



# NCC CONSTRUCTION SCHOOL

ISSUE NO 4

KANSANSHI  
MATERIALS TESTING

NCC GRADUATION  
CEREMONY

NCC LAUNCHES  
DIPLOMA COURSES

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**Skills Bulletin**

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## REMARKS BY EXECUTIVE DIRECTOR

It is with great pride and foresight that I present the fourth edition of the **Skills Bulletin**, a publication that celebrates not just the achievements of our graduates, but also the evolution of Zambia's construction sector through innovation, capacity building, and inclusive growth.

This particular Bulletin is themed around the 11<sup>th</sup> Combined Graduation Ceremony of the National Construction School, held on 21<sup>st</sup> February 2025. The Graduation ceremony marked a pivotal moment in our journey. After a five-year hiatus, 602 graduates crossed the stage, each equipped to make tangible contributions to Zambia's infrastructure transformation. This event underscored our unwavering commitment to building a resilient construction sector that aligns with national development goals and global sustainability standards.

The theme, "*Building Sustainable Futures: Empowering Graduates for a Resilient Construction Industry,*" resonates deeply with NCC's mandate. At a time when Zambia is recovering and investing heavily in infrastructure to support economic transformation, our focus as a country remains on quality, right price, timeliness, and ethical professionalism in delivery.

NCC continues to position itself as a strategic enabler of national development. Through reforms in construction regulation, curriculum modernization, and partnerships with industry players, we are creating pathways not only for employment but also for entrepreneurship, innovation, and leadership in construction.

This publication is more than a celebration - it is a reaffirmation of our mission to shape a future-ready workforce and a dynamic construction ecosystem. I am confident that our graduates will uphold the values of integrity, excellence, and sustainability as they take on the mantle of nation-building.

On behalf of the National Council for Construction, I extend heartfelt congratulations to our graduates and appreciation to all stakeholders who support our mission.

**Prof. Paul L. K. Makasa**

*Executive Director*

A handwritten signature in white ink, appearing to be 'P. Makasa', located at the bottom left of the page.



## REMARKS BY PRINCIPAL

The construction industry plays a critical role in national development, and its success depends on a skilled and competent workforce. At the National Construction School, we are proud to contribute to this vision by empowering young Zambians with the practical skills and technical knowledge required to meet the ever-evolving demands of the industry.

This fourth edition of the Skills Bulletin showcases the transformative journeys of our trainees and the innovative strides we have made in construction training. From hands-on experience to classroom excellence, these stories highlight the real-world impact of our work in strengthening Zambia's human capital.

In this edition, we are especially proud to feature the launch of two new diploma programmes - *Highway Engineering* and *Building Construction Works Monitoring and Management*. These programmes were developed in collaboration with TEVETA and industry stakeholders to address identified skills gaps and prepare our learners for specialized roles within the sector.

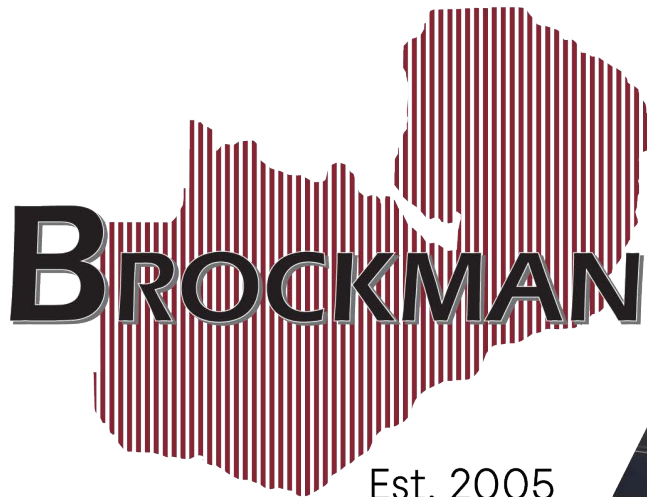
We are equally excited about the continued success of our strategic training partnerships, including the Zambia Sugar Supplier Development Programme and the SME Training under the Lobito Corridor Trade Facilitation Project. These initiatives serve as shining examples of how public-private collaboration can uplift communities and foster inclusive growth.

As the NCS we remain deeply committed to supporting our trainees with relevant, high-impact training that positions them for long-term success. Let this publication stand as a testament to what we can achieve when training, policy, and purpose come together.

We proudly present this edition of the *Skills Bulletin* - may it inspire you as much as it has inspired us.

**Wendy Nambule Mukape**

*Principal - National Construction School*



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# Materials Testing and Site Inspection: The Foundation of Successful Construction

## Kansanshi's Obed Mulenga Shares Insights on Quality Assurance in Construction

*By Stephen Kuwani*

Quality construction begins with rigorous materials testing and site inspections”, according to Obed Mulenga, a Construction Materials Technician at Kansanshi Mine in Solwezi. Having honed his expertise at the National Construction School, Mulenga emphasizes that ensuring the integrity and safety of any construction project depends on meticulous quality assurance processes.

“Materials testing and site inspections are the foundation of a successful construction project. The triumph of any building project, especially in terms of safety and integrity, depends largely on these procedures,” he explains.

Mulenga’s role involves testing, sampling, and measuring construction materials to guarantee compliance with quality standards. He highlights that materials such as soil, rebar, asphalt, concrete, and masonry must undergo rigorous checks before, during, and after construction. This ensures they meet performance expectations and prevent potential structural failures.

“Materials testing is crucial at every stage of construction - whether it's a new project, additions, alterations, or renovations. These tests help ensure a project’s safety and longevity,” he adds.

