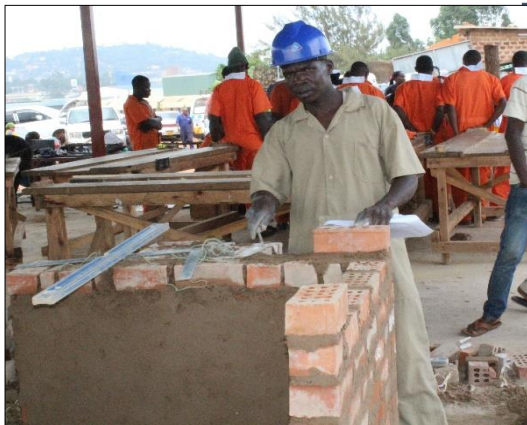




**THE REPUBLIC OF UGANDA**  
**Ministry of Education and Sports**

**Directorate of Industrial Training**



**Assessment and Training  
Package**

**For a  
BUILDER**

**Qualification Level: 1**

**Occupational Cluster: Technology and Design**

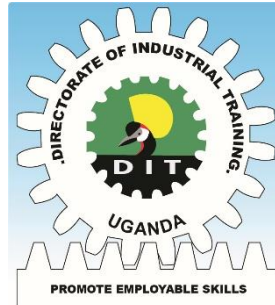
**September 2020**

**Reviewed by:**

**Directorate of Industrial Training  
Qualifications Standards Department**

**Supported by:**

**Government of Uganda**



## **Assessment and Training Package**

**For a  
BUILDER**

**Qualification Level: 1**

**Occupational Cluster: Technology and Design**

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2021

ISBN: 978-9913-626-59-0

ISO: 9001:2015      Certificate No.: UG92580A

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Under BTVET Act, 2008, the functions of the Directorate of Industrial Training are:

- (a) To identify the needs of the labour market for occupational competencies that fall under the UVQF.
- (b) To regulate apprenticeship schemes.
- (c) To foster and promote entrepreneurial values and skills, as an integral part of the UVQF.
- (d) To secure adequate and sustainable financing for the efficient operations of the Directorate.
- (e) To accredit training institutions or companies as assessment centres.
- (f) To determine fees payable under the Act.
- (g) To develop, apply, expand and improve the purposeful application of Uganda vocational qualifications defined in the UVQF.
- (h) To assess and award Uganda Vocational Qualifications.
- (i) To promote on-the-job training in industry for apprenticeship, traineeship and indenture training and for other training such as further skills training and upgrading.
- (j) To prescribe the procedure for the making of training schemes.

Further to the above provisions, there is an established Uganda Vocational Qualifications Framework (UVQF), under part V of the BTVET Act, 2008. It is stated that:

The purpose of the UVQF is to;

- (a) Define occupational standards in the world of work.
- (b) Define assessment standards.
- (c) Award vocational qualifications of learners who meet the set standards of different studies.
- (d) Provide guidelines for modular training.

The UVQF shall follow principles of Competence Based Education and Training (CBET) which include:

- (a) Flexible training or learning modules.
- (b) Positive assessment and certification.
- (c) Assessment of prior learning.
- (d) Recognition of formal and non-formal training.
- (e) Self-paced or individual learning.
- (f) Work place learning.

For award and recognition of certificates, the BTVET Act, 2008 provides that:

- (1) The Directorate and other examination boards established under the Act shall award certificates and diplomas for Business, Technical or Vocational Education and Training under the UVQF.
- (2) The Certificates and Diplomas to be awarded shall be in the form prescribed by the Minister on the recommendation of the Industrial Training Council.
- (3) The Certificates and Diplomas awarded under the Act shall be recognised in the Uganda education system and by the labour market.

Under the TVET Implementation Standards 2020, the proposed new mandate of the Directorate of Industrial Training shall be restricted to promoting the highest standards in the quality and efficiency of industrial training in the country and ensuring an adequate supply of properly trained manpower at all levels in the industry and the world of work.

The functions shall include:

- (a) Regulating Industrial Training and Trainers.
- (b) Developing Industrial Training Curricula.
- (c) Harmonising Curricula and Certificates of competence.
- (d) Assessing Industrial Training.
- (e) Development of Occupational Standards and Assessment and Training Packages (ATPs) for Trade Testing for the industry and world of work.
- (f) Awarding certificates in that respect.

At operational level in the Directorate, the Qualification Standards Department performs development tasks related to concepts, procedures and instruments for establishment of the UVQF in close collaboration with both public and private stakeholders in vocational training.

In particular, the Department organises and coordinates the development of Assessment and Training Packages for use in competence-based vocational training as well as standards-based assessment and certification.

The Directorate has therefore produced this Assessment and Training Package for use in implementing Competence-Based Education and Training mechanisms.

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## Word from Permanent Secretary

The Kajubi Report (1989) and the Uganda Government White Paper on Education Review (1992) emphasised that the Uganda Secondary School Education should be vocationalised.

The World Bank Report on education in Uganda 2007 observed that although Uganda was experiencing steady economic growth on one hand, the secondary education curriculum was inadequately addressing the social and economic needs of the country on the other. The Report further noted that it is not the very top academic cadres that contribute most to the growth of the GDP but rather the competent middle level technicians that are flexible and technologically literate that the economy needs in the labour market at all levels.

Correspondingly, the NDP III 2020/21- 2024/5 highlights (i) low labour productivity (ii) high youth unemployment (38%) (iii) low transition rates from training to employment (35%) as some of the key challenges to Human Capital Development in Uganda.

In order to overcome these challenges, NDP III 2020/21- 2024/5, under objective 2 peaks the need to train the learners for the urgently needed skills and mainstream a dual education and training system. This paved way for the development of the lower secondary school vocational curriculum which supports both academic and vocational training.

The afore is in line with the Uganda Vision 2040. Under section 261, it emphasises that learners will be accorded opportunities to excel in the skills areas they are placed into. These will range from sports and cut to technical and vocational training. Hitherto, section 262 clearly states that the entire education system will be changed to emphasise practical skills, attitude and moral values.

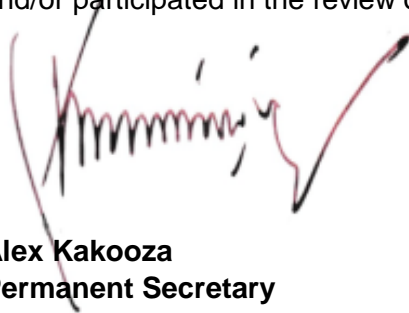
Government of Uganda through the Ministry of Education and Sports rolled out the New Lower Secondary Curriculum in secondary schools countrywide during the first term of the academic year 2020. The overall goal of this curriculum is to produce graduates with employable skills and who are competitive in the labour market. It should be emphasised that vocational training will produce graduates who are employable. In the New curriculum, emphasis will be on equipping learners with employable skills and competencies. This will enable learners perform the requisite duties of the specified occupations. This is the reason why the lower secondary school vocational curriculum was tailored to the assessment requirements of the world of work.

Reading from the Curriculum Framework page 12, it is stated that the learners will be assessed by DIT. Upon assessment and certification, the graduates will be employable and competitive in the labour market. It's against this background that DIT, within its mandate vested in the BTVET Act, 2008 comes on board to take the lead in the development of the requisite Assessment and Training Packages (ATPs) for the various occupations that will be assessed under the Lower Secondary Curriculum.

The ATPs can be used by any training provider and/or those who wish to present themselves for Occupational Assessment and Certification.

Herewith, the Directorate of Industrial Training presents the Assessment and Training Package for training, assessment and certification of a **BUILDER QUALIFICATION LEVEL 1**.

Finally, I thank all individuals, organisations and review partners who have contributed and/or participated in the review of this noble document.



