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ESTABLISHMENT OF A CLOTHING UNIT IN THE DEPARTMENT
OF SUPPLIES TO ORGANIZE AND SUPPORT TECHNICALLY
LOCAL MANUFACTURE OF SCHOOL AND OTHER UNIFORMS

US/BOT/87/097/11-04

BOTSWANA

Technical report: First visit*

Prepared for the Government of Botswana
by the United Nations Industrial Development Organization

Based on the work of Mortimer O'Shea
Purchase + Procurement Expert

Backstopping officer: J.P. Moll, Agro-based Industries Branch

* This document has not been edited.

2/30

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MAJOR RECOMMENDATIONS:

Newly trained personnel should not commence work using flawed system for Stock Control, Materials Procurement and Record keeping. A physically segregated, fully secure area of the warehouse should be exclusively dedicated to textiles. A cloth inspection and measuring machine should be installed in this area.

A systematic storage/retrieval system for standard specification master samples coupled with historical fabric delivery samples with test results to be devised. Appropriately trained personnel to have charge of Record-Keeping. The establishment of a small technical library.

ABSTRACT:

The textile procurement expert familiarized himself with the Textile and Garment Manufacturing Industries in Botswana, the existing procurement procedures and the current status of documentation, record-keeping with stock control/quality control and information at the Gaborone West Depot of the Department of Supply section of the Ministry of Finance and makes recommendations for a number of improvements to result in greater efficiency, economies and security with special emphasis on the sourcing of many textiles within Botswana either through the discovery of unknown resources or by persuasion of potential producers to cooperate by modification of production/dyeing/finishing inputs to supply certain key textiles now being imported.

OBJECTIVES:

The objectives of this first mission (one man month) are:

To assess the status of the textile manufacturing and making up industries in Botswana from the textile procurement viewpoint.

To set the 'ground rules' for a better system of fabric procurement, examination, testing, storage and despatch.

1.0 FABRIC PROCUREMENT: Current practices

1.1 SOURCING

Because up to recently, there existed very few textile weaving, dyeing and finishing units within the country and most of those with appropriate facilities were export-oriented and unwilling to produce special fabrics, the trend has been for the Department of Supply to import their fabric requirements; there have also been particularly difficult problems when for example a fabric is woven in Botswana but must be exported to, say, Zimbabwe for dyeing. Reimportation of such fabric has been made an untenable operation because of customs regulations concerning Country of Origin. The less difficult approach has been to import cloth. Indeed the Department of Supply sent two officers to Honk Kong, PRC, South Korea and Japan quite recently on a fabric sourcing mission. Much of the department's fabric sourcing has been in the Republic of South Africa.

1.2 WAREHOUSING: Incorrect procedures

Currently, all textile materials are stored along with other non textile supplies in a general warehouse. Intended originally to be textile/uniform-dedicated.

1.2.1 Untrained Staff - The general warehouse staff accept deliveries and issue stock without the normal checks. Bin cards exist but one could not place any confidence in such a lack of security.

1.2.2 No Measuring - Supplier's length and width, weight, etc. are accepted as being correct.

1.2.3 No stocktaking - There is no formal stocktaking nor even random checking.

1.2.4 Rolls of cloth are stacked in bins without the normal tubular storage system

1.2.5 No screening of warehouse staff for colour blindness; therefore an incorrect colour may be accepted or issued.

- 1.3 Fabric Specifications: an inadequate system-There is no formal system in existence and in the absence of the highly competent Uniform Coordinator, one would expect frequent problems and chaos.
 - 1.4 Historical Records: system lacking- By Historical Records is meant the filing of all submitted manufacturers' samples, the filing of samples from each colourway delivered, together with specification details.
 - 1.5 Testing and Quality Control: no in-house facilities-Only very rarely is a sample sent for laboratory assessment for fibre content, quality, sett, crease recovery, colour-fastness, abrasion resistance, weight per square metre, etc.
 - 1.6 Personnel - There is no trained Stock Controller, Quality Controller, Laboratory Technician nor indeed a laboratory or any other normal facility.
-
- 2.0 Fabric Procurement : recommended procedures
 - 2.1 Sourcing.
 - 2.1.1 Rationalizing of fabric specifications - The Textile Procurement Expert feels that if an analysis of all fabric requirements is made, it should be possible to reduce to a few standard generic types under the headings:-
 - .fibre blend percentage
 - .weight per square metre
 - .width
 - .weave

2.1.2 Ordering undyed stocks - Then it should be possible to order in (say) white 'prepared for dyeing/printing' in substantial quantities with significant price advantage from a number of manufacturers in Botswana, hitherto not interested because of the relatively small 'per colourway' order possibilities. These stocks of standard fabrics would be held in the Gaborone West Warehouse and issued for dyeing and finishing as required. An indication of minimum dyeing quantity for 'jet' dyeing (without surcharge) has been given by Al knitters (Pty) Ltd. This is 3,000 metres. Dyestuffs would be of the fibre-reactive type.

Shashe River Textiles (Pty) Ltd are prepared to weave most fabrics currently being used by the Department of Supply. They are also prepared to undertake the dyeing of these fabrics to special colours. However, the Government of Botswana should give careful consideration to waiving the rigorous Customs Regulations in this instance because, although the fabrics would be woven in Botswana, it would be necessary to send them to Zimbabwe for dyeing. This could be a very fine fabric resource for Botswana and at the most competitive prices if only we could overcome the customs problems. It would certainly make more sense than importing from the far East, Europe or indeed the Republic of South Africa.

