle	No	2			
8.1.2		Stop Board	No	2			
8.1.3		a) 25 mm dia drainage pipes	m	2			
8.1.4		a) 50 mm dia drainage pipes	m	11			
8.1.5		b) 19 mm Stone Aggregate	m3	3.3			
8.1.6		c) Concrete Class 25/19	m3	2.6			
		<u>2) Discus circle complete as detailed on the drawings including:</u>					
8.2							
8.2.1		Discus circle	No	1			
8.2.2		a) 25 mm dia drainage pipes	m	1			
8.2.3		a) 50 mm dia drainage pipes	m	8			
8.2.4		b) 19 mm Stone Aggregate	m3	2.6			
8.2.5		c) Concrete Class 25/19	m3	2.1			
		<u>3) Hammer & Discus circles facility complete as detailed on the drawings including:</u>					
8.3							
8.3.1		Hammer Circle	No	1			
8.3.2		Discus circle	No	1			
8.3.3		a) 25 mm dia drainage pipes	m	2			
8.3.4		a) 50 mm dia drainage pipes	m	12			
8.3.5		b) 19 mm Stone Aggregate	m3	3.2			
8.3.6		c) Concrete Class 25/19	m3	2.6			
8.4		<u>4) Hammer cage</u>					
8.4.1		Ground sockets installed 1 set	No	10			
8.4.2		Concrete backfill Class 25/19	m3	4.4			
8.4.3		Hammer cage installed	No	1			
8.50		<u>5) Discus cage</u>					
8.5.1		Ground sockets installed 1 set	No	9			
8.5.2		Concrete backfill Class 25/19	m3	1.8			
8.5.3		Discus cage installed	No	1			
8.6		<u>6) Water jump</u>					
8.6.1		Remove synthetic surfacing	m2	3.4			
8.6.2		Extend drainage pipe	m	0.3			
		200 thick Concrete Infill Class 25/19	m3	0.7			
8.6.3							
		New adjustable hurdle bolted to top of concrete wall	No	1			
8.6.4		Existing hurdle sleeves: concrete infill	m3	0.3			
TOTAL CARRIED TO SUMMARY PHASE 2: MODULE 4,6&7: PART 8 FIELD ITEMS							

PHASE 3 - PRELIMINARY & GENERAL			PART 1: GENERAL				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
	3.1	<u>Fixed-charge and value-related items</u>					
1.1		<u>Facilities for Specialist Natural Turf Pitch Contractor:</u>	Sum	1			
1.2		Supervision for Duration of Construction	Sum	1			
1.3		Company and Head Office Overhead Costs for the Duration of Contact	Sum	1			
1.4		Other Time-Related Obligations	Sum	1			
	3.2	<u>Establishment of Facilities on the Site: Synthetic Surfacing</u>					
		<u>Facilities for IAAF accredited Surveyor</u>					
1.5		b) Transport	Sum	1			
1.6		c) Living Accommodation	Sum	1			
1.7		Company and Head Office Overhead Costs for the Duration of Contact	Sum	1			
	3.3	<u>Fixed-charge and value-related items</u>					
		<u>Facilities for Paving contractor:</u>	Sum	1			
1.8		Supervision for Duration of Construction	Sum	1			
1.9		Company and Head Office Overhead Costs for the Duration of Contact	Sum	1			
1.10		Other Time-Related Obligations	Sum	1			
TOTAL CARRIED TO SUMMARY PHASE 3: PART 1 GENERAL							