While not all projects require the same tests, key evaluations depend on factors such as project type, location, and available testing services. These assessments can be performed either on-site (field testing) or at specialized offsite laboratories, ensuring materials are safe, sustainable, and compliant with regulations.

To uphold high construction standards, repeated testing and inspections should be conducted throughout the project lifecycle. Mulenga underscores that regular quality checks help identify potential risks early, mitigating costly errors or failures down the line. “Routine inspections at various stages of construction ensure quality outcomes. The earlier we detect issues, the better we can address them before they compromise the project,” he notes.

### **Building a Strong Career Through NCC Training**

Reflecting on his professional journey, Mulenga attributes his success to the skills acquired at the National Construction School. His training

equipped him with a deep understanding of construction materials, testing techniques, data interpretation, and regulatory compliance. He also gained essential soft skills, including teamwork, problem-solving, and time management - key competencies for excelling in the field.

Mulenga envisions further growth in his career, aspiring to advance from a Quality Control Technician to a Quality Control Manager and, ultimately, a Quality Assurance Manager.

### A Call to Aspiring Professionals

Encouraging others to pursue training in materials testing and quality control, Mulenga believes upskilling is vital for both career development and national progress.

“I encourage others to take courses at NCC to build their capacities. By investing in knowledge and expertise, we can contribute to sustainable infrastructure development and drive Zambia’s growth,” he concludes.



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# EQUIPPING ARTISANS WITH AN ADAPTABLE SKILLSET

*By Iuse Katenekwa (reg. Arch)*

The Zambian construction industry today faces numerous challenges, including advanced technology, climate change, demand for fast-track completion of projects and diverse stakeholders that require management. As a result of this, it is imperative that artisans are equipped with adaptable skill sets that match the changes that occur in the construction industry.

Studies have revealed that sourcing local skilled construction workers to meet industry demands has been a challenge and in order to keep up with these demands, there is a need for agility in responding to these changes. It is essential for artisans to be trained with a balance of soft

and technical skills in order to respond to the work space.

Training institutes need to take a proactive approach in identifying current and future skills gaps and collaborate with other built environment professionals on what the needs are on diverse sites. The aspect of change



management among artisans needs to be incorporated in the training curriculum in order to respond to common and unique changes on site. While traditional approaches have placed emphasis on technical skill, soft skills such as teamwork, communication, supervisory skills, conflict resolution and high impact leadership are becoming increasingly necessary for artisans to thrive in the construction industry.

The National Construction School has various programs such as sustainable building works supervision, occupational health and





safety, steel fixing, tiling, plumbing, carpentry, painting and paving technology. These programs aim to equip artisans with both technical and soft skills, furthermore, the programs offer continuous professional development in the construction sector thereby moving with the trends in the industry.

Construction companies and individuals are looking to employ workforce that are innovative, and solution focused for both minor and complex projects. Developers need artisans who can adapt to new building techniques, materials and methods in order to build faster, smarter and more resilient structures.

It is therefore acceptable to state that regular training and upgrading of skills is necessary to ensure that artisans are not only resilient but are able to adapt to the changes in the construction industry. This is indeed a call to all industry stakeholders to work collaboratively in developing an adaptable workforce.





## SUPPLIER DEVELOPMENT PROGRAM TRANSFORMS WOMEN IN CONSTRUCTION

*By Edgar Kamuna*

**T**he Supplier Development Program, conducted by the National Council for Construction (NCC) and sponsored by Zambia Sugar, has been a transformative experience for many local contractors. Among them is Lisa Muntanga, one of only two women who participated in the practical training program aimed at building the capacity of 20 contractors and 40 foremen in Mazabuka.

Reflecting on her journey, Muntanga expressed her gratitude for the opportunity to be part of the program, emphasizing how it has deepened her understanding of the construction industry and provided her with invaluable skills.

“I started this journey as a trainee site supervisor, and it has been an amazing experience. The construction industry is vast, with numerous procedures and processes, and

this program has exposed me to critical aspects of the work,” she said.

Through the training, Muntanga developed a strong interest in electrical installations. She learned the importance of selecting the correct cable sizes for lighting, sockets, and cookers, as well as choosing the right circuit breakers to prevent electrical hazards, such as house fires. Beyond electrical work, she gained hands-on experience in supervising construction projects, ensuring that buildings are constructed correctly from foundation to roofing.

Ms. Muntanga also highlighted the practical construction knowledge she acquired, including:

- Understanding when to use 4-inch versus 6-inch blocks
- Proper cement mixing techniques for plastering and structural durability



- Installing roofing, door frames, and window frames
- Working with bituminous materials for painting and waterproofing

She described site supervision as one of the most fascinating aspects of her training, giving her confidence and leadership skills to manage teams effectively.

“This program has been a life-changing opportunity, equipping me with the knowledge and confidence to contribute meaningfully to construction projects,” Muntanga said.

Her journey demonstrates the impact of training and capacity-building initiatives, particularly for women in construction, a

The Supplier Development Program is an example of how strategic partnerships can



empower local contractors and enhance skills development, ultimately contributing to quality infrastructure and economic growth in Zambia.



# SANDIE TEMBO – FROM NCC STUDENT TO CONTRACTOR

*By Eng. Wendy Nambule Mukape*

**A**t just 28 years old, Sandie Tembo Jr. has built a career as a contractor, demonstrating the impact of quality training and skills development in the construction industry. His journey is a success story of the NCC Construction School, which remains committed to equipping students with practical knowledge and technical expertise to support sustainable infrastructure development in Zambia.