Another new resource with strong potential to help is the LONHRO Group weaving/dyeing/finishing mill in Gaborone. Although their current production programme is 100% polyster fabrics, it is probable that they would cooperate in developing a polyster/other fibre blend fabric. Some additional machinery would be required for polyester/wool fabric production.

It will of course continue to be necessary to import certain specialist textiles but these constitute only a minor percentage of annual requirements.

2.2. WAREHOUSING - Correct Procedures

2.2.1 Security - Ideally the entire currently used building should be available, but if not a dedicated area of about 90% of the Warehouse at Gaborone West should be sealed off by means of secure welded steel mesh from floor to roof, from the remainder of the Warehouse. A lockable door constructed from steel frame and similar welded wire mesh would allow authorized access for goods inward and outward - for large quantities and an adjoining hatch - for small quantities as well as for receipt of requisition documents and the issue of despatch documents.

2.2.2 Cloth inspection and measuring machine - The starting point for the new stock control regime must be the purchase of a cloth inspection and measuring machine and the training of the Textile warehouse manager/stock controller. In this connection the management of Shashi River Textiles (Pty) Ltd, have kindly offered to quote for the supply of one of their own custom - built machines (but fitted with a standard Trumeter[®]). The machine should be equipped with an opening triangle for folded pieces.

2.2.2.1 Training of operative - Shashi have also promised to train the proposed stock controller on the operation of a similar machine in their Francistown Mill. They operate the metric system of fault logging and their own log chart could be adapted as a standard form for the warehouse. The use of an advanced electronic system is not recommended in this instance.

2.2.3 Documentation - A number of new forms and docket books will be required (see Annex VI for tentative proposals) it is recommended that the cloth examiner should affix a standard sized, gimped cutting from each piece examined, to the inspection - log form and that he/she should place an indelible 'truth mark' at the beginning and end of each piece, as well as the Trumeter[®] length ticket.

2.3 FABRIC SPECIFICATIONS

The importance of a sound storage and retrieval system - master samples should be stored in a filing - type cabinet with manufacturers'/ dyers' counter - samples filed adjacently in separate pockets/envelopes, plus, again separately but adjacently, a representative sample from each delivery (to be provided by the stock controller in collaboration with the testing laboratory).

2.3.1 Verification - The verification of specification details of new deliveries will be provided by the stock - controller in collaboration with the testing laboratory.

2.4 HISTORICAL RECORDS

The importance of a reliable storage/retrieval system - it is important that a representative sample from each delivery should be filed in the system outlined at 2.3 together with the Laboratory Report. In case of necessity, the full set of samples - one from each piece - will be available from the Stock Controller. In the event of a dispute such records would be of vital importance and should be retained for a specified period but not for less than the time taken for all stocks to have been made up into garments and there would no longer be a likelihood of a dispute arising.

2.5 STOCK TAKING

Following the setting-up of the new stock control regime, the Stock Controller must carry out a 100% stocktaking by measuring all existing cloth stocks and recording these stock levels as the new base line.

2.6 STORAGE SPACE MANAGEMENT

The tubular system for cloth storage should be introduced, whereby each roll of fabric will lie independently within a tube of adequate diameter. Storage should be according to fabric specification category with a specific storage demarcation for each material specification and with sub divisions according to colour.

2.6.1 A manually - operated fork-lift is recommended for the placement/removal of light weight cloth rolls.

2.6.2 A stock of standard cloth tubes (cores) should be acquired and used as necessary. It may be possible to re-use suppliers' cores if these are of good quality and equal to the store's standard core)

2.7 GENERAL

It is obvious that the Textile Stock Controller and any other personnel in the isolated part of the warehouse should report only to the Uniform Coordinator and, therefore, be totally independent of other stores and their staff.

3.00 TECHNICAL LIBRARY

Its importance - A technical Library with a core stock of recommended books B.S.I./I.S.O. standards in all appropriate subjects, selected video programmes, slides and periodicals is an essential element or tool for the advancement of the staff's knowledge, reference purposes and the keeping of standards. A recommended appointment is that of information officer/librarian who might also undertake typing and photocopying services. See Annex VIII, IX for recommended acquisitions.

3.1 SPACE ALLOCATION

This area should adjoin the laboratory and a small area of approximately nine square metres is indicated.