**Alex Kakooza**  
**Permanent Secretary**



## Executive Summary

This Assessment and Training Package is a Competence-Based Education and Training (CBET) tool and consists of three major parts:

- 0.1 **PART I: The Occupational Profile (OP) of a BUILDER.** This Occupational Profile which was reviewed by Builders practicing in the world of work mirrors the duties and tasks that Builders are expected to perform.
- 0.2 **PART II: Training Modules** in the form of guidelines to train Builders both on the job as well as in training centres (or combinations of both venues of learning). The Training Modules herein have been reviewed basing on the Occupational Profile and hence are directly relevant for employment.
- 0.3 **PART III: Assessment Instruments** in the form of performance (Practical) and written (theory) test items that can and should be used to assess whether a person complies with the requirements of employment as a BUILDER. These assessment instruments were reviewed jointly by job practitioners (Builders) and instructors based on the occupational profile and training modules.
- 0.4 While the Occupational Profile (OP) contained in PART I of this document provides the information on **WHAT a person is expected to do** competently in the world of work, the test items, - including performance criteria- of PART III qualify the **HOW and/or HOW WELL a person must do the job.**
- 0.5 The modular format of the curriculum (PART II) allows learners to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration allowing flexibility for learners to move directly into an entry level job, go for further modules or advance to higher levels of training. Modular courses allow more learners to access the training system because training centres as well as companies can accommodate more learners in a given period of time.
- 0.6 In addition to improved access, equity and relevance of BTVET, the UVQF will also enable people who are convinced to have acquired competencies laid down in this ATP through prior training and on-the-job experience to access assessment and certification directly; be it on the basis of a single module, a group of modules or all modules pertaining to the occupation at once. This achievement will facilitate Recognition of Prior Learning (RPL).

0.7 The parts of this Assessment and Training Package were sequentially reviewed as follows:

- i Part 1: Occupational Profile: **August 2020**
- ii Part 2: Training Modules: **August 2020**
- iii Part 3: Assessment Instruments (initial bank): **August 2020**

This ATP (or parts of it) may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

DIT takes responsibility of any shortcomings that might be identified in this publication and welcomes suggestions for effectively addressing the inadequacies. The suggestion can be communicated to DIT through P.O. Box 20050, Kampala or through email [uvaf.dit@gmail.com](mailto:uvaf.dit@gmail.com).



**Patrick Byakatonda**  
Ag Director

## Acknowledgement

The Qualifications Standards Department of DIT wishes to sincerely acknowledge the valuable contributions to the review of this Assessment and Training Package by the following persons, Institutions and organisations:

- Members of the DIT Industrial Training Council,
- The Director and staff of DIT,
- Ministry of Education and Sports,
- The practitioners from the world of work,
- Teachers of Bricklaying and Technical Drawing from various Secondary Schools,
- Builder Curriculum Specialists from NCDC,
- Examination Specialists from UNEB,
- The facilitators involved in guiding the review panel in their activities,
- The Government of Uganda for financing the review of this ATP.

## Abbreviations and Acronyms

A&C	Assessment and Certification
ATP	Assessment and Training Packages
CBET	Competency Based Education and Training
DIT	Directorate of Industrial Training
ITC	Industrial Training Council
GoU	Government of Uganda
LWA	Learning-Working Assignment
MC	Modular Curriculum
MoES	Ministry of Education and Sports
OP	Occupational Profile
PEX	Practical Exercise
PTI	Performance (Practical) Test Item
QS	Qualification Standards
RPL	Recognition of Prior Learning
TIB	Test Item Bank
TVET	Technical, Vocational, Education and Training
UVQ	Uganda Vocational Qualification
UVQF	Uganda Vocational Qualifications Framework
WTI	Written (Theory) Test Item
PPE	Personnel Protective Equipment

## Key Definitions

<b>Assessment</b>	Assessment is the means by which evidence is gathered and judged to decide if an individual has met the stipulated assessment standards or not. Testing is a form of formal assessment.
<b>Certification</b>	Certification is a formal procedure to issue a certificate (qualification) to an individual that has demonstrated during formal assessment that he/she is competent to perform the tasks specified in the occupational profile.
<b>Competence</b>	Integration of skills, knowledge, attitudes, attributes and expertise in doing /performing tasks in the world of work to a set standard.
<b>Competency</b>	(Occupational) competence is understood as the ability to perform tasks common to an occupation at an acceptable level.
<b>CBET</b>	Competence-based education and training means that programs: <ol style="list-style-type: none"><li>1. have content directly related to work</li><li>2. focus is on 'doing something well'</li><li>3. assessment is based upon industry work standards, and</li><li>4. curricula are developed in modular form</li></ol>
<b>Duty</b>	A Duty describes a large area of work in performance terms. A duty serves as a title for a cluster of related Tasks (see also: TASK).
<b>Learning-Working Assignment (LWA)</b>	LWA are simulated or real job situations / assignments that are suitable for learning in a training environment (e.g. "small projects"). In a working environment LWAs are real work situations /assignments.
<b>Modules</b>	Modules are part(s) of a curriculum. Modules can be considered as "self-contained" partial qualifications which are described by learning outcomes or competencies and which can be assessed and certified individually.
<b>Occupational Profile (OP)</b>	<p>An Occupational Profile is an overview of the duties and tasks a job incumbent is expected to perform competently in employment.</p> <p>Occupational Profiles developed by practitioners from the world of work enhance the relevance of training and learning to the requirements of the world of work.</p>

Occupational Profiles define what a person is supposed to do in performance terms. It also contains generic information regarding related knowledge and skills, attitudes/behavior, tools, materials and equipment required to perform as well as trends/ concerns in the occupation.

Occupational profiles are the reference points for developing modular curricular and assessment standards

**Qualification** A qualification is a formal recognition for demonstrating competence, based on formal assessment against set standards. A qualification is provided to the individual in form of a certificate specifying the nature of the competence.

**Task** Job tasks represent the smallest unit of job activities with a meaningful outcome. Tasks result in a product, service, or decision. They represent an assignable unit of work and have a definite beginning and ending point. Tasks can be observed and measured. (*Also see: Duty*)

## 1.0 ATP-PART I

### Occupational Profile for a BUILDER

- 1.1 The OCCUPATIONAL PROFILE (OP) for “Builder” below defines the **Duties** and **Tasks** a competent Builder is expected to perform in the world of work (on the job) in Uganda and the East African region today.
- 1.2 Since it reflects the skill requirements of work life, the Occupational Profile is the reference document for the subsequent development of training modules and assessment instruments (test items) which are directly relevant to employment in Ugandan and the East African businesses and industries.
- 1.3 To ensure that the Occupational Profile is relevant for employment in Uganda and East Africa, the DIT used the method of “occupational/job profiling.”<sup>1</sup>

This approach involves the brainstorming of a panel of 8 to 12 competent job practitioners guided by trained and experienced facilitators. During a two-day workshop the panelists defined the duties and tasks performed in employment, as well as the prerequisite skills, knowledge, attitudes, tools and equipment, and the future trends and concerns in the occupation/job.

- 1.4 The panelists, facilitators and coordinators who participated in developing this Occupational Profile are listed on the following page.