Recognizing the Government of the Republic of Zambia as the largest client in the construction sector, NCC aligns its training programs to ensure that projects are delivered on time, within budget, and to the highest quality standards. The council works closely with the government to bridge the skills gap, producing competent professionals who contribute meaningfully to the sector.

In an interview, Mr. Tembo, a former NCC Construction School student, shared his experiences on how the training he received shaped his career and business growth.

“I am a contractor by profession and the founder of STJ Construction and Supply Ltd. I was trained at the National Council for Construction School in various skill courses, including contract management, bricklaying, site supervision, preparation of responsive bids, and occupational health and safety.”

Tembo’s interest in construction was sparked by his passion for architectural design. He realized that beyond design, he wanted to build and manage projects, leading him to pursue relevant construction skills at NCC. His education in contract management and bricklaying has helped him operate professionally, allowing him to:

- Bid for government contracts using the EPG system
- Draft contracts for clients
- Supervise and coordinate teams on various projects
- Offer consultancy services to other contractors and clients

Reflecting on his training, Tembo highlighted some of the most valuable lessons he learned, including:

- Upholding high construction standards by ensuring the use of quality



materials and best

practices

- Executing projects professionally by following contract specifications
- Organizing and managing a team effectively to deliver excellent results

One of Tembo's notable projects took place in 2023, when a lecturer from NCC recommended his services to a local contractor struggling to set out a complex 40x40m house in Meanwood Nkosi. The design required GPS technology, but using his knowledge in bricklaying and site preparation, he successfully completed the project despite the challenges.

Tembo believes that bricklaying and contract management skills are increasingly in demand.

With clients seeking quality workmanship and reliable project management, well-trained professionals are essential, regardless of project size.

He also noted that the introduction of Constituency Development Fund (CDF) projects has increased demand for certified professionals, as the government mandates the use of trained personnel for these public works.

Transitioning from classroom training to real-world application was not without its challenges.

Tembo faced two key obstacles:

- Acquiring specialized tools and equipment, such as profile boards and dumpy levels, which were not readily available compared to traditional construction methods.
- Client resistance to standard mixing ratios, with some believing the prescribed formulas were theoretical and costly. However, over time, clients became more receptive after he explained their importance in ensuring structural integrity.

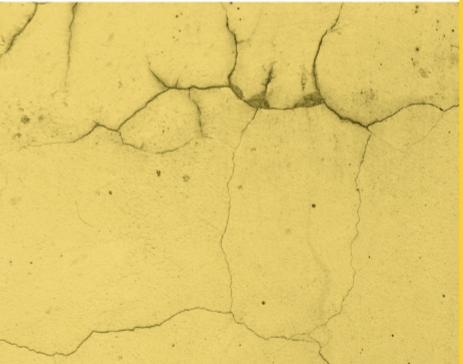
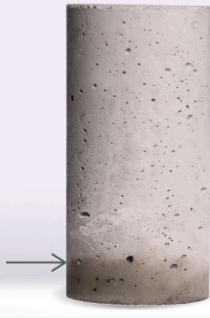

To stay updated with the latest construction techniques, Tembo actively researches online, reads industry publications, and maintains a professional relationship with NCC mentors like Mr. Chintu, who provides guidance and updates on new courses.

Mr. Tembo's journey is a testament to NCC's commitment to capacity building and skills development. His story serves as an inspiration for aspiring professionals seeking to build careers in construction through quality training and mentorship.



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# NCC Trains Assistant Building Officers in Western

*By Eng. Martin Daka*

National Council for Construction (NCC) recently conducted a two-week intensive training program for Assistant Building Officers in Western Province, focusing on cement/sand block moulding. The training, which ran from 21st to 31st January 2025, involved 16 participants drawn from all 16 districts in the province.

## **Supporting School Infrastructure Development**

The training was part of the Zambia Education Enhancement Project (ZEEP), under which the Government of Zambia, through the Ministry of Education, is constructing 22 schools in Western Province as part of the 120 schools being built nationwide under ZEEP Additional Financing.

One of the biggest challenges in the school construction process in Western Province had been the high cost of transporting building materials, particularly concrete blocks. Procuring and transporting blocks from Lusaka would be extremely costly, making on-site block moulding a more sustainable and cost-effective solution.

## **Utilizing Local Materials for Construction**

Across Zambia, crusher dust-based concrete blocks are widely used in construction.

However, in Western Province, sourcing crusher dust was difficult, as the nearest supply point was over 200 km away, while some areas required transportation of up to 600 km.

Given this challenge, the Ministry of Education and its stakeholders explored the potential of using the abundant Kalahari sand in Western Province for block moulding. This led to NCC being contracted to train Assistant Building Officers on how to effectively utilize the locally available sand for block production.

## **Hands-On Training in Block Moulding**

During the training, participants were taught grading, moulding, and curing techniques to ensure high-quality block production. The grading process revealed that the sand in Western Province consists mainly of fine sand and silt, requiring careful processing before use.

To enhance block strength, the training incorporated a sieving process to remove excessive silt. Rapid-setting Portland cement was used to mould blocks with three different cement-to-sand mix ratios:

- 20% cement content
- 18% cement content
- 16% cement content

The blocks were monitored for seven days of curing, showing promising early results. The curing process was extended to 28 days, after



which compressive strength tests were conducted.