ANNEX I - LIST OF STANDARD CLOTHS AND THEIR END-USES

FOLIO NO.	CURRENT SUPPLIER	QUALITY	COLOUR	COMPOSITION	WIDTH CM.	WEIGHT GRAMS/SQ.M	THREADS PER CM.	THREAD COUNT (No) WARP/WEFT	WEAVE	END-USE	ESTIMATED ANNUAL CONSUMPTION (METRES)
8305-049	DWS MALAWI	MOH 2W	WHITE PRINTED BGP	100% COTTON	160	155	23.1x23.8	20 /20	PLAIN	BEDSHEETS/ PILLOW CASES	20k
8305-051			WHITE	100% COTTON	150	280			2/2 TWILL	POCKETING	2k
8305-052	DWS MALAWI		GINGHAM BLUE/WHITE	100% COTTON	150	280			2/2 TWILL	COOKS' TROUSERS	2K
8305-053	DURAFORM LTD.		RED	100% COTTON	150	280			2/2 TWILL	TRAFFIC FLAGS ROADS & RAILWAYS	
8305-055	CONE TEXTILES ZIMBABWE	433/006	CREAM	50%/50% POLY/COTTON	150	100			PLAIN	WILDLIFE OFFICERS' SHIRTS/BLOUSES	5K
8305-056	H.P. HARTLEY (U.K.)	344/H.F.	MOSS GREEN	ANGORA - 60% WOOL 25% NYLON 15% COTTON	150	350	14.5x13.0	23 /23	PLAIN	BDF SHIRTS	20K
8305-057	CONE TEXTILES ZIMBABWE	103	CAMOUFLAGE	100% COTTON	280				2/2 TWILL	BDF FIELD DRESS (COMBAT)	30K
8305-058	DWS. SOUTH AFRICA		OLIVE GREEN	100% COTTON	150				2/2 TWILL	BDF SHIRTS BDF SLACKS JUNIOR OFFICERS SERVICE DRESS	30K
8305-066	CONE TEXTILES ZIMBABWE	432/003	2400 SKY BLUE	50%/50% POLY/COTTON	150	100			PLAIN	SHIRTING FOR CIVIL AVIATION LOCAL GOVT.	
8305-068	CONE TEXTILES ZIMBABWE	433/004	KHAKHI	50%/50% POLY/COTTON	150	100			PLAIN	SHIRTING FOR PRISON OFFICERS	10K
8305-070	H.F. HARTLEY (U.K.)	4065	LIGHT GREEN	67% POLY/ 33% VISCOSE	150	500-510			2/2 TWILL	WILDLIFE OFFICERS UNIFORMS	
8305-072	CONE TEXTILES ZIMBABWE		WHITE	POLY/COTTON	150	280 (TO BE REPLACED BY HEAVIER QUALITY			2/2 TWILL	DUST COATS MALE COOKS' JACKETS	5K
	CONE TEXTILES ZIMBABWE	475/027	KHAKHI	50%/50% POLY/COTTON	150	280			2/2 TWILL	GATE-KEEPERS' RAILWAYS UNIFORMS	10K
8305-075	CONE TEXTILES	150-025	ORANGE	100% COTTON	150	280			2/2 TWILL	RAILWAYS; CIVIL AVIATION OVERALLS	3K

FOLIO NO.	CURRENT SUPPLIER	QUALITY	COLOUR	COMPOSITION	WIDTH (CM)	WEIGHT GRAMS/SQ.M	THREADS PER CM	THREAD COUNTS (No) WARP/WEFT	WEAVE	END-USE	ESTIMATED ANNUAL CONSUMPTIO METRES
	GARMENTS IMPORTED FROM ZAMBIA & S.A. SERVICES & HYGRADE CLGTHING	1842	KHAKHI	65% POLY/ 35% VISCOSE		325			BARATHEA	PRISON OFFICERS' WINTER UNIFORM	10K
	SERVICES & BERDEN UNIFORMS READY MADE (ZAMBIA & S.A.)	3176	NAVY BLUE	100% WOOL	150	465			2/2 TWILL	CUSTOMS IMMIGRATION CIVIL AVIATION	20K
		116 PV 51	NAVY BLUE	65% POLY/ 35% VISCOSE	147-149	350				TO BE DISCONTINUED	
	H.F. HARTLEY (UK)	3345 EXTN	MOSS GREEN	ANGORA WORSTED 60% WOOL 25% NYLON 15% COTTON	150	360				POLICY SSG - NOT YET APPROVED BY USER DEPT.	20K
	CONE TEXTILES ZIMBABWE		LIGHT GREY	50%/50% POLY/COTTON	150	120			PLAIN	SHIRTING - SECURITY GUARDS MESSENGERS	20K
	CONE TEXTILES ZIMBABWE		LIGHT GREEN	50%/50% POLY/COTTON	150	120				BDF SHIRTING	7k
	READY-MADE GARMENTS BY POLICE		DARK GREY	100% TERYLENE (POLYESTER)	150					SHIRTING - POLICE - JUNIOR OFFICERS	20K
8305-003	DWS-MALAWI	858	BEIGE - PRINTED	100% COTTON	90	146				TEA/DISH CLOTHS	30K
8305-004	DURAFORM		BROWN DENIM	67% COTTON 33% POLY	150	250	26/12.5	60/60 (TEX)	2/1 TWILL	PRISONERS' UNIFORMS	30K
8305-005	HYUNDAI KOREA		SKY BLUE & WHITE							FOR THE MANUF. OF NATIONAL FLAG - VARIOUS SIZES	20K
8305-015			KHAKHI	65% POLY/ 35% VISCOSE	150	267			PLAIN VELVETERN	AGRI. DEMO. LADIES' COSTUMES	5K
8305-016			FAWN	DITTO	150	267			PLAIN VELVETERN	LOCAL GOVT. NURSES' UNIFORMS	10K