**Job Expert Panel**

**Tusasiire Mark**

Arch Forum LTD

**Balikoowa Robert**

Kiira College Butiki

**Epiat Denis**

Ndejje S.S.S

**Semuwemba Siraje**

Eskorn

**Kavuma Abubaker**

NCDC/ Kibuli S.S

**Guma Lawrence**

Seeta High School

**Rutaro Nicholas**

Lugogo VTI

**Ssendawula Martin**

King's College Buddo Wakiso

**Mpaata Keziron**

Infra Build

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**Facilitators**

**Ahimbisibwe Judith**

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Directorate of Industrial Training

**Coordinator**

**Mukyala Ruth**

Directorate of Industrial Training

**Funded by**

The Government of Uganda



**THE REPUBLIC OF UGANDA**  
**Ministry of Education and Sports**

**Directorate of Industrial Training**

**Occupational Profile**  
**For a**  
**"A Builder"**

**Reviewed by: Qualifications Standards**  
**Department of Directorate of Industrial**  
**Training**

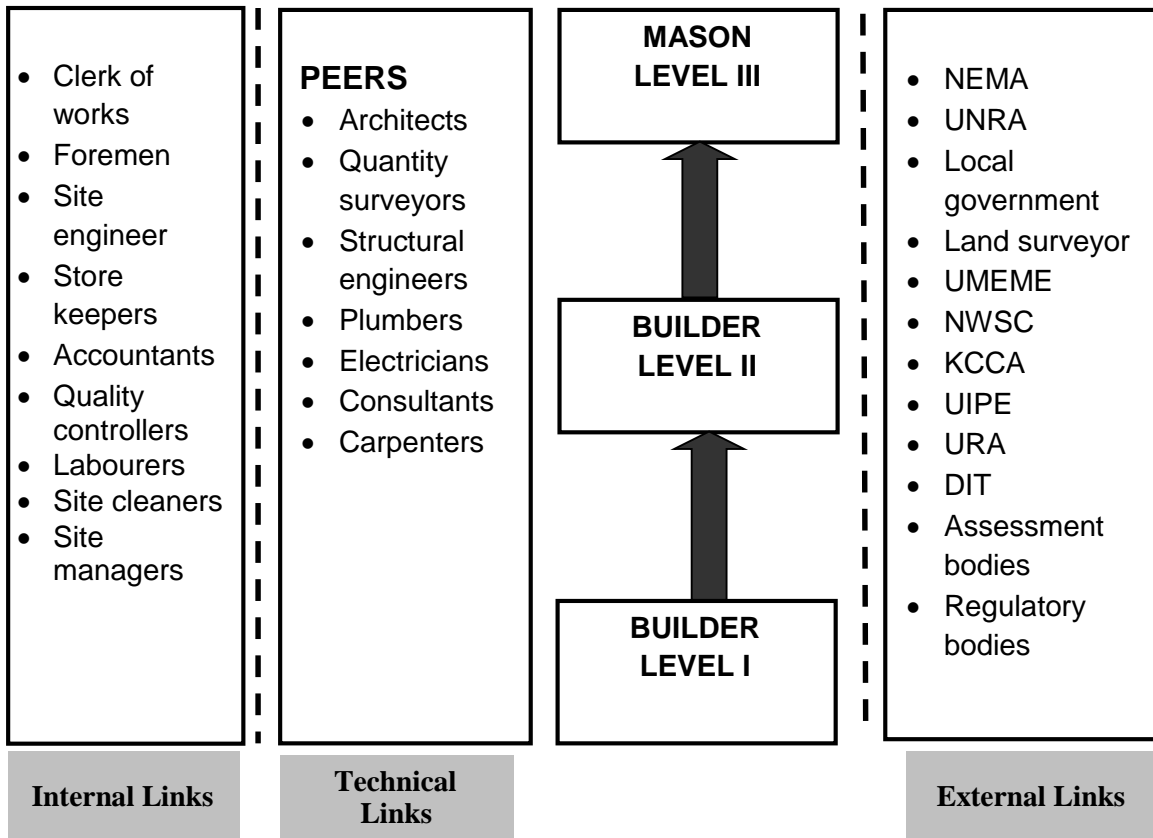
**Dates of workshop: 14<sup>th</sup>- 18<sup>th</sup> September 2020**



## NOMENCLATURE FOR THE OCCUPATION OF BUILDER

**Definition:** A Builder is a person who is able to construct, demolish, and repair a building structure.

### JOB ORGANISATION CHART FOR A BUILDER



#### Descriptions for the levels in the occupation of "Builder"

**A Builder Level I:** Is a person who can set-up simple structures up to 10m long. He/she is also able to construct sub structures on strip foundations and also construct super structures by using header and stretcher bonds.

**A Builder Level II:** Is a person who can set up both square-conered and multi angled bungalow structures. This person is able to construct sub structures on strip, stepped and foundations. She/he can construct walls up to 3-block thick, cavity and parapet walls as well as thresholds. She/he is also able to construct arches (semi-circular and segmental) as well as apply various finishes including tiles, pavers, cornice and coping.

**A Mason Level III:** Is one who is a highly skilled implementer.

## Duties and Tasks

<b>A. PLAN WORK</b>	<b>A1.</b> Conduct a site survey	<b>A2.</b> Prepare working drawings	<b>A3.</b> Calculate building cost
	<b>A4.</b> Prepare work contracts	<b>A5.</b> Select tools, equipment and materials	<b>A6.</b> Mobilise resources
<b>B. PREPARE SET OUT</b>	<b>B1.</b> Clear the site	<b>B2.</b> Demarcate work area	<b>B3.</b> Determine levels
	<b>B4.</b> Interpret drawings	<b>B5.</b> Set profiles	<b>B6.</b> Mark trenches
<b>C. ERECT SUB STRUCTURE</b>	<b>C1.</b> Excavate trenches	<b>C2.</b> Cast concrete foundation	<b>C3.</b> Erect plinth walls
	<b>C4.</b> Backfill trenches	<b>C5.</b> Compact the back fill	<b>C6.</b> Hardcore filling
	<b>C7.</b> Sand blinding	<b>C8.</b> Lay DPM	<b>C9.</b> Cast over site concrete
<b>D. ERECT SUPER STRUCTURE</b>	<b>D1.</b> Set out	<b>D2.</b> Lay DPC	<b>D3.</b> Build walls
	<b>D4.</b> Cast ring beams/lintel	<b>D5.</b> Check finished work	<b>D6.</b> Clean tools and equipment
<b>E. PERFORM CONCRETE WORK</b>	<b>E1.</b> Mix concrete	<b>E2.</b> Transport concrete	<b>E3.</b> Cast concrete in form work
	<b>E4.</b> Compact concrete	<b>E5.</b> Cure concrete	<b>E6.</b> Remove shattering
<b>F. MODIFY STRUCTURES</b>	<b>F1.</b> Identify defects in structures	<b>F2.</b> Alter designs	<b>F3.</b> Determine method of work
	<b>F4.</b> Demolish structures	<b>F5.</b> Build components	<b>F6.</b> Perform finishing work

<b>G. MAINTAIN RECORDS</b>	<b>G1.</b> Record data	<b>G2.</b> Open files	<b>G3.</b> File records
	<b>G4.</b> Classify records	<b>G5.</b> Store records	<b>G6.</b> Refer to records
	<b>G7.</b> Update records		

<b>H. OBSERVE HEALTH AND SAFETY</b>	<b>H1.</b> Site hoarding	<b>H2.</b> Provide sanitary facilities	<b>H3.</b> Provide first aid facilities
	<b>H4.</b> Wear protective equipment	<b>H5.</b> Maintain cleanliness of workplace	<b>H6.</b> Display safety signs
	<b>H7.</b> Sensitise workers on communicable diseases	<b>H8.</b> Manage waste	

<b>I. PERFORM ADMINISTRATIVE TASKS</b>	<b>I1.</b> Consult superiors	<b>I2.</b> Orient and induct workers	<b>I3.</b> Enforce sign language usage
	<b>I4.</b> Recommend disciplinary action for workers	<b>I5.</b> Train workers	<b>I6.</b> Attend workshops and seminars
	<b>I7.</b> Prepare reports	<b>I8.</b> Advertise work	<b>I9.</b> Recruit workers
	<b>I10.</b> Appraise and terminate workers	<b>I11.</b> Guide and counsel workers	<b>I12.</b> Supervise workers
	<b>I13.</b> Remunerate workers		