### Encouraging Results for Locally Moulded Blocks

After 28 days of curing, the compressive strength tests showed:

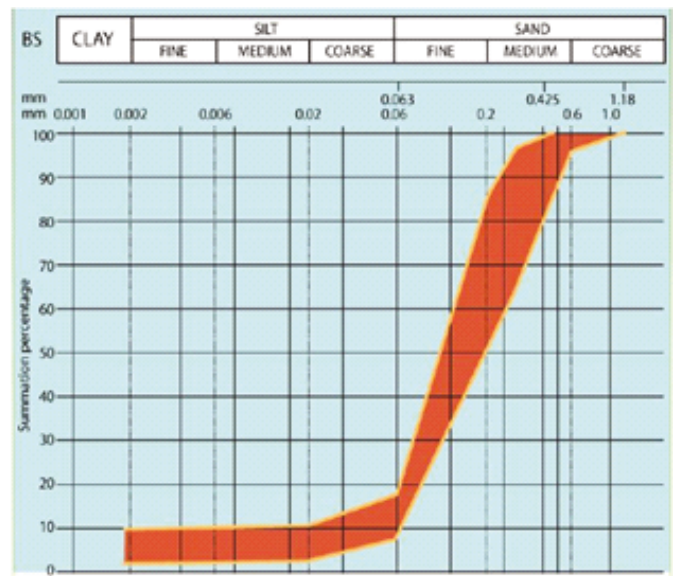
- 3.8 MPa strength for blocks with 16% cement content
- 4.2 MPa strength for blocks with 20% cement content

These results confirm that Western Province’s sand, when carefully screened and mixed, can produce cement blocks that meet the required industry standards. The Ministry of Education’s guidelines for block moulding at school construction sites in the province prescribe a minimum compressive strength of 3.5 MPa, which was successfully achieved in this training.

The training demonstrated that Western Province can produce its own high-quality construction materials, reducing reliance on costly transported blocks. By leveraging local resources, the Ministry of Education is

promoting cost-effective, sustainable school construction while ensuring quality infrastructure for education development.

With the support of NCC, this initiative not only enhances the capacity of Assistant Building Officers but also sets a new standard for local construction practices, ensuring that infrastructure projects in Western Province can be delivered efficiently and affordably







# Diploma in Highway Engineering



**Start Date:** 11th August 2025

**Duration:** 3 years

**Cost:**

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## Curriculum Includes

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- Road Construction and Maintenance Supervision ◆
- Occupational Safety, Health, and Environment ◆
- Contracts Management ◆

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## NCC EXPANDS ITS REACH WITH NEW MPIKA OFFICE

The National Council for Construction (NCC) has announced the opening of a new regional office in Mpika, which will become operational in the second quarter of 2025. This strategic initiative aims to expand NCC's geographical presence and enhance service delivery, particularly in the Northern and Muchinga Provinces. The office shall be located in the heart of Mpika at Mpika Boma, a strategic location for easier accessibility for the public.

### ***A Visionary Expansion Under NCC Leadership***

The establishment of the Mpika office results from focused leadership and strategic planning by the current NCC Board, led by the Board Chairperson, Eng. Vitalis Mooya. Since the installation of this board, expanding NCC's reach and improving accessibility to its services and service delivery has been a top priority. Eng. Mooya had emphasized that this expansion was part of NCC's long-term vision to decentralize its operations and ensure that contractors and stakeholders in all provinces receive efficient, timely, and high-quality services.

*"This initiative is a milestone for NCC and a testament to our commitment to supporting infrastructure development across the country. The Mpika office will bring NCC closer to contractors in Northern and Muchinga Provinces, making compliance, training, and support services more accessible,"* said Eng. Mooya.



## ***Strengthening Service Delivery and Compliance***

With a growing number of infrastructure projects in the Northern and Muchinga Provinces, the Mpika office will:

- Streamline contractor registration, licensing, and compliance processes.
- Provide on-the-ground monitoring and enforcement of construction standards.
- Offer capacity-building programs for local contractors and industry professionals.
- Facilitate closer collaboration between NCC, government agencies, and industry stakeholders.
- Manage and guide stakeholders with complaints and appeals.

## ***Aligning with the Government's Decentralization Policy***

The launch of the Mpika office is in line with Zambia's decentralization policy, which aims to bring essential services closer to the people. The NCC is working to ensure that all regions receive equal attention and support to boost infrastructure development and compliance with construction regulations.

NCC Executive Director Prof. Makasa reiterated NCC's commitment to expanding its footprint and ensuring that every contractor, no matter their location, had access to vital industry services.

## ***A Step Towards Sustainable Infrastructure Development***

The NCC Board and Management remain committed to strengthening the construction industry, improving service efficiency, and ensuring that Zambia's infrastructure development is guided by the highest standards of quality and sustainability.

With the second-quarter launch of the Mpika office, the future of construction in the Northern and Muchinga Provinces looks brighter, as NCC continues to expand, innovate, and empower the industry for national growth.

***NCC: Expanding Horizons, Strengthening Construction, Building Zambia!***



# NCC HOSTS GRADUATION CEREMONY



*By Timothy Musole*

**A**fter a five-year hiatus, the National Construction School proudly hosted its 11<sup>th</sup> Combined Graduation Ceremony on 21<sup>st</sup> February 2025 at the New Government Complex.

The event, officiated by Hon. Eng. Charles Milupi, MP, Minister of Infrastructure, Housing, and Urban Development, saw 602 graduates receive qualifications in Road Construction and Maintenance Supervision, Occupational Safety Health and Environment, Construction Materials Testing, Earthmoving Plant Operation, Painting, Management of Civil Engineering Processes, Basic Land Surveying and AutoCAD.