FOLIO NO.	CURRENT SUPPLIER	QUALITY	COLOUR	COMPOSITION	WIDTH (CM)	WEIGHT GRAMS/SQ.M	THREADS PER CM.	THREAD COUNTS (No)	WEAVE	END-USE	ESTIMATED ANNUAL CONSUMPTION (METRES)
8305-018	TOWA, KOREA		GREY	65%/35% POLY/VISCOSE	150	267			PLAIN VELVETEEN	MESSENGERS/ LADIES UNIFORMS	STILL UNDER DISCUSSION
8305-019	DAGAMA TEXTILES S.A.		SKY BLUE	100% COTTON	65-71				PLAIN (BRUSHED)	DUSTERS	20K
8305-121			WHITE	NOW 100% COTTON BUT TO BE REPLACED BY POLY/COTTON							20K
8305-023	DURAFORM		WHITE	100% COTTON	150				PLAIN	NURSES' CAPS	LIKELY TO BE DISCONTINUED
	CONE TEXTILES, ZIMBABWE		KHAKI	100% COTTON					2/2 TWILL (DRILL)	IRONING BOARD COVERS, DUST OVERALLS	5K
	H.F. HARTLEY (U.K.)		DESERT KHAKI	50%/50% POLY/COTTON	180					BDF OVERALLS	
			WHITE	100% COTT	301					HAND ROLL TOWEL	
		S.J. 3	WHITE	100% COTTON	70	660			TERRY TOWELLING	BATH TOWELS	
			WHITE	100% COTTON					HUCKABACK TOWELLING		

ANNEX II - LIST OF USUAL CLOTH SUPPLIERS

SUPPLIER	COUNTRY
DWS	Malawi and Republic of South Africa
Durafoam Ltd	Republic of South Africa
Cone Textiles	Zimbabwe
H.F. Hartley Ltd.	U.K.
Hyundai	Republic of South Korea
Towa	ditto
Dagama Textiles	Republic of South Africa

ANNEX III- LIST OF POTENTIAL SUPPLIERS (Botswana - based)
OF RATIONALIZED 'PREPARED FOR DYEING' FABRICS

MANUFACTURER	LOCATION
Ngotwane Textiles (Lonhro Group)	Gaborone
Shashi River Textiles (pty) Ltd	Francistown
AI Knitters*	Francistown
Algo Industries (pty) Ltd**	Gaborone

*Fine Weft Knitters with surplus dyeing capacity. Jigs currently installed but will have Jet dyeing equipment operational early 1990 and will then accept commission-dyeing orders for minimum quantities of 3,000 Metres per shade in woven fabrics of any fibre composition.

**Cotton spinning and weaving are planned for the near future as a further diversification for this progressive textile enterprise. Management are confident that they will be in a position to produce all the 100% cotton fabrics currently being imported by the Department of Supply.

**ANNEX IV - LIST OF FABRICS WHICH WILL REQUIRE TO BE IMPORTED FOR
THE FORSEEABLE FUTURE**

Folio No.	Composition	Supplier
8305-056	60% wool/25% nylon 15% cotton	H.F. Hartley
End-use prison officers' winter uniform	65% polyester/ 35% viscose	Services and Hygrade Clothing*
uniforms for customs, immigration and civil aviation	100% wool worsted	Berden Uniforms*

***Currently being supplied as made-up uniforms**

ANNEX V ADDITIONAL EQUIPMENT

- 1- artificial daylight colour-matching cabinet
- 2- cloth 'truth' marking stamp (can be a rubber stamp using indelible ink, a stencil or a hot-foil type stamp)
- 3- manually-operated pneumatic cloth hoist
- 4- magnifying thread counter with illumination source
- 5- thread twist tester
- 6- yarn counts tester (for assessment of approximate yarn counts by measuring and weighing yarn lengths removed from fabric samples)
- 7- shirley yarn counts conversion slide rules (six off)
- 8- manually-operated pattern gimping machine for the cutting of small reference samples (approximately 70mm X 70mm)
- 9- wet and dry rubbing tester (crocking test)
- 10- pattern mounting cards for;-

- a) warehouse
- b) filing system

NOTE: cards to have appropriate printed format (this to be decided during procurement expert's next mission)

- 11- bow and skew testing : this will be one of the duties of the cloth examiner
- 12- platform and dial- type weighing machine for exclusive cloth store use
- 13- supply of cloth storage cylinders in an appropriate range of inside diameters

NOTE 1: range of measurements and required number/sizes to be determined during FPE's next mission

NOTE 2: This will be a recommendation only; purchase would logically fall without the remit of the UNDP programme

- 14- signage system for the cloth store (to indicate storage areas for the various cloth types/end-usage)
- 15- filing cabinets for cloth samples

NOTE: the required number to be determined during the FPE's next mission

- 16- book shelving units and periodicals display/storage stand

16-contd.

/stand for library

17- ideally, the testing laboratory should have a 'standard atmosphere' for accuracy and reproducibility of tests. ·
the PPE strongly recommends this