## Additional Information

<p><b>Generic Knowledge &amp; Skills</b></p> <ol style="list-style-type: none"> <li>1. Communication</li> <li>2. Setting out</li> <li>3. Planning</li> <li>4. Supervising</li> <li>5. Mixing materials</li> <li>6. Plumbing &amp; fitting</li> <li>7. Elementary carpentry</li> <li>8. Steel bending</li> </ol>	<ol style="list-style-type: none"> <li>9. Sharpening tools</li> <li>10. Compacting skills</li> <li>11. Moulding bricks</li> <li>12. Operating machines</li> <li>13. Interpret drawing sketches</li> <li>14. Safety and health precaution</li> <li>15. Building finishes</li> <li>16. Taking measurements</li> </ol>
<p><b>Tools, Equipment and Material</b></p> <ol style="list-style-type: none"> <li>1. Trowel</li> <li>2. Building line</li> <li>3. Plumb bob</li> <li>4. Square</li> <li>5. Spirit level</li> <li>6. Water level</li> <li>7. Spade</li> <li>8. Hoe</li> <li>9. Wheelbarrow</li> <li>10. Tape measure</li> <li>11. Hammer</li> <li>12. Straight edge</li> <li>13. Mixer</li> <li>14. Booster</li> <li>15. bricks</li> </ol>	<ol style="list-style-type: none"> <li>16. Bow saw</li> <li>17. Hack saw</li> <li>18. Axe</li> <li>19. Vibrator</li> <li>20. Chisel</li> <li>21. Panga</li> <li>22. Concrete mixer</li> <li>23. Sand</li> <li>24. Cement</li> <li>25. Aggregates</li> <li>26. Hard core</li> <li>27. Sand blinder</li> <li>28. DPC</li> <li>29. DPM</li> <li>30. Steel bars</li> <li>31. Timber</li> </ol>
<p><b>Trends and Concerns</b></p> <ol style="list-style-type: none"> <li>1. Use of computers</li> <li>2. Use of digital tools</li> <li>3. Use of light materials</li> <li>4. Improved designs</li> <li>5. Change in government policies</li> </ol>	<p><b>Attitude / Traits / Behaviour</b></p> <ol style="list-style-type: none"> <li>1. Punctual</li> <li>2. Respectful</li> <li>3. Hardworking</li> <li>4. Honest</li> <li>5. Organised</li> <li>6. Responsible</li> <li>7. Ability to work in a team</li> <li>8. Duty consciousness</li> <li>9. Disciplined</li> <li>10. Safety conscious</li> <li>11. Innovative</li> <li>12. Care for company property</li> <li>13. Good morals</li> <li>14. Smart</li> </ol>

## **2.0 ATP – PART II**

### **Training Modules for a Builder**

- 2.1 A curriculum is a “guide /plan for teaching and learning” which provides a guide to teachers, instructors and learners. In the envisaged system of competence-based or outcome-oriented education and training (CBET), Curricula are no longer the benchmark against which assessment is conducted. It is rather the Occupational Profile that provides the benchmark for Curriculum development as well as assessment.
- 2.2 This modular format of the curriculum allows learners of BUILDER to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration allowing learners to move directly into an entry level job, do further modules and advance to higher levels of training. Modular courses allow more learners to access the training system because training centres, as well as companies can accommodate more learners in a given period of time.
- 2.3 The modules were reviewed jointly by both instructors and job practitioners. They were reviewed using the Occupational Profile as a reference point and taking into account the specifications of training and learning outcomes.
- 2.4 The modules contain “Learning-Working Assignments” (LWAs) and related “Practical Exercises” (PEXs) as key elements.
- LWAs are simulated or real job situations/assignments that are suitable for learning in a training environment (e.g. “small projects”). In a working environment, LWAs are real work situations.
- PEXs are therefore sub-sets of a LWA.
- 2.5 In principle, and following the philosophy of Competence-Based Education and Training (CBET), the modules can be used as a guide for learning in a training Centre, at the workplace; or a combination of both.

## **WHO IS A BUILDER QUALIFICATION LEVEL 1?**

A **Builder Level 1:** Is a person who can set-up simple structures up to 10m long. He/she is also able to construct sub structures on strip foundations and also construct super structures by using header and stretcher bonds.

## **TRAINING MODULES FOR A BUILDER UVQ LEVEL 1**

Code	Module Title	Average duration	
		Contact hours	Weeks
UE/BL/M1.1	Erect a Sub-structure with Right Angles	160	4
UE/BL/M1.2	Build a Super Structure with Right Angles and Perform Beam Filling	120	3
UE/BL/M1.3	Carryout Basic Bridging Woks	40	1
UE/BL/M1.4	Carryout Basic Finishes	120	3
UE/BL/M1.5	Carryout Entrepreneurship Skills	40	1
<b>Summary</b>	<b>5 Training Modules</b>	<b>480 hours</b>	<b>12 Weeks</b>

**Note: Average duration is contact time but NOT calendar duration**

It is assumed that:

- 1 day is equivalent to 8 hours of nominal learning and
- 1 month is equivalent to 160hours of nominal learning

Information given on the average duration of training should be understood as a guideline. Quick learners may need less time than indicated or vice versa.

At completion of a module, the learner should be able to satisfactorily perform the included Learning Working Assignments, their Practical exercises and attached theoretical instructions, as the minimum exposure.

Prior to summative assessment by recognized Agencies, the users of these Modules Guides are encouraged to carefully consider continuous assessment using samples of (or similar) performance (practical) and written test items available in part 3 of this ATP.

<b>Code</b>	<b>UE/BL/M1.1</b>
<b>Module title</b>	<b>M1.1: Erect a Substructure with Right Angles</b>
<b>Related Qualification</b>	Part of Uganda Vocational Qualification (Builder UVQ1)
<b>Qualification Level</b>	1
<b>Module purpose</b>	After completion of this module, a trainee shall be able to construct a building up to floor slab level.
<b>Learning-Working Assignments (LWAs)</b>	<p><b>LWA 1/1: Set out Building</b></p> <p><b>LWA 1/2: Construct Foundation Base</b></p> <p><b>LWA 1/3: Build Plinth Wall</b></p> <p><b>LWA 1/4: Fill Hardcore</b></p> <p><b>LWA 1/5: Cast over Site Concrete</b></p> <p><b>LWA 1/6: Observe Occupational Health, Safety and Environmental Protection Practices</b></p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li><i>The learning exercises may be repeated until the trainee acquires targeted competence;</i></li> <li><i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i></li> </ol>
<b>Related Practical Exercises (PEXs)</b>	<p><b>LWA 1/1: Set out Building</b></p> <p>PEX 1.1: Interpret working drawings</p> <p>PEX 1.2: Fix site datum and mark different levels</p> <p>PEX 1.3: Establish building square</p> <p>PEX 1.4: Fix pegs and profiles</p> <p>PEX 1.5: Demarcate excavation trenches</p> <hr/> <p><b>LWA 1/2: Construct Foundation Base</b></p> <p>PEX 2.1: Excavate trenches</p> <p>PEX 2.2: Mix concrete</p> <p>PEX 2.3: Transport concrete</p> <p>PEX 2.4: Cast concrete</p> <p>PEX 2.5: Compact concrete</p> <hr/> <p><b>LWA 1/3: Build Plinth Wall</b></p> <p>PEX 3.1: Mix mortar</p> <p>PEX 3.2: Transport mortar</p> <p>PEX 3.3: Build walls</p>