The graduation was hailed as a significant achievement, reaffirming NCC's commitment to building a skilled and professional workforce for Zambia's infrastructure sector.

#### Shaping the Future of Construction

Hon. Milupi highlighted the importance of a well-trained workforce in building a sustainable future, aligning with the ceremony's theme, "Building Sustainable Futures: Empowering Graduates for a Resilient Construction Industry." He urged the graduates to embrace sustainability, innovation, and ethical practices, stressing that their work would directly impact economic growth and urbanization.

"The roads you will construct, the homes you will build, and the facilities you will design and

manage will shape the quality of life for generations to come," he remarked.

The Minister reaffirmed the government's commitment to infrastructure development under President Hakainde Hichilema's leadership, guided by the principles of Right Quality, Right Price, and Right Delivery Time.

"your hard work, dedication, and perseverance have brought you here today. the rigorous academic and practical training you have undergone at the NCS has prepared you to make meaningful contributions to zambia's infrastructure development" Hon Milupi said.

Hon. Milupi emphasised that Zambia required skilled professionals to construct infrastructure that fosters economic growth, urbanization, and environmental sustainability.

The training by the national council for construction, was enhancing the capacity of the construction sector by fostering professionalism, innovation, and excellence.

"Allow me to extend my deepest appreciation to the national council for construction for their dedication to shaping the future of zambia's construction sector. your commitment to developing skilled professionals is commendable and instrumental to the nation's progress" Hon. Milupi said.

He further emphasized "let us remember that zambia's future depends on its infrastructure, and the strength of that infrastructure lies in the hands of skilled and dedicated professionals."

## Fostering an Entrepreneurial Mindset

The Executive Director, Prof. Paul Makasa pointed out that one of the key pillars of training at NCC is the drive to create entrepreneurs rather than just employees. While employment in well-established construction firms is one path, NCC strongly encourage its students to think beyond traditional roles and consider becoming job creators, business owners, and industry pioneers.

“We live in an era where economic transformation requires a shift in mindset. Zambia’s construction sector is full of opportunities—opportunities not only to build roads, bridges, and buildings but also to build businesses, generate employment, and contribute meaningfully to our national development” he said.

## Innovate and Modernize

The Board Chairperson, Hon Eng. Vitalis Mooya emphasised that NCC had taken

deliberate steps to **innovate and modernize its training programs** to ensure that the Construction School moved with the times and meet the needs of the 21st-century construction industry.

“Some of the key innovations we have introduced include, **Virtual Learning for Enhanced Access** in response to the need for greater accessibility and flexibility. Further to meet **growing industry demands**, I am pleased to announce that, for the first time, **NCC this year launches two diploma programs to meet growing industry demands namely Diploma in Highway Engineering and Diploma in Building Construction Works Monitoring and Management” Hon. Mooya said**

With a new generation of skilled professionals entering the workforce, the future of Zambia’s construction sector looks brighter than ever.

Congratulations to all our graduates!





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## NCC LAUNCHES DIPLOMA COURSES TO ADVANCE CONSTRUCTION TRAINING

In a bold step toward enhancing professional development in the construction industry, the National Council for Construction (NCC) has launched two new diploma programs. These specialized programs aim to equip industry professionals with the advanced skills required to meet the evolving demands of Zambia's construction sector.

The two newly introduced diploma programs are:

- **Diploma in Highway Engineering**
- **Diploma in Building Construction Works Monitoring and Management**

Recognizing a critical gap in construction education, NCC collaborated with the Technical Education, Vocational, and Entrepreneurship

Training Authority (TEVETA) to develop these programs. The rigorous curriculum review and development process ensures that graduates gain both theoretical expertise and practical application, enhancing their ability to manage complex projects efficiently.

With infrastructure development being a key driver of economic growth, these diploma programs will empower professionals with the knowledge and hands-on experience necessary for project design, implementation, and management—ultimately fostering a more sustainable and robust construction industry.

To address the growing need for flexible and accessible education, NCC has embraced hybrid virtual learning for selected courses. This



forward-thinking approach allows students, contractors, and industry professionals to acquire essential skills from any location, breaking geographical barriers to education.

By integrating digital platforms, NCC is ensuring that construction training is more inclusive and adaptable, catering to the busy schedules of working professionals while maintaining high-quality instruction.

In a rapidly evolving industry, NCC remains committed to redefining construction education by focusing on:

- 1. Technology-Enhanced Learning** – Leveraging digital tools to provide accessible and flexible training opportunities.
- 2. Industry-Relevant Curricula** – Aligning training with the latest market demands to ensure graduates are job-ready.
- 3. Global Competitiveness** –

Incorporating international best practices to prepare professionals for local and global opportunities.

**4. Innovation and Adaptability** – Evolving programs to include emerging trends such as sustainable construction and smart infrastructure.

**5. Collaborative Growth** – Partnering with industry stakeholders to bridge the gap between academia and the workplace.

With these initiatives, NCC is not only addressing the current skills gap but also shaping the future of Zambia's construction workforce. By investing in specialized training, the industry is poised for growth, resilience, and global competitiveness.

For more information on these diploma programs, visit the NCC website or contact the NCC Training Department.





# NCC CONSTRUCTION SCHOOL

Skills Bulletin

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## LABOUR-BASED TECHNOLOGY GAINS MOMENTUM:



### IRCP Site Visit to Chibombo

By Eng. Edgar Kamuna and Eng. Martin Daka

The implementation of **Labour-Based Technology (LBT)** under the **Improved Rural Connectivity Project (IRCP)** is taking shape as the National Council for Construction (NCC) and the **Ministry of Local Government and Rural Development (MLGRD)** continue to

spearhead its rollout. This initiative, funded through a **World Bank loan**, seeks to enhance rural road infrastructure while promoting job creation and skills development.