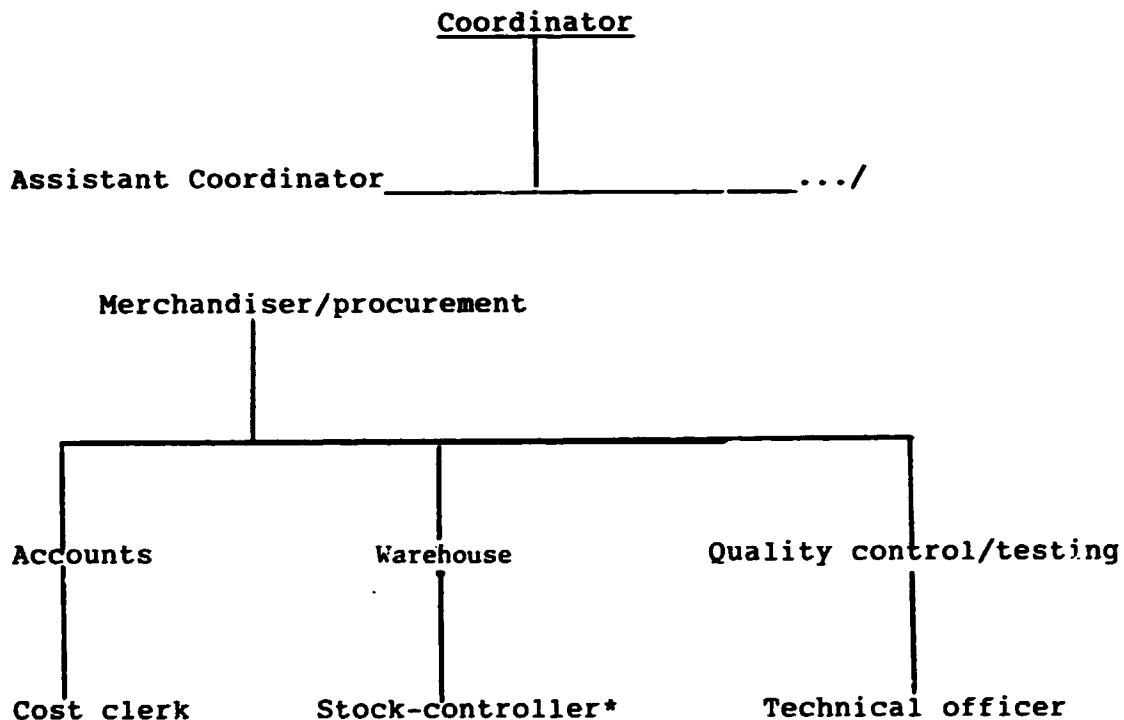
ANNEX VI - TENTATIVE PROPOSALS FOR NEW FORMS/DOCUMENTATION

UTILIZATION OF COMPUTER

The Purchase and Procurement expert feels that the recently acquired computer should have an appropriate software package which will probably be available "off the shelf", and capable of dealing with the entire range of stock-control requirements. This matter will be discussed with the CPA and the PPE would then make recommendations on the most appropriate package.

ANNEX VII - ORGANIZATION CHART (PART) WITH PROPOSED MODIFICATION

(For original, see DIAGRAM 2, Page 25, Technical Report by Don Hague 10/R.85, 16 December 1988)



*To receive special Fellowship training

ANNEX VIII - TECHNICAL LIBRARY CORE BOOKS - ALL AVAILABLE FROM
THE TEXTILE INSTITUTE

TITLE	AUTHOR/S	PRICE &STG.
Basic Techniques in Textiles	M. Bell	4.95
Beyond Basic Textiles	A. Cohen	20.00
Care & preservation of Textiles	Finch & Putman	16.95
Chemical Testing & Analysis(Tp)	A.G.de Boos	7.00
" " " " "	E.B.Jones	7.00
Cloth Geometry	J.R. Womersley	2.00
Clothing Terms & Definitions		8.50
Colour Terms & Definitions		2.50
Comfort Properties of Textiles (TP)	K. Siater	7.00
Computers in Textiles-A Buyer's Guide to European Products & Services		25.00
Computers in the World of Textiles		25.00
Courtaulds Vocabulary of Textile Terms		3.95
Deskbook of World Fabrics	P.Lennox Kerr	17.50
The Dyeing of Cellulosic Fibres	C.Preston	26.00
Dyeing & Chemical Technology of Textile Fibres	E.R. Trotman	40.00
Essentials of Textiles	M.L. Joseph	19.50
Fabric Distortion		7.00
Fabric Forming Systems	P. Schwartz, T. Rhodes	47.95
Fabric Science	Joseph J. Pizzuto	20.00
Fusing Technology	G. Cooklin - HBK - PBK	15.00 10.50
Glossary of Terms Used in the Clothing Industry		27.50
Handbook of Textile Fibres : Part 1 : Natural Fibres		11.50
Ditto : Part 2 :Man-made Fibres	J. Gordon Cook	27.50
Identification of Textile Materials	C.A. Farnfield	22.00
Identification of Vegetable Fibres	D. Catling	25.50
Introducing Colour		1.25
Introduction to Clothing Production Management	A.J. Chuter	11.95

TITLE	AUTHOR/S	PRICE £STG
Introduction to Laundry Chemistry		8.50
Introduction to Quality Control in the Apparel Industry	P. Mehta	25.00
Introductory Textile Science	M.L Joseph	25.50
Laundering & Dry-Cleaning (TP Vol 8 No.2) Marking & Coding of Faults : Outerwear Fabrics	A. Rice	17.50
Outline of Statistical Methods for use in the Textile Industry	A. Brearley & D.R. Cox	5.95
Permanent Press : Pre- or Post- Cure Physical Testing & Quality Control (TP Vol 6 No.4)	H. Weston	7.00
Practical Statistics for the Textile Industry Part 2	G.A.V. Leaf	20.00
Principles of Colour Technology	F.W. Billmeyer	52.25
Principles of Textile Testing	J.E. Booth	23.95
Q.C. of Cloth Dimensions & the Shrinkage of Yarns & Fabrics		4.00
Standard Handbook of Textiles	A.J. Hall	28.95
Statistical Methods for Textile Technologists	T. Murphy, K.P. Norris & L.H.C. Tippet	3.00
Technology of Clothing Manufacture	H. Carr & B. Latham	17.95
Terms Used in the Clothing Industry		27.50
Textile Dictionary : Eng/Fr/Ger/Sp.		101.00
Textile Fabrics & Their Selection	I. Wingate	46.75
Textile Graphics _Computer-Aided	J. Lourie	20.00
Textile Identification, Conservation and Preservation		55.00
Textile Terms & Definitions	S.R. Beech (Ed.) HBK	35.00
Textiles (6th Edition)	N. Hollen & J. Saddler	22.00
Textiles in Africa	A. Werbeloff	45.00