	<p><b>LWA 1/4: Fill Hardcore</b>  PEX 4.1: Fill marram  PEX 4.2: Compact marram  PEX 4.3: Apply hardcore  PEX 4.4: Apply sand blinding</p> <p><b>LWA 1/5: Cast Oversite Concrete</b>  PEX 5.1: Mix concrete  PEX 5.2: Transport concrete  PEX 5.3: Place concrete  PEX 5.4: Compact concrete  PEX 5.5: Cure concrete</p> <p><b>LWA 1/6: Observe Occupational Health, Safety and Environmental Protection Practices</b>  PEX 6.1: Manage waste  PEX 6.2: Build hoarding  PEX 6.3: Display safety signs  PEX 6.4: Wear protective gear  PEX 6.5: Practice firefighting  PEX 6.6: Practice work moral ethics  PEX 6.7: Conduct tool box meeting  PEX 6.8: Administer first aid  PEX 6.9: Maintain personal hygiene  PEX 6.10: Carryout timbering to trenches</p>
<b>Occupational health and safety</b>	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
<b>Pre-requisite modules</b>	None
<b>Related knowledge/ theory</b>	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> <li>• Identify tools and equipment</li> <li>• Define a datum peg and state its function and importance</li> <li>• Differentiate between a frontage line and the subsidiary line</li> <li>• State different method of setting right angled corners as well as checking for diagonals</li> <li>• Define profile boards and state their purpose</li> <li>• The handling, care and storage of materials</li> <li>• Proportioning, practice in mixing until proficient</li> </ul>



	<ul style="list-style-type: none"> <li>• Compaction</li> <li>• Methods of transporting concrete</li> <li>• Definition of concrete</li> <li>• Characteristics of concrete</li> <li>• Methods of curing concrete</li> <li>• Definition of setting out</li> <li>• Methods of setting out</li> <li>• Definition of a sub-structure</li> <li>• Features of a sub-structure</li> <li>• Procedure of casting over site concrete</li> <li>• Definition of form work</li> <li>• Procedure of making formwork</li> <li>• Definition of plinth walls</li> <li>• Dimensions of a plinth wall</li> <li>• Definition of stripped foundation</li> <li>• Knowledge on safety and hygiene</li> </ul>
<b>Average duration of learning</b>	160 hours (20 days) of nominal learning suggested to include: <ul style="list-style-type: none"> <li>• <i>5 days of occupational theory and</i></li> <li>• <i>15 days of occupational practice</i></li> </ul>
<b>Suggestions on organisation of learning</b>	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
<b>Assessment</b>	Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank.
<b>Minimum required tools/ equipment/ implements or equivalent</b>	Straight edges, hammers (including sledge hammers and lump hammer), hand saws, marking equipment, spirit level, spade, hoe, wheel barrow, plumb bob, builder's square, steel square, trowel, water level, tape measure, building line, chisel, pick axe, hoe
<b>Minimum required materials and consumables or equivalent</b>	Nails, timber, pegs, dump proof membrane, water, hardcore, cement, bricks, sand, aggregate.
<b>Special notes</b>	

<b>Code</b>	<b>UE/BL/M1.2</b>
<b>Module title</b>	<b>M1.2: Build a super structure with right angles and perform beam filling</b>
<b>Related Qualification</b>	<u>Part of</u> Uganda Vocational Qualification (Builder UVQ1)
<b>Qualification Level</b>	1
<b>Module purpose</b>	After completion of this module, the trainee shall be able to dump proof and build walls up to the roof.
<b>Learning-Working Assignments (LWAs)</b>	<p><b>LWA 2/1: Set out Super Structure</b>  <b>LWA 2/2: Build Solid Wall Using Header or Stretcher Bonds</b>  <b>LWA 2/3: Cast Ring Beam</b>  <b>LWA 2/4: Build Walls Above Wall Plate</b>  <b>LWA 2/5: Observe Occupational Health, Safety and Environmental Protection Practices</b></p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. The learning exercises may be repeated until the trainee acquires targeted competence;</li> <li>2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</li> </ol>
<b>Related Practical Exercises (PEXs)</b>	<p><b>LWA 2/1: Set out Super Structure</b>  PEX 1.1: Interpret working drawings  PEX 1.2: Take measurements  PEX 1.3: Mark wall positions</p>
	<p><b>LWA 2/2: Build Solid Wall Using Header or Stretcher Bonds</b>  PEX 2.1: Lay DPC  PEX 2.2: Mix mortar  PEX 2.3: Transport mortar  PEX 2.4: Build walls</p>
	<p><b>LWA 2/3: Cast Ring Beam</b>  PEX 3.1: Batch materials  PEX 3.2: Mix concrete  PEX 3.3: Transport concrete  PEX 3.4: Cast concrete in formwork  PEX 3.5: Compact concrete  PEX 3.6: Cure concrete</p>

	<p><b>LWA 2/4: Build Walls Above Wall Plate</b>                  PEX 4.1: Batch materials                  PEX 4.2: Mix materials                  PEX 4.3: Prepare scaffold                  PEX 4.4: Lay bricks and level</p> <p><b>LWA 2/5: Observe Occupational Health, Safety and Environmental Protection Practices</b>                  PEX 5.1: Manage waste                  PEX 5.2: Build hoarding                  PEX 5.3: Display safety signs                  PEX 5.4: Use protective gear                  PEX 5.5: Practice firefighting                  PEX 5.6: Practice work moral ethics                  PEX 5.7: Conduct tool box meeting                  PEX 5.8: Administer first aid                  PEX 5.9: Maintain person hygiene                  PEX 5.10: Carryout timbering to trenches</p>
<p><b>Occupational health and safety</b></p>	<p>Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs</p>
<p><b>Pre-requisite modules</b></p>	<p>None</p>
<p><b>Related knowledge/ theory</b></p>	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> <li>• Define form work</li> <li>• State purpose of form work</li> <li>• Define dump proofing</li> <li>• State the purpose of using damp proofing</li> <li>• Types of dump proof</li> <li>• Define block and brick</li> <li>• Differentiate blocks and bricks</li> <li>• State application areas of blocks and bricks</li> <li>• Define bonding</li> <li>• Differentiate between stretcher and header bonding</li> <li>• Advantages and disadvantages of the different types of bonds</li> <li>• Define scaffolding</li> <li>• State purposes of scaffolding</li> <li>• Knowledge on health and safety</li> <li>• Interpret working drawings</li> </ul>

<b>Average duration of learning</b>	120 hours (15 days) of nominal learning suggested to include: <ul style="list-style-type: none"> <li>• 3 days of occupational theory and</li> <li>• 12 days of occupational practice</li> </ul>
<b>Suggestions on organisation of learning</b>	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
<b>Assessment</b>	Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank.
<b>Minimum required tools/ equipment/ implements or equivalent</b>	hammers (including sledge hammers and lump hammer), hand saws, marking equipment, spirit level, spade, hoe, wheel barrow, plumb bob, builder's square, trowel, water level, tape measure, building line, chisel, hoe, trowel.
<b>Minimum required materials and consumables or equivalent</b>	nails, timber, dump proof course, water, cement, bricks, sand, aggregate.
<b>Special notes</b>	