PHASE 3 - PAVED AREAS INFIELD AND OUTFIELD			PART 2: SITE CLEARANCE, EARTHWORKS & LAYERWORKS				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
2.1	1200C	<u>SECTION: SITE CLEARANCE</u> Remove grass and dispose	m2	500			
2.2		Topsoil Removal to a nominal depth of 200 mm and dispose	m3	100			
2.3	1200D	<u>SECTION: EARTHWORKS:</u> <u>Bulk Excavations</u> Excavate in all materials and use for embankments or backfill or dispose as ordered: Cut to form boxcut 145mm deep and dispose	m3	-		Rate only	
2.4	1200D M	<u>SECTION: EARTHWORKS (ROADS, SUBGRADE)</u> <u>Treatment of road-bed</u> a) Roadbed Preparation rip and recompact to 90 % MOD AASHTO	m2	500			
2.5		B) 150mm selected layer (G7) compacted to 93% of mod. AASHTO density	m3	-		Rate only	
2.6	1200M E	Process upper selected layer by means of stabilization Stabilization agent	m3	-		Rate only	
2.7		b) Road lime <u>SECTION: SUBBASE</u> Construct subbase course with material from commercial sources:	t	-		Rate only	
2.8		a) 150 mm Subbase layer (G5) compacted to 95 % Mod AASHTO stabilized (C4)	m3	75			
2.9		Process subbase course by means of stabilization Stabilization agent	m3	75			
2.10		d) 3% OPC cement	t	4.5			
TOTAL CARRIED TO SUMMARY PHASE 3: PART 2: SITE CLEARANCE, EARTHWORKS & LAYERWORKS							

PHASE 3 - PAVED AREAS INFIELD AND OUTFIELD			PART 3: FINAL SURFACING, KERBING AND CHANNELLING, SERVICE REPAIRS				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
	1200 MJ	<u>SECTION: SEGMENTED PAVING</u>					
		<u>PROVISION FOR EDGE RESTRAINTS - INFIELD</u>					
3.1		i) for radii over 4m and up to 20m	m	14			
3.2		ii) for radii over 20m and straight	m	131			
		<u>Construction of Paving Complete - Infield</u>					
3.3	1200 MK	Lay 50 mm paving blocks including rolling to Locked-up Condition	m2	15			
		<u>Construction of Paving Complete - Outfield</u>					
3.4		Lay 50 mm paving blocks including rolling to Locked-up Condition	m2	500			
		Cutting units to fit edge restraints					
3.5		a) Straight and curves edges	m	121			
		<u>SECTION: KERBING AND CHANNELLING</u>					
		Concrete Kerbing - Outfield:					
		Precast concrete kerbing SABS 927-1969 Fig 12 including bedding, haunching and joints					
3.6		i) for radii over 4m and up to 20m	m	-			
3.7		ii) for radii over 20m and straight	m	483			
3.8		iii) Supply and install precast drainage channel D6 or equal	m	14			
		<u>SECTION: SERVICES REPAIR AND MAINTENANCE</u>					
3.9		Provisional sum for Inspecting existing storm water system for damage and blockage, cleaning and repairs as required	Sum	1.00			
TOTAL CARRIED TO SUMMARY PHASE 3: PART 3: FINAL SURFACING, KERBING AND CHANNELLING, SERVICE REPAIRS							

PHASE 3 - MODULE C: GRASSING INFIELD AND OUTFIELD			PART 4: TOPSOILING AND GRASSING				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		<u>INFIELD LEVEL CORRECTIONS</u>					
		<u>Adjusting Existing Pitch Levels</u>					
4.1		a) Scarify thatch with tractor drawn scarifier and dump debris in designated area on site	m2	9192			
4.2		b) Remove existing pop-us and maintain	Sum	1			
4.3		c) Remove sods by means of grader and maintain for re-use on existing soccer pitch	m2	9192			
4.4		d) Adjust topsoil (washed river plaster sand, 200mm depth) levels to indicated slopes and levels	m2	9192			
4.5		e) Provide and apply fertilizers in top 100mm layer of topsoil (919 m3)					
4.6		i) Agrilime	kg	909			
4.7		ii) Super phosphate	kg	919			
4.8		iii) LAN	kg	1838			
4.9		iv) 2:3:2 SR	kg	1838			
4.10		f) Repair and place existing pop-ups to new heights	Sum	1			
4.11		g) Provide, mix constituents and apply 3 mm thick topdressing matching topsoil properties, excluding organic matter	m3	28			
		<u>Grassing</u>					
4.12		a) Placement of existing sods with rink spreader	m2	9192			
		<u>Maintenance of grass</u>					
4.13		Watering as required to establish the sward until site handover	Sum	1			
AMOUNT CARRIED FORWARD:							