TITLE	AUTHOR/S	PRICE	£STG
Textiles: Fibre to Fabric	B.P.Corbman		13.50
ASTM Textiles- Fibres & Zippers			106.00
ASTM Textiles- Yarns, Fabrics & General Test Methods			106.00
Understanding Textiles	P.G. Tortora		37.50
Water & Soil Repellants for Fabrics	C.S.Sodane		73.50
Workwear for Fire & Heat Protection			29.50
Yarn Evenness (TP Vol 14 No. 3&4)	K. Slater		7.00
Yarn Hairiness (TP Vol 13 No.1)	A. Barella		7.00
Garment Dyeing: Ready to Wear Fashion from the Dyehouse (TP Vol 19 No.2)			14.00
Apparel Manufacturing Management Systems	E.M. McPherson		58.00

ANNEX IX - B.S.I/I.S.O. Standards

PRICE GROUP	B.S. No.	TITLE
No.		
4	946	method for the designation of yarns
2	4815	glossary of generic names for man-made fibres
3	5523	glossary of terms for textiles- weaves- definitions of general terms and basic weaves
7	6189	glossary of terms relating to fabrics and associated fibres, yarns and processes
3	950 part 1	artificial daylight for the assessment of colour illuminant for colour matching and colour appraisal
?	1006	methods of test for colour fastness of textiles and leather
2	1930	method for the determination of width of woven or knitted fabrics when relaxed at zero tension
2	1931	method for the determination of length of woven or knitted fabrics
5	2085	method of test for the determination of twist in yarns, direct counting method
3	2471	methods of test for textiles- woven fabrics- determination of mass per unit length and mass per unit area
3	2544	method for the determination of thickness of textile fabric
4	2545	methods of fabric sampling for testing
5	2576	methods of test for textiles- woven fabrics- determination of breaking strength and elongation (strip method)
2	2819	method for the measurement of distortion in bowed and skewed fabrics
3	2861	methods for the analysis of woven fabric construction
5	3086	method for the determination of recovery from creasing of textile fabrics by measuring the angle of recovery
3	3320	method for the determination of seam slippage of woven fabric
2	3321	method for the measurement of the equivalent pore size of fabrics

PRICE	B.S. No.	TITLE
GROUP NO.		
2	3356	method for the determination of stiffness of cloth
3	3411	method for the determination of the tensile properties of individual textile fibres
3	4253	method for the ballistic tear testing of woven fabrics
2	4294	methods of test for the stretch and recovery properties of fabrics
3	4303	method for the determination of the resistance to tearing of woven fabrics (wing-rip technique)
5	4745	method for the determination of thermal resistance of textiles
2	4768	method for the determination of the bursting strength and bursting distension of fabrics
7,3,3	4784	method for the determination of correct invoice mass (weight) of textiles
3	4797	method of test for textiles- determination of resistance to certain insect pests
5	5058	method for the assessment of drape of fabrics
7	5441	methods of test for knitted fabrics
2	5636	method of test for the determination of the permeability of fabrics to air
3	5690	method of test for determination of the abrasion resistance of fabrics
3	5811	method of test for determination of the resistance of pilling of woven fabrics (pill testing box method)
5	6176	method for determination of length and length distribution of staple fibres by measurement of single fibres
5	1955	method for determination of dimensional changes of wool-containing fabrics during washing
3	2823	methods of test for resistance of fabrics to penetration by water (hydrostatic head test)
2	3449	method for testing the resistance of fabrics to water absorption (static immersion test)

PRICE GROUP No.	B.S. No.	TITLE
3	3702	method of test for determination of resistance of textile fabrics to surface wetting (spray test)
2	4032	method of test for the determination of certain water-or alkali-soluble additives in cellulosic or synthetic fibres, yarns and fabrics or yarns and fabrics made from blends of such fibres
3	4323	method for the determination of dimensional change of fabrics induced by free steam
7	4407	methods of test, quantitative analysis of fibre mixtures
4	4554	method of test for wettability of textile fabrics
3	4569	specification for surface flash in pile fabrics
3	4658	methods of test for textiles- preparation of laboratory test samples and test specimens for chemical testing
4	4736	determination of dimensional changes of fabrics by cold water immersion.
3	4923	schedule of domestic washing and drying procedures for textile testing
3	4931	procedure for the preparation, marking and measuring of fabric specimens and garments in tests for assessing dimensional change
	4961	methods for determination of dimensional stability of textiles to dry cleaning in tetrachloroethylene
3	Part 1- machine	method
6	5066	method of test for the resistance of fabrics to an artificial shower
	5377	specification for assessment of laundering effects by means of cotton control cloth
5	Part 1-	preparation and use of the cotton control cloth
7	Part 2	method of analysis and test for the unsoiled cotton control cloth
3	5807	method of test for determination of dimensional change of textiles in domestic washing and drying