<b>Code</b>	<b>UE/BL/M1.3</b>
<b>Module title</b>	<b>M1.3: Carryout Basic Bridging Woks</b>
<b>Related Qualification</b>	Part of: Uganda Vocational Qualification (Builder UVQ 1)
<b>Qualification Level</b>	1
<b>Module purpose</b>	After completion of this module, a trainee shall be able to prepare pre-cast and cast-in-situ lintels over a straight opening
<b>Learning-Working Assignments (LWAs)</b>	<p><b>LWA 3/1: Prepare a Pre-Cast Reinforced Concrete Lintel</b>  <b>LWA 3/2: Prepare a Cast-in-Situ Lintel</b>  <b>LWA 3/3: Prepare a Wooden Lintel</b>  <b>LWA 3/4: Observe Occupational Health, Safety and Environmental Protection Practices</b></p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li><i>The learning exercises may be repeated until the trainee acquires targeted competence;</i></li> <li><i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i></li> </ol>
<b>Related Practical Exercises (PEXs)</b>	<p><b>LWA 3/1: Prepare a Pre-Cast Reinforced Concrete Lintel</b>  PEX 1.1: Prepare formwork for precast lintel  PEX 1.2: Prepare and place reinforcement in formwork for pre-cast lintel  PEX 1.3: Cast and compact concrete in pre-cast lintel  PEX 1.4: Position pre-cast lintel over straight opening</p> <p><b>LWA 3/2: Prepare a Cast-in-Situ Lintel</b>  PEX 2.1: Prepare formwork  PEX 2.2: Prepare and place reinforcement and position into formwork  PEX 2.3: Cast concrete in formwork  PEX 2.4: Cure concrete</p> <p><b>LWA 3/3: Prepare a Wooden Lintel</b>  PEX 3.1: Measure and cut wood to the required length  PEX 3.2: Lay mortar on the abutments and position wooden lintel to level</p>

	<p><b>LWA 3/4: Observe Occupational Health, Safety and Environmental Protection Practices</b></p> <p>PEX 4.1: Administer first aid  PEX 4.2: Wear personnel protective gear  PEX 4.3: Maintain personal hygiene  PEX 4.4: Practice communicable and non-communicable disease prevention  PEX 4.5: Manage wastes  PEX 4.6: Clean tools and equipment  PEX 4.7: Clean surrounding environment  PEX 4.8: Use firefighting equipment</p>
<b>Occupational health and safety</b>	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs.
<b>Pre-requisite modules</b>	None
<b>Related knowledge/ theory</b>	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> <li>• Define lintels</li> <li>• State types of lintels</li> <li>• Discuss advantages and disadvantages of the different types of lintels</li> <li>• Differentiate the types of lintels</li> <li>• State area of application of different types of lintels</li> <li>• Formwork</li> <li>• Procedure of placing lintels</li> <li>• Process of preparing lintels</li> <li>• Procedure of curing concrete</li> <li>• Define curing</li> <li>• Health, safety and environmental knowledge</li> </ul>
<b>Average duration of learning</b>	<p>40 hours (5 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> <li>• 1 days of occupational theory and</li> <li>• 4 days of occupational practice</li> </ul>
<b>Suggestions on organisation of learning</b>	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.

<b>Assessment</b>	Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank
<b>Minimum required tools/ equipment/ implements or equivalent</b>	measure tapes and rules, shovels, wheel barrow, chutes, edging tools, trowel machine, hand float, bu floats, stipple plumb rules, jointing tools, hammers, bolster, shovels, spirit levels, dumpy levels, mortar, boards, straight edges, profiles lines, pointing/ranking tools.
<b>Minimum required materials and consumables or equivalent</b>	bar chairs, branching peg spacers, edge form/boards, fabric sheets, cement, sand, water.
<b>Special notes</b>	The bridging work will be limited to straight openings

<b>Code</b>	<b>UE/BL/M 1.4</b>
<b>Module title</b>	<b>M1.4 Carryout Basic Finishes</b>
<b>Related Qualification</b>	Part of Uganda Vocational Qualification (Builder UVQ1)
<b>Qualification Level</b>	1
<b>Module purpose</b>	After completion of this module, a trainee shall be able to plaster, render and screed effectively.
<b>Learning-Working Assignments (LWAs)</b>	<p><b>LWA 4/1: Plaster Walls</b>  <b>LWA 4/2: Render Walls</b>  <b>LWA 4/3: Apply Cement Sand Screed</b>  <b>LWA 4/4: Build Splash Apron</b>  <b>LWA 4/5: Observe Occupational Health, Safety and Environmental Protection Practices</b></p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. <i>The learning exercises may be repeated until the trainee acquires targeted competence;</i></li> <li>2. <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i></li> </ol>
<b>Related Practical Exercises (PEXs)</b>	<p><b>LWA 4/1: Plaster Walls</b></p> <p>PEX 1.1: Prepare surface  PEX 1.2: Batch materials  PEX 1.3: Mix materials  PEX 1.4: Set plaster gauge  PEX 1.5: Apply mortar on prepared surface  PEX 1.6: Level using a straight edge  PEX 1.7: Perform wood floating  PEX 1.8: Perform steel floating</p>
	<p><b>LWA 4/2: Render Walls</b></p> <p>PEX 2.1: Prepare surface  PEX 2.2: Batch materials  PEX 2.3: Mix materials  PEX 2.4: Set render gauge  PEX 2.5: Apply mortar on prepared surface  PEX 2.6: Level using a straight edge  PEX 2.7: Perform wood floating</p>



	<p><b>LWA 4/3: Apply Cement Sand Screed</b></p> <p>PEX 3.1: Prepare surface                  PEX 3.2: Apply floor gauge                  PEX 3.3: Batch materials                  PEX 3.4: Mix materials                  PEX 3.5: Ram mortar                  PEX 3.6: Place mixed mortar and trim off excess mortar                  PEX 3.7: Perform wooden floating                  PEX 3.8: Perform steel floating                  PEX 3.9: Cure floor</p> <p><b>LWA 4/4: Build Splash Apron</b></p> <p>PEX 4.1: Setout splash apron                  PEX 4.2: Demarcate trench                  PEX 4.3: Excavate trench                  PEX 4.4: Cast concrete layer                  PEX 4.5: Build brick walls to a required height                  PEX 4.6: Back fill and compact masonry                  PEX 4.7: Cast concrete in splash open formwork                  PEX 4.8: Render wall surface                  PEX 4.9: Apply cement screed                  PEX 4.10: Cure floor area</p> <p><b>LWA 4/5: Observe Occupational Health, Safety and Environmental Protection Practices</b></p> <p>PEX 5.1: Administer first aid                  PEX 5.2: Wear personal protective gear                  PEX 5.3: Maintain personal hygiene                  PEX 5.4: Practice communicable and non-communicable disease prevention                  PEX 5.5: Manage wastes                  PEX 5.6: Clean tools and equipment                  PEX 5.7: Clean surrounding environment                  PEX 5.8: Use firefighting equipment</p>
<b>Occupational health and safety</b>	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
<b>Pre-requisite modules</b>	None

<b>Related knowledge/ theory</b>	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> <li>• Define plastering, rendering as finishing techniques</li> <li>• Differentiate between plastering and rendering</li> <li>• State advantages and disadvantages of plastering and rendering as finishing techniques.</li> <li>• Describe the process of plastering and rendering</li> <li>• Describe screed finish</li> <li>• Describe the process of curing out a screed finish</li> <li>• Define curing</li> <li>• State the advantages and disadvantages of using screed finish as a finishing technique</li> <li>• Define skirting as applied to building</li> <li>• Describe the process of constructing a splash apron</li> <li>• State the purpose of construction a splash apron and a screed.</li> <li>• State the defects observe on a skirting, splash apron and screed and recommended remedies.</li> <li>• Health, safety and environmental knowledge</li> </ul>
<b>Average duration of learning</b>	<p>120 hours (15 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> <li>• 4 days of occupational theory and</li> <li>• 11 days of occupational practice</li> </ul>
<b>Suggestions on organisation of learning</b>	<p>The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.</p>
<b>Assessment</b>	<p>Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank.</p>
<b>Minimum required tools/ equipment/ implements or equivalent</b>	<p>tape measure, shovels, wheelbarrow, edging tools, brick trowel, plumb bob, hammers, bolster, shovels, spirit levels, dumpy levels, mortar, boards, straight edges, profiles lines, wooden float, rammer.</p>
<b>Minimum required materials and consumables or equivalent</b>	<p>bricks, wire nails, aggregate, timber, cement, sand, water.</p>
<b>Special notes</b>	