#### i. Bridging Rural Connectivity with LBT

Zambia's **primary feeder roads** form the largest portion of the country's road network, providing a significant opportunity for the adoption of labour-based construction methods. The **IRCP aims to**

rehabilitate these vital roads, improving accessibility and fostering economic growth in rural communities.

As part of its implementation strategy, a **joint site visit was conducted on 6th March 2025** in Chibombo District with prospective contractors who will be engaged through a competitive bidding process. The selected contractors will undertake works under a **capacity-building supervisory contract**, ensuring the integration of labour-based construction methodologies.

#### ii. Target Roads for Rehabilitation

The project will focus on the rehabilitation of three key roads in Chibombo District:

a) **Chabona - Kanjanji Road** – The road is a major trade route for agricultural produce and leads to **Chabona Primary school**

b) **Lucy O'Brien Road**– This critical access route to a healthcare facility becomes

impassable during the rainy season, necessitating urgent rehabilitation.

**c) Saint Thomas Hospital Road** - is a road that leads to St Thomas Hospital and is a gateway route to Lukanga Fish Swamp

### **iii. Empowering Communities Through Employment**

A core objective of the LBT initiative is to **create employment opportunities** for local communities, particularly in rural areas. By utilizing labour-intensive methods, the project **not only enhances infrastructure but also provides sustainable**

**livelihoods** for those involved.

One of the key success factors for LBT is **consistent and dedicated funding**, ensuring long-term sustainability. Given that the Ministry of Local Government and Rural Development oversees rural roads; this initiative aligns seamlessly with its mandate to support infrastructure development while fostering economic empowerment.

### **iv. A Sustainable Path for Rural Development**

With effective implementation, LBT has the potential to **transform Zambia's rural road network** by enabling both road rehabilitation and maintenance of **gravel and**

**earth roads.** Beyond infrastructure, the initiative guarantees that **local communities gain access to markets, schools, hospitals, and essential services**, ultimately improving their quality of life.

As NCC and MLGRD push forward with this transformative project, the adoption of labour-based methods is set to **reshape rural road development** in Zambia—bridging gaps, creating jobs, and ensuring sustainable infrastructure growth.

For more updates on LBT initiatives and road rehabilitation projects, follow NCC's official channels.



# Diploma in Building Construction Works, Monitoring and Management

**Start Date:** 11th August 2025

**Duration:** 3 years

**Cost:**

**Term 1:** K6,700, **Term 2:** K6,100, **Term 3:** K6, 050

## Curriculum Includes

- Site monitoring and inspections ◆
- Construction mathematics ◆
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# NCC EMPOWERS LOCAL CONTRACTORS THROUGH HANDS-ON TRAINING IN MAZABUKA

*By Muchinga Simfukwe and Martin Daka*

In a groundbreaking initiative aimed at enhancing local construction expertise, National Council for Construction (NCC) has partnered with Zambia Sugar Plc in one of the largest housing rehabilitation projects in Southern Province. The project involves the rehabilitation and upgrading of approximately 900 entry-level housing units using Mazabuka-based citizen contractors, aligning with Zambia Sugar Plc's commitment to corporate social responsibility and improved employee living conditions.

## **Equipping Contractors for Excellence**

To ensure efficiency and consistent quality in construction, Zambia Sugar Plc entered into a Memorandum of Understanding (MoU) with NCC to provide specialized training for 22 local contractors in building works supervision. The program, launched on 24th June for Site Agents and 12th August 2024 for Site Foremen, focuses on essential construction management aspects, including:

- ✓ Project scheduling and programming
- ✓ Contract management
- ✓ Costing and tendering processes
- ✓ Effective site supervision

This initiative serves as both a training platform and a demonstration project, integrating modern residential construction techniques that

emphasize cost-effectiveness, efficiency, and environmental stewardship.

## **Contractors' Perspectives: Transformative Training**

The six-month intensive training has already begun to yield tangible benefits for the participating contractors, equipping them with critical skills to bid for larger contracts within and beyond Mazabuka.

Mr. Chisanga Chimfwembe, Director of Kentz Construction Limited, highlighted the shift in his approach to project management: *"The insights from NCC's training have completely changed how I prioritize tasks, manage risks, and allocate resources. I now have a structured approach to delegation and off-site supervision, which enhances project execution."*

Mr. Clayton Kaumba, Director of Fabflex Construction Limited, described the training as a game-changer: *"NCC has transformed how I manage construction projects, from pricing Bills of Quantities (BOQs) to effective stakeholder engagement. My communication skills have improved, making it easier to address project concerns and ensure smooth execution."*

Mr. Enoch Katolo, Director of Demas Construction Company, emphasized the impact



on his management skills:  
*"I've gained a deep understanding of how to prevent project delays and optimize resources efficiently. This training has helped me deliver quality projects on time while maintaining profitability."*

### **Hands-On Training Success: Setting a New Standard**

The program's success is exemplified by the construction of demonstration houses, which serve as educational models showcasing the use of high-quality materials, cost-effective design, and adaptable floor plans suitable for both urban and rural settings.

Beyond just constructing houses, the initiative has provided practical, on-the-ground training for contractors, builders, and artisans, enhancing their ability to meet industry standards and deliver sustainable housing solutions.