PRICE GROUP No.	B.S. No.	TITLE
3	6085	methods of test for determination of the resistance of textiles to microbiological deterioration
	1771	specification for outdoor uniform cloths for fire service, local authority and hospital staffs
7	part 1	
6	part 2	
7	2747	textile care labelling code
	3546	coated fabrics for water resistant clothing
5	part 1	
3	part 2	
3	3838	specification for blazer fabrics
3	4560	specification for fabrics for linings in uniform clothing
	4973	interlinings
5	part 1-	nonwoven sew-in interlinings
5	part 2-	nonwoven fusible interlinings
2	part 3-	woven and knitted fusible interlinings
3	part 4-	specification for woven sew-in interlinings
2	5742	specification for textile labels requiring to be washed and/or dry cleaned
3	5815	specification for cotton and man-made fibre blend sheeting, sheets, pillowslips, towels and napkins for use in the public sector
3	2732	specification for tickings for use by hospitals and local authorities
5	5129	specification for dimensions of bed blankets
	5866	blankets for use in the public sector
3	part 1-	specification for wool and wool/nylon blankets
3	part 2-	specification for cotton leno cellular blankets
3	1850	specification for elastic flat bands containing natural rubber with cotton, rayon or nylon
3	1897	specification for woven elastic webbings
5	4270	specification for woven elastic webbing with natural rubber for men's trunk tops
	1771	specification for outdoor uniform cloths for fire service, local authority and hospital staffs

PRICE	B.S. No.	TITLE
GROUP No.		
	1771-	continued
7	part 1	
6	part 2	
7	1903	glossary of terms used by the clothing industry
7	2747	textile care labelling code
6	3084	specification for slide fastners
6	3102	brass eyelets and washers for general purposes
3	3666	specification for size designation of women's wear
5	3728	specification for size designation of children's wear
3	3866	specification for holes and shanks for buttons
	3870	stitches and seams
8	part 1-	classification and terminology of stitch types
10	part 2-	classification and terminology of seam types
5	4162	methods of test for buttons
3	5511	size designation of clothes- definitions and body measurements procedure
2	5592	size designation of clothes- headwear
3	5919	specification for children's anoraks
3	6185	" " size designation of men's wear
5	6308	specification for men's uniforms
5	953	methods of test for safety and protective footwear
3	1801	tagged boot and shoe laces (cotton)
	1870	safety footwear
7	part 1-	specification for safety footwear other than all-rubber and all-plastics moulded types
2	part 2-	lined rubber safety boots
2	part 3-	specification for polyvinyl chloride moulded safety footwear
4	2723	firemen's leather boots
3	4004	specification for nylon boot and shoe laces

PRICE B.S. NO. TITLE

GROUP No.

3	4972	specification for women's protective footwear
2	4981	system of shoe sizing and marking 'mondopoint'
		part 1- fundamental characteristics
		part 2- system of length marking

PRICE GROUPINGS KEY

Group	Price £Stg
1	1.80
2	5.20
3	8.80
4	12.30
5	18.20
6	21.40
7	30.60
8	40.60
9	48.20
10	56.00
11	62.30
12	70.00
13	76.70
14	83.60
15	132.00

ANNEX X - MILLS, FACTORIES AND WORKSHOPS VISITED

LOCATION	FIRM
Gaborone	Masa Linens
	Franka
	Lyon Curtains
	Sunbird Textiles
	Boiteko Dressmaker
	Tswelelo Fashions
	L.L. Textiles
	Ratanang Dressmaker
	One's Garment
	Premier Clothing
	Alvic Textiles
	Bothakga
	Euniliz
	Knit & Purl
	Algo Industries
	Ngotwane Textiles
Mochudi	Tsholofelo-ya-one
	Setlha-tlha-le Maje
	Tshegetsanang
	Garona Knit & Sew
	Ranagi Fashions
Lobatse & Kanye	Thusanyo Dressmaker
	Mohutsiwa Dressmaker
	Anthony's Knitwear
Mahalapye	Cap & Helmet
	Tshwaragano Brigade
	Tihatloso Dressmaker
Palapye	Perfect
Selebi Phikwe	Hilda Pitse
Francistown	Eno Manufacturers
	Esquire Socks
	Al Knitters
	Shashe River Textiles
	Commercial Enterprises

ANNEX XI - PEOPLE MET*

NAME	ORGANIZATION/FIRM	TITLE
Mr. Don Hague	Fielden House	CTA
Mr. Pontius M. Mokgosana	Ministry of Finance & Development Planning	Director of Supply
Ms.C. Mwasi	Department of Supply	Uniform Coordinator
Mr. A. Kelly	Dept. of Supply	Supplies, Management Adviser
Mr. M.G. Bakwena	Dept. of Supply	Assistant Director of Supply
Mr. R.J. Bimbo	Dept. of Supply	Assistant Director of Supply
Ms. G. Dichabeng	Department of Supply	Assistant Uniform Coordinator
Ms. Nkgwedi Ramalebang	Dept. of Supply	Fellowship Candidate
Ms. Lesego M. Tshelemetse	Dept. of Supply	Ditto.
Mr. M.I. Mustak	Algo Industries (pty) Ltd	?
Mr. Mike Wilkins	Shashi River Textiles	Managing Director
Mr. Mike Sanderson	" " "	Export Manager
Mr. Gavin B. Viljoen	" " "	Accountant
Mr. Milan Holjevac	Perfect (pty) Ltd.	Managing Director
Mr. J. Madhoo	AI Knitters (pty) Ltd.	General Manager
Mr. M. Hammam	Franka Clothing Manufacturers	Director
Mr. Peter Coyle	Tiro Ya Diatla Knitwear Factory	Manager
Mr. Colin Whitehouse	Garment Technologist	UNIDO

NOTE: Additionally the owners/managers of the units visited as per Annex X.