PHASE 3 - GRASSING INFIELD AND OUTFIELD				PART 4: TOPSOILING AND GRASSING			
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
		AMOUNT BROUGHT FORWARD					
	PE:	<u>REHABILITATION OF GRASSING ALONG CONSTRUCTION AREAS</u>					
	PE-7.1	<u>Preparing areas for grassing</u>					
4.14		a) Scarifying	m2	80			
4.15		b) Importation of topsoil matching existing topsoil properties, to obtain required levelling, including 3-5% organic matter, placement and shaping	m3	16			
		f) Provide and apply fertilizers in top 150mm layer of topsoil (95 m3)					
4.16		i) Agrilime	kg	8.00			
4.17		ii) Super phosphate	kg	8.00			
4.18		iii) LAN	kg	16.00			
4.19		iv) 2:3:2 SR	kg	16.00			
	PE-7.2	<u>Grassing</u>					
4.20		a) New grassed areas: Kikuyu sods to match existing turf	m2	80			
	PE-7.3	<u>Maintenance of grass</u>					
4.21		Watering as required to establish the sward until site handover	Sum	1			
TOTAL CARRIED TOSUMMARY PHASE 3: PART 4: TOPSOILING AND GRASSING							

PHASE 3 - SYNTHETIC SURFACING			PART 5: SYNTHETIC SURFACING				
ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	% IMPORTED CONTENT
5.1		<u>Line Markings and IAAF Certification</u> IAAF Survey report by an IAAF accredited surveyor for certification Class 1	Sum	1		Rate only	
5.2		Application for and Issue of IAAF Certification Class 1	Sum	1		Rate only	
5.3		IAAF Survey report by an IAAF accredited surveyor for certification Class 2	Sum	1			
5.4		Application for and Issue of IAAF Certification Class 2	Sum	1			
TOTAL CARRIED TO SUMMARY PHASE 3: PART 5: SYNTHETIC SURFACING							

SUMMARY OF BILL OF QUANTITIES

BOKSBURG STADIUM		Upgrading of synthetic athletics track
DESCRIPTION		AMOUNT
PHASE 1 - MODULE A: PRELIMINARY & GENERAL		
	PART 1: GENERAL	
PHASE 1 - MODULE B: FIELD ITEMS		
	PART 2: FIELD ITEMS	
PHASE 1 - MODULE C: SYNTHETIC SURFACING		
	PART 3: SYNTHETIC SURFACING	
SUB TOTAL 1: PHASE 1		
PHASE 1 - MODULE D: PROFESSIONAL FEES		
	PART 4: PROFESSIONAL FEES (3% OF SUB TOTAL 1 PHASE 2)	
SUB TOTAL 2: PHASE 1		
PHASE 2 - MODULE A: PRELIMINARY & GENERAL		
	PART 1: GENERAL	
PHASE 2 - MODULE B: ATHLETICS TRACK UPGRADE		
	PART 2: SITE CLEARANCE	
	PART 3: EARTHWORKS	
	PART 4: LAYERWORKS	
	PART 5: ASPHALT	
	PART 6: KERBING AND CHANNELLING	
	PART 7: SYNTHETIC SURFACING	
PHASE 2 - MODULE C: FIELD ITEMS UPGRADE		
	PART 8: FIELD ITEMS	

SUB TOTAL 1: PHASE 2		
SUB TOTAL 2: PHASE 2		
PHASE 3 MODULE A: PRELIMINARY & GENERAL		
	PART 1: GENERAL	
PHASE 3 - MODULE B: PAVED AREAS INFIELD AND OUTFIELD		
	PART 2: SITE CLEARANCE, EARTHWORKS & LAYERWORKS	
	PART 3: FINAL SURFACING, KERBING AND CHANNELLING, SERVICE REPAIRS	
PHASE 3 - MODULE C: GRASSING INFIELD AND OUTFIELD		
	PART 4: TOPSOILING AND GRASSING	
PHASE 3 - MODULE D: SYNTHETIC SURFACING		
	PART 5: SYNTHETIC SURFACING	
SUB TOTAL 1: PHASE 3		
SUB TOTAL 2: PHASE 3		
TOTAL PHASE 1 + PHASE 2 + PHASE 3		
CONTINGENCIES @ 10%		
SUB TOTAL		
VAT @ 14%		
TOTAL		