### **Shaping the Future of Residential Construction**

The Mazabuka housing rehabilitation project stands as a testament to the power of collaboration, innovation, and skills development. By addressing workforce challenges, refining communication, and promoting cost-effective construction, NCC and Zambia Sugar Plc have set a benchmark for residential housing projects in Zambia.

This initiative is not just about building houses—it is about empowering contractors, enhancing construction standards, and creating a skilled workforce for the future. With such programs, Zambia's construction sector is poised for sustained growth, improved quality, and increased competitiveness in both local and regional markets.

## LOBITO THEORY TRAINING CONCLUDED, NOW AWAITING PRACTICAL PHASE

*By Eng. Martin Daka and Pathias Mwaba*

Following the commencement of the training of the road Sector Small and Medium Scale Enterprises (SME's) in Road Construction and Maintenance under the Lobito Trade Facilitation Project financed by the African Development Bank that took place from 14<sup>th</sup> October – 22<sup>nd</sup> November 2024, the NCC is gearing up to now commence the practical training phase schedule for 21<sup>st</sup> April, 2025 in Solwezi.

The training program was being conducted in two phases of theory and practical being bridged by the rainy season with the total duration of the assignment being 18 weeks.

The primary objective of the assignment was to train and build capacity of 40 no. SME's in Road Construction and

Maintenance. Further, the training was designed to improve contractor's project implementation efficiency in both labour based (largely) and machine based technologies with the emphasis on tractor towed technology.

With the main objective outlined above, the specific objectives of the assignment included:

- i. To enhance the technical capacity of 40 small and medium scale contractors in road construction practices, contract management and financial management (i.e. business acumen, bid preparation, pricing and record keeping);
- ii. To equip 40 small and medium scale contractors with knowledge, skills and attitude required in road construction and maintenance operations;
- iii. To improve 40 small and medium scale contractors'

efficiency in road construction and rehabilitation projects which include a Labour-Based Technology, tractor – towed technology with a component of Machine (conventional) Based method;

- iv. To introduce 40 small and medium scale contractors to different road seals such as





double seal surface dressing, slurry and cape seal

v. To encourage participation of women and youth in road construction and maintenance.

vi. Build Capacity using labour based technology

At the end of the assignment, it is anticipated that more women will be equipped to participate in road

construction and maintenance projects. The class currently has 42 students spread across different districts of North-western Province with 32 male students and 10 female students. Out of this number one student is from the Road Development Agency (RDA) North-western Province while the other is from Solwezi Trades Training Institute.

Part of the knowledge gained from the theory phase was being applied by some of the students who were bidding for routine maintenance contracts in the province. Once the course is completed, it is anticipated that there will be increased participation in future bids for routine maintenance road contracts in the province.





## Ensuring Quality: Equipment Calibration at NCC's Construction Materials Laboratory

*By Miyanda Hanalete and Timothy Musole*

**N**ational Council for Construction (NCC) continues to uphold quality and reliability in Zambia's construction industry through the calibration of laboratory equipment at its Construction Materials Laboratory. This facility plays a critical role in testing construction materials, including concrete, soil, and asphalt, ensuring they meet industry standards for safety and durability.

Calibration is a vital process that ensures laboratory equipment produces accurate and consistent results. This involves aligning testing instruments with established measurement

standards to detect and correct any deviations.

Regular calibration is essential for:

- Material quality assurance
- Structural safety
- Compliance with regulatory requirements

At the NCC Materials Laboratory, various equipment undergoes routine calibration, including:

- Compression testing machines, used to measure concrete strength
- Drying ovens, which extract moisture content from aggregates and soils
- Weighing balances, ensuring precision in sample measurements
- Load cells, which convert force into electronic signals for specialized tests such as

the California Bearing Ratio (CBR) and Indirect Tensile Strength (ITS) tests

To maintain high testing standards, NCC partnered with the Zambia Metrology Agency (ZMA) to conduct a comprehensive calibration exercise. During this process, ZMA technicians evaluated the laboratory equipment, identified inaccuracies, and ensured that all instruments met the required industry tolerance levels. Upon successful calibration, each piece of equipment received a certificate of compliance, further reinforcing the accuracy and reliability of NCC's materials testing processes.

Looking ahead, NCC is implementing several initiatives to enhance accuracy and efficiency in its Construction Materials Laboratory. These include:

- Establishing a routine calibration schedule for continuous compliance
- Providing specialized training for laboratory staff on equipment maintenance and

calibration importance

- Investing in advanced testing technologies to keep up with industry trends and improve service delivery

The successful calibration of NCC's laboratory equipment underscores the Council's dedication to excellence, safety, and quality assurance in Zambia's construction sector. By maintaining highly reliable and accurate materials testing processes, NCC continues to strengthen the credibility of construction standards and support the development of safe



## HON. MILUPI DIRECTS NCC TO MONITOR & BUILD CAPACITY ON THE REHABILITATION OF THE LUSAKA-MONGU ROAD

National Council for Construction (NCC) participated in the groundbreaking ceremony for the rehabilitation of the 87.3-kilometre section of the Lusaka-Mongu Road from Tateyoyo Gate to Katunda/Lukulu Junction in Western Province. The event, held on 7<sup>th</sup> August 2024, saw the presence of key stakeholders, with NCC represented by Board Chairperson Hon. Eng. Vitalis Moonga Mooya.