*Excluding UNIDO Vienna and UNDP Gaborone

ANNEX XII - ABBREVIATIONS USED

B.S.I.	British Standards Institution
I.S.O.	International Standards Organization
CTA	Chief Technical Adviser
PPE	Purchase and Procurement Expert
CMT	Cut, Make and Trim
Poly.	Polyester
Eng.	English
Fr.	French
Ger.	German
Sp.	Spanish
U.K.	United Kingdom
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization

ANNEX XIII - MINUTES OF MEETING TO DISCUSS AWARD OF UNIDO

FELLOWSHIPS FOR UNIFORM COORDINATION'S UNIT STAFF

PRESENT:

Mr. P.M. Mokgosana	-	Director of Supply
Dr. M. Tissot	-	United Nations Resident Representative
Mr. R.I. Bimbo	-	Regional Director - South
Mr. M. O'Shea	-	Textile Advisor, UNIDO ✓
Mr. K. Muller	-	Programme Officer, UNDP
Ms. C. Mwasi	-	Uniform Coordinator, Recording

Matters Arising:

The United Nations Resident Representative in his introductory remarks, told members that the meeting was convened at such a short notice in order to rectify some problems which might hinder progress of the Uniform Project. The major problem was with the selection of Candidates - for fellowships.

He went on to say that it had come to the attention of UNDP through other equally concerned people that there was a particular fellowship which was being processed whose Candidate did not qualify. For this reason it was felt that it was better to rectify the problem before it gets any worse and jeopardise the project.

The principles of the project were summed up as follows:-

- (1) To formulate a selection committee where UNDP would be presented.
- (2) A prerogative should be set based on suitable qualifications, which should not be in contradiction with United Nations rule of fellowship nominations to avoid incidents of similar nature.
- (3) To come up with a workable selection formular for the purpose of preserving the future. For all future selections, UNDP should be represented in the interview panel.
- (4) Training should be cost effective and at the same time make savings and create jobs.

The Director of Supply requested for some clarification regarding the inclusion of UNDP officials during the fellowship selection interviews. He pointed out that this was the first time his Department was made aware of the panel requirements because as far as he is concerned, they thought that the nominations were in order because all the necessary procedures were being followed and in all cases UNDP/UN Representatives were involved in the selection of Candidates. In the case of this particular Candidate, the problem was that she was the sole Candidate with no other contenders. She was recommended.

In reply Dr. Tissot explained that the inclusion of his office in the selection process was to ensure that only technically qualified people are selected. The UNDP major concern was not with the appointment of officers to take up Government posts, because UNDP would not interfere with Government nominations, their only concern is with fellowships which they finance. As things are they could be stuck with the Candidate, because it seems the processing of the fellowship had already gone too far. He went on to say that because of this both UNDP and Department of Supply are left with two alternatives.

- (1) To let the Candidate go and leave it to the University to do final selection by prescribing an aptitude test which would then determine the quality of the Candidate.
- (2) To identify an alternative Candidate to replace the first Candidate in case of her being unsuccessful during the pre-entry tests.

The United Nations Resident Representative emphasised that he would not want to see the project which was the Director of Supply's own baby fail. It was very important to spend the project money wisely for the project to succeed.

In reply Mr. Mokgosana reiterated that he did not want to see the project fail either just because of one person who appears as an obstacle. He would go along with the UNDP selection machinery for fellowships.

STIPEND FOR THE CANDIDATE

The meeting unanimously agreed that this would only be implemented after the Candidate's aptitude test results.

Finally, the meeting agreed upon the following points:-

- (1) To let the Candidate go and leave it to the University to carry out the final assessment.
- (2) To identify an alternative Candidate who could succeed the first one, should the other person fail the test.
- (3) The Department of Supply would pay Airfares for the second Candidate should need arise.
- (4) The UNIDO procurement expert should tactfully make an assessment of new member of staff in the Uniform Unit, as a standby Candidate in case of eventualities.
- (5) For all future fellowships, an interviewing panel composed of UNDP and Director of Supply officials will be formed who will act as an independent body.
- (6) UNDP will write an official letter to the Candidate stating that her nomination is subject to her passing the interview or aptitude test in England where necessary.
- (7) The UNDP Resident Representative will endorse on the Candidate's nomination form that, his approval is subject to her passing the test at Leeds University.
- (8) The UNDP should go ahead with all the necessary arrangements regarding the Candidate's travel to Leeds University.

The Director of Supply thanked the UNDP Resident Representative and his team for convening the meeting which was to the benefit of the country.

Chairman: P.M. Mokgosana

C. Mwasi
Recording Secretary.