<b>Code</b>	<b>UE/BL/M 1.5</b>
<b>Module title</b>	<b>M 1.5: Carryout Entrepreneurship</b>
<b>Related Qualification</b>	Part of Uganda Vocational Qualification (Builder UVQ1)
<b>Qualification Level</b>	1
<b>Module purpose</b>	After completion of this module, a trainee shall be able to perform basic book keeping, market builders, services and do basic pricing
<b>Learning-Working Assignments (LWAs)</b>	<p><b>LWA 5/1: Market Builders' Services</b>  <b>LWA 5/2: Carryout Basic Book Keeping</b>  <b>LWA 5/2: Perform Basic Pricing</b></p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. The learning exercises may be repeated until the trainee acquires targeted competence;</li> <li>2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</li> </ol>
<b>Related Practical Exercises (PEXs)</b>	<p><b>LWA 5/1: Market Builders' Services</b>  PEX 1.1: Advertise builders' services  PEX 1.2: Provide good customer care  PEX 1.3: Communicate effectively</p> <p><b>LWA 5/2: Carryout Basic Book Keeping</b>  PEX 2.1: Record material in and out flows  PEX 2.2: Record work progress.  PEX 2.3: Record workers' attendance</p> <p><b>LWA 5/3: Perform Basic Pricing</b>  PEX 3.1: Establish cost of materials  PEX 3.2: Establish cost of tools and equipment  PEX 3.3: Establish cost of labor</p>
<b>Occupational health and safety</b>	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
<b>Pre-requisite modules</b>	None
<b>Related knowledge/ theory</b>	<i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i>

	<ul style="list-style-type: none"> <li>• Types of records used by builder</li> <li>• Definition of the different types of documents used by builder</li> <li>• Starting a builder business</li> <li>• Components of different types of documents used by builder</li> <li>• Methods of marketing builder products</li> <li>• Explain marketing</li> <li>• Definition of information, communication and technology</li> <li>• Types of communications and technologies</li> <li>• Benefits of communication and technology</li> </ul>
<b>Average duration of learning</b>	<p>40 hours (5 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> <li>• <i>2 days of occupational theory and</i></li> <li>• <i>3 days of occupational practice</i></li> </ul>
<b>Suggestions on organisation of learning</b>	<p>The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.</p>
<b>Assessment</b>	<p>Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank.</p>
<b>Minimum required tools/ equipment/ implements or equivalent</b>	<p>calculator, telephone set/mobile phone, electrical tool and equipment</p>
<b>Minimum required materials and consumables or equivalent</b>	<p>pens, pencil, paper, rubbers, rulers, reference text books.</p>
<b>Special notes</b>	

## 3.0 ATP- PART III

### Assessment Instruments for a Builder

- 3.1 Assessment of occupational competence is the procedure by which evidence is gathered and judged to decide if an individual (candidate) has met the stipulated assessment standards.
- 3.2 Assessment of occupational competence should comprise of both practical (performance) testing and written (theory/knowledge) testing.
- 3.3 Based on the Occupational Profile and Training Modules, a combined panel of job practitioners and Instructors reviewed a substantial number of test items for assessing (practical) performance as well as items for assessing occupational knowledge (theory) all stored in an electronic Test Item Bank (TIB) at the Directorate of Industrial Training.
- 3.4 Performance (Practical) Test Items (PTI) are closely related to typical work situations in Ugandan business enterprises. They comprise of a test assignment for candidates and assessment criteria and/or scoring guides for assessors' use.
- 3.5 Written Test items (WTI) for written testing of occupational theory, (knowledge) are presented in different forms which include:
- Short answer test items.
  - Multiple choice test items
  - Matching test items,
- These WTIs herein focus on functional understanding as well as trouble-shooting typically synonymous with the world of work.
- 3.6 Composition of assessment/test papers will always require good choices of different types of WTI in order to ensure the assessment of relevant occupational knowledge required of candidates to exhibit competence.
- 3.7 The test items contained in the Test Item Bank may be used for continuous/formative assessment during the process of training as well as for summative assessment of candidates who have acquired their competences non-formally or informally.
- 3.8 In this document, samples of test items for assessing both performance (practical) and occupational knowledge (theory) of a **BUILDER** are included.

### 3.9 Overview of Test Item Samples Included

No	Type of test Items	Numbers included
1	Written (theory) - short answer	2
2.	Written (theory) - multiple choice	2
3.	Written (Theory)- matching with generic	1
4	Written (Theory)- matching with work sequence	1
5.	Performance (Practical) test items	1
<b>Total</b>		<b>07</b>

### WRITTEN TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Written (Theory) Test Item- No. 1			
Occupational Title:	Builder			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer	√		
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C2			
Date of OP:	September 2020			
Related modules:	M1.2			
Time allocation:	3 minutes			

Test Item	List any two methods of curing concrete			
Answer spaces	(i) .....			
	(ii) .....			
Expected key (answers)	(i) Water spraying			
	(ii) Matting or socking			
	(iii) Sand laying			
	(iv) Polythene sheet			
	(v) Curing additives			

DIT/ QS	Test Item Database Written (Theory) Test Item- No. 2			
<b>Occupational Title:</b>	Builder			
<b>Competence level:</b>	Level 1			
<b>Code no.</b>				
<b>Test Item type:</b>	Short answer	√		
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
<b>Complexity level:</b>	C2			
<b>Date of OP:</b>	September 2020			
<b>Related modules:</b>	M1.1, M1.2			
<b>Time allocation:</b>	3 minutes			

Test Item	List any three (3) tools used by a builder to erect a wall
<b>Answer spaces</b>	(i) ..... (ii) ..... (iii) .....
<b>Expected key (answers)</b>	(i) Trowel (ii) Plumb bob (iii) Spirit level (iv) Builder square (v) Lines and pins (vi) Tape measure (vii) Water level



DIT/ QS	Test Item Database Written (Theory) Test Item- No. 3			
Occupational Title:	Builder			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	√		
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C1			
Date of OP:	September 2020			
Related modules:	M1.1			
Time allocation:	2 minutes			

<b>Test Item</b>	Which tool is best used for setting and testing walls at right angles?
<b>Distracters and correct answer</b>	A. Plumb bob B. Builders' square C. Spirit level D. Tape measure

<b>Key (answer)</b>	B
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DIT/ QS	Test Item Database Written (Theory) Test Item- No.4			
Occupational Title:	Builder			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	√		
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C1			
Date of OP:	September 2020			
Related modules:	M1.1			
Time allocation:	2 minutes			

Test Item	Why is it necessary to se DPC in walling?
Distracters and correct answer	<p>A. To make the wall strong</p> <p>B. To beautify the wall</p> <p>C. To prevent moisture from rising up the wall</p> <p>D. To prevent cracks in the wall</p>

Key (answer)	C
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<b>DIT/QS</b>	<b>Test Item Database Written (Theory) Test Item- no. 5</b>			
<b>Occupational Title:</b>	Builder			
<b>Competence level:</b>	Level 1			
<b>Code no.</b>				
<b>Test Item type:</b>	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
		√		
<b>Complexity level:</b>	C2			
<b>Date of OP:</b>	September 2020			
<b>Related Modules:</b>	M1.1, M1.2			
<b>Time allocation:</b>	3 minutes			

<b>Test Item</b>	Match the following tools with building operations at the site
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<b>Column A (Tools)</b>	
1	Trowel
2	Hoe and spade
3	Plumb bob
4	Spirit level

<b>Column B (Building operations)</b>	
A	Excavation
B	Building wall
C	Vertical straightness
D	Transport mortar
E	Setting out
F	Same plane