Minister of Infrastructure, Housing, and Urban Development, Hon. Charles L. Milupi, MP, officiated the ceremony, emphasizing the government's dedication to infrastructure as a



catalyst for economic growth. He directed NCC to ensure strict monitoring of the project to guarantee quality delivery and value for money. "I implore NCC to ensure that quality checks are conducted kilometre by kilometre. This project has been procured at the right price, and we expect timely completion and adherence to high standards," said Hon. Milupi.

### Ensuring Quality and Capacity Building

Hon. Milupi called on China Geo-Engineering Corporation, in joint venture with Chipangano Builders Limited, to uphold uniform quality

across all sections of the road. He stressed that there should be no variance in quality along the stretch and urged NCC to work closely with contractors to ensure compliance.

At the same event, the Ngambela of Barotseland, Mr. Manyando Mukela, emphasized the need for capacity building, particularly for youths in Western Province. He

urged the government to use the project as an opportunity to transfer skills to local communities to create long-term employment opportunities.

### NCC's Role in Monitoring and Compliance

NCC Board Chairperson

Hon. Eng. Mooya assured the Minister and stakeholders that NCC would monitor the project in line with its mandate. He reiterated the council's commitment to ensuring that the project meets the three key pillars of cost, time, and quality.

### Call for Improved Feeder Roads

In his remarks, the Ngambela also urged the government to prioritize feeder roads in the province, recognizing them as critical to rural economic development. He noted that poor roads hinder access to markets, especially for

farmers in areas with high agricultural potential, such as rice fields. He called for improved connectivity to support local economies and enhance access to chiefdoms.

#### Project Completion Timeline and Economic Benefits

The rehabilitation of the Lusaka-Mongu Road is set to be completed within two years. The people of Western Province have welcomed this development, as the road has been in poor condition for over seven years. The project is expected to boost economic activities, create jobs, and improve travel efficiency.

As an added benefit, Hon. Milupi assured Kaoma residents that township roads would also be included in the project scope. He urged contractors to subcontract local firms in Kaoma, ensuring that economic gains from the project trickle down to local businesses.

#### Project Scope and Technical Details

The Road Development Agency (RDA) has contracted China Geo-Engineering Corporation

in partnership with Chipangano Builders Limited, with Bari Zambia Limited serving as the project consultant. The total project cost stands at K1.3 billion (\$50 million), with a 24-month construction period.

The rehabilitation works include:

- Widening of the road formation to accommodate two 3.4-metre lanes
- Two 1.5-metre surfaced shoulders
- 0.5-metre gravel shoulder strips
- Reconstruction of the road surface using asphalt

#### A Road to Economic Transformation

This government-funded project represents a major milestone for Western Province. Once completed, it will reduce travel time, lower vehicle maintenance costs, and enhance trade and business efficiency. With the government's continued investment in infrastructure, Zambia's transport network is set to improve, driving sustainable development in key regions.





## NCC HANDS-ON PRACTICAL COURSES CREATING LIVELIHOODS – NIMROD SIMWINGA

National Council for Construction (NCC) continues to empower individuals through its hands-on practical training programs, equipping them with skills that translate into entrepreneurial opportunities and sustainable livelihoods. One such beneficiary is Zambia Correctional Services (ZCS) Assistant Superintendent, Mr. Nimrod Simwinga, who has praised NCC's courses for their role in transforming lives.

Mr. Simwinga, a bricklayer by profession, attended a tiling course at NCC, and has since



**Empowering lives, brick by brick, NCC transforms skills into livelihoods, paving the way for economic independence and brighter futures**



witnessed how training at the Construction School has enabled many graduates to earn a living through their acquired skills.

He highlighted that ZCS has sponsored several officers, including two women, to enroll in NCC courses. This initiative has not only improved their individual capabilities but has also allowed them to transfer skills to inmates, providing them with practical knowledge to support their reintegration into society.

“The skills we are imparting to the inmates are giving them a livelihood after they have served their sentences. It is equipping them with practical expertise that they can use to earn a living,” said Mr. Simwinga.

On a personal level, he shared how his tiling skills have opened up new opportunities, enabling him to undertake projects in his free time. “A lot of people admire and praise my work, and I am getting many referrals,” he noted, adding that his newfound skill has become a valuable side business outside his official duties.

Seeing the impact of NCC training, Mr. Simwinga has been actively encouraging his colleagues to enroll in hands-on courses. He believes that practical construction skills not only benefit institutions like ZCS but also empower individuals with financial independence and career growth.

“The knowledge I gained has contributed significantly to my professional and personal development. These skills are not just beneficial for the organization but also provide a pathway to self-sufficiency,” he said.

With the demand for skilled artisans growing in Zambia, NCC’s commitment to vocational training continues to offer tangible benefits to individuals, organizations, and communities, fostering economic empowerment and job creation.





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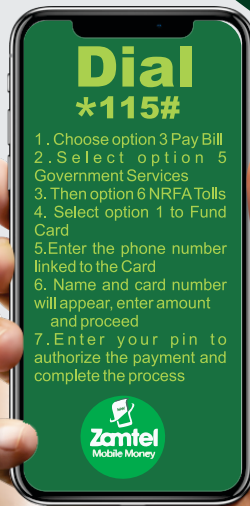
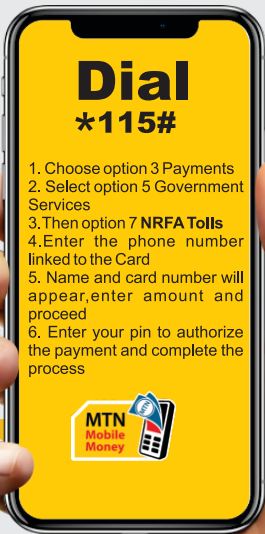


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