<b>Key (answer)</b>	1: B, 2: A, 3: C, 4: F
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DIT/ QS	Test Item Database Written (Theory) Test Item- no. 6			
Occupational Title:	Builder			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause-Effect	Work-sequence
				√
Complexity level:	C2			
Date of OP:	July 2020			
Related module:	M1.1M1.2			
Time allocation:	4 minutes			

Test Item	Rearrange the following Procedures involved in casting a floor slab
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Column A (chronology)	Column B (work steps) in wrong chronological order	
1 <sup>st</sup>	A	Cure Concrete
2 <sup>nd</sup>	B	Transport Concrete
3 <sup>rd</sup>	C	Batch Materials
4 <sup>th</sup>	D	Mix Materials
5 <sup>th</sup>	E	Compact Material
6 <sup>th</sup>	F	Place Materials

Key (answer)	1-C, 2-D, 3-B, 4-F, 5-E, 6-A
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## PERFORMANCE TEST ITEMS (Samples)

DIT/ QS	Test Item Database Performance Test Item- no. 7
Occupational Title:	Builder
Competence level:	Level 1
Code no.	
Test Item:	Set out a one roomed house 3000 mm x 3000 mm
Complexity level:	P 2
Date of OP:	September 2020
Related module:	M1.1
Related skills and knowledge:	Knowledge of interpret drawings and sketches, knowledge of safety precautions, levelling skills, taking measurements, elementary carpentry, setting squares.
Required tools, Materials and Equipment:	Steel tapes, spirit level, water level, plumb bob, building square pencil, wooden pegs, profile boards, assorted nails, sledge hammer, claw bar, claw hammer, bow saw, hand saw, panga strings
Time allocation:	4 hours
Preferred venue:	Site
Remarks for candidates	<ul style="list-style-type: none"> <li>◆ Observe safety, health and environmental precautions</li> </ul>
Remarks for assessors	<ul style="list-style-type: none"> <li>◆ Provide tools and materials</li> <li>◆ Prepare work area</li> </ul>

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
1	Preparations for a task	<b><u>Wore protective gear</u></b> Overall, helmet, safety shoes, gloves, face masks,		
		<b><u>Cleaned work place</u></b> Identify/select and assemble tools		
2	Selected tools and materials	Sawing-handling rules for saw	1	
		Length of profile pegs 100 mm x 75 mm x 1 m ± 5 mm		2
		Profile board 150 mm x 50 mm x 1.5 m,		1

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		Nails -2", 2 1/2", 3"	1	
		Checked tools and instruments	3	
3	Levelled site	Reduced to a common surface +2m - all around structure	3	
		Levelled ground	2	
		Cleared excess cut soil 5m away	2	
5	Interpreted working drawings	Set out building	3	
		Corrected orientation and size	3	
		Set out building according to the working drawing observed		3
6	Establish datum or reference level	Location; safe distance from setting works 2m	3	
		Peg; measured off-set from edge of structure 2m ± 5mm.	2	
		Marked and excavated peg 300 ± 10mm	2	
7	Set building line	From existing buildings, provided by designer or local authority	4	
		Measured and marked off set	3	
8	Set front of building	Measured and marked centre of building along the ranging line		4
		Measured overall length and marked with pegs 3m ± 5mm.	4	
9	Set corner	Placed square at one of the pegs and one line along the building line	4	
		Stretched a line from this corner peg and parallel to the second side of the square	3	
		Measured with 3m ± 2mm, marked third peg.	2	
10	Transferred the buildings square to third peg	Repeated operation in step 8	1	
		Measured and marked the length and width of third and fourth sides respectively.	2	
11	Measured diagonal	Stretched building lines around pegs	1	
		Measured diagonals to ± 10mm.	2	
		Made correction or adjustment where necessary	2	
12	Set profile pegs	Measured and marked for profiles 2m ± 15mm from lines	3	

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		Profiles erected		2
		Plumbed, levelled and cut to 900mm height	2	
13	Set profile boards	Set with water level	3	
		Nailed on profile pegs		1
14	Transferred lines to profile boards	Stretched all lines beyond proof		4
		Transferred lines with plumb bob to profile boards	2	
		Marked and fixed nails on boards	2	
		Fixed and stretched string lines	1	
15	Measured wall thickness and foundation over laps	Measured from centre and marked for wall thickness $150 \pm 2\text{mm}$	3	
		Marked for foundation $600\text{mm} \pm 10\text{mm}$		3
16	Transferred foundation lines to the ground	Marked by dropping lines with plumb bob		4
17	Erected barrier ground works	High light lines with sand, chalk line or paint		2
		Use warning tape	3	
	<b>TOTAL</b>		<b>72</b>	<b>26</b>
	<b>Maximum score (Y)</b>	$\frac{X}{Y} \times 100$	<b>98</b>	

## 4.0 ATP- PART IV

### INFORMATION ON REVIEW PROCESS

#### 4.1 Occupational Profile Review (September 2020)

The Occupational Profile was exclusively reviewed by job practitioners who were working in the Builder occupation. The job expert panel, guided by DIT Facilitators defined duties and tasks performed and provided additional generic information regarding the occupation.

#### 4.2 Training Module Review (September 2020)

Based on the Occupational Profile for Builder of September 2020, Training Modules were reviewed by job practitioners, guided by DIT Facilitators.

#### 4.3 Test Item Review (September 2020)

Based on the Occupational Profile for Builder of September 2020, and Training Modules, Test Items were reviewed by combined panels of instructors and job practitioners, guided by DIT Facilitators.

#### 4.4 Methodology

The rationale for the Assessment and Training Package development was to link Vocational Education and Training to the real world of work by bridging Occupational Standards to Training Standards through industry-led Standards-Based Assessment.

Active participation of both instructors and job practitioners' panels consolidated the development philosophy.

The panelists worked as teams in workshop settings complemented by off-workshop field research and literature review activities including international benchmarking.



#### 4.5 Review Panel

The participating panels of Job Practitioners required at different stages were constituted by members from the following organisations:

No	Name	Institution/ Organisation
1.	Tusasiire Mark	Archforum LTD
2.	Balikoowa Robert	Kiira Collage Butiki
3.	Epiat Denis	Ndejje S.S.S
4.	Semuwemba Siraje	Eskorn
5.	Kavuma Abubaker	NCDC/ Kibuli S.S
6.	Guma Lawrence	Seeta High School
7.	Rutaro Nicholas	Lugogo VTI
8.	Ssendawula Martin	King's Collage Buddo Wakiso
9.	Mpaata Keziron	Infra Build
10.	Nahabwe Elisa	Ntinda Vocational Training Institute

#### 4.6 Facilitator team

This Assessment and Training Package was reviewed by a Facilitator team listed below:

1. **Team Leader:** Ms Mukyala Ruth Ag. Deputy Director/QS Dept, DIT
2. **Facilitators:** Ms. Ahimbisibwe Judith, DIT; and Mr. Mwesigwa Isaac, DIT, Mr. Kirabo Thomus Mugenyi, DIT
3. **Data Entrants:** Ms. Atukwase Esther, Data Entrant DIT, Mr. Tumusiime Edward, Data Entrant DIT.
4. **Compiled by:** Mr. Tumusiime Edward, Data Entrant DIT.
5. **Edited by:** Ms Mukyala Ruth Ag. Deputy Director\QS DIT.
6. **Coordinated by:** Mr. Byakatonda Patrick, Ag. Director, DIT;

#### 4.7 Reference:

The Assessment and Training Package was revised in September 2020 and may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

**References:**

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- Laxmi Publications LTD (12<sup>th</sup> January 2018) 1<sup>st</sup> Edition Building construction
- F. Hall & Roger (21<sup>st</sup> March 2001) Building Services Handbook
- Roy Cudley (1988) Building construction handbook



ISBN 978-9913-626-59-0



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