MAKERERE UNIVERSITY

COLLEGE OF ENGINEERING, DESIGN, ART AND TECHNOLOGY

SCHOOL OF THE BUILT ENVIRONMENT

DEPARTMENT OF CONSTRUCTION ECONOMICS AND MANAGEMENT

A REPORT ON THE CONSTRUCTION OF DORMITORY, ONE UNIT- THREE CLASSROOM BLOCK AND OTHER FACILITIES AT KISOZI SEED SECONDARY SCHOOL – GOMBA DISTRCT

BY

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2024/HD08/1635U

B Eng CBE (KYU)

A PROJECT REPORT SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT FOR THE AWARD OF POST GRADUATE DIPLOMA IN CONSTRUCTION AND PROJECT MANAGEMENT

JULY 2025

DECLARATION

I, the undersigned do declare that the content of this report is my original work and has not been submitted to any university or higher institution of learning for academic award.

Signature ..... Date 03/07/2025

APPROVAL

This report has been submitted with the approval of the undersigned supervisor:

Signature ..... Date 03/07/2025

Dr. Julius Semanda,
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Kampala.

DEDICATION

This report is dedicated to all colleagues who are tirelessly endeavoring to make the construction a much better industry in Uganda and World over. I likewise dedicate it to my family for their kind support in this academic journey.

ACKNOWLEDGEMENT

Special thanks go to the Almighty God for enabling me reach this fundamental stage of my academic life.

Heartfelt and sincere gratitude goes to all those who contributed to the success in my education journey especially my employers for without their effort and guidance, this would not have been possible.

My Parents, I am forever grateful to you for nurturing me into a responsible human being and standing with me through thick and thin. I am indebted to you.

ABBREVIATIONS/ACRONYMS

BOQ	Bill of Quantities
CC	Centre to Centre
CEBDE	Commander Engineer's Brigade
DLG	District Local Government
DLP	Defects Liability Period
DPM	Damp Proof Membrane
EBDE	Engineers' Brigade
ENG	Engineer
KG	Kilogram
MM	Millimeters
MODVA	Ministry of Defence and Veteran Affairs
MOES	Ministry of Education and Sports
PM	Project Manager
PPDA	Public Procurement and Disposal of Assets Authority
PS	Permanent Secretary
QS	Quantity Surveyor
SM	Square meters
UNBS	Uganda National Bureau of Statistic
UPDF	Uganda Peoples' Defence Forces

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ABSTRACT

The construction of a dormitory, one unit three classroom blocks and other facilities is aimed at providing more accommodation and reducing the number of students to classroom ratio at Kisozi Seed Secondary School. Other expected outcomes are improved access to inclusive and quality education services for the surrounding communities in Gomba District, expand and equip capacity of infrastructure.

The project included the following details; project name, purpose of the project, main objective of the project, the stakeholders involved, cost and estimated project duration.

Management challenged identified and discussed such as employment of the non-skilled youth from the surrounding communities at the project, environmental and social safeguards, noise interferences during learning sessions. Management decisions taken, discussed and lessons learnt.

Finally, conclusion drawn and appropriate recommendations made from management issues discussed. Rhen relevant document such as working drawings, BOQs, and photographs taken site to show progress.

CHAPTER ONE: INTRODUCTION

1. Background.

The Project was earmarked as one of the government's commitments to improve the quality standards of education in the country. Kisozi Seed Secondary School as a beneficiary is located in Gomba District and was given priority because it is the only secondary school serving a big number of students leaving around seven primary schools within the that locality. The identified urgent requirements for implementation were majorly insufficient space for accommodation and classroom facilities since it is a mixed boarding and day school.

Therefore, the project for implementation included a dormitory which was planned to accommodate 120 (one hundred and twenty) students upon completion and the students were meant to sleep on double decker beds.

The dormitory also would have a separate room for the matron and an area designated for ironing clothes

The classroom block has 03No (Three) rooms with a sitting capacity of Fifty – five students.

The total built-up area is 201.95 m^2 for the dormitory and the classroom block was 243.97 m^2 once completed.

The construction of the facilities was funded by the Government of the Republic of Uganda supervised by Ministry of Education, and Sports as the client.

1.1 Purpose

The construction of a dormitory, one unit three-unit classroom block and other facilities at Kisozi Seed Secondary school was aimed at provision of accommodation for boarding students, reducing the ratio of the student to classroom and improving the security of at the school. It is assumed that this would improve performance, reduction of school dropout rate and increase enrollment of students in post primary level hence improved education standards in the district.

1.2 Project details

Table 1-1: Showing project details

1	Project Name	Construction of a dormitory, one unit three classroom blocks and other facilities at Kisozi Seed Secondary School
2	Client	Ministry of Education and Sports
3	Supervisor	Principal Engineer Ministry of Education and Sports
4	Contractor	UPDF – Engineers' Bridge P.O. Box 310, LUGAZI
5	Site hand over date	13 /April / 2023
6	Commencement Date	19 /April / 2023
7	Expected completion date	30 / October / 2023
8	Project cost	541,953,173 VAT Excluded
9	DLP	6 months

1.3 Project stakeholders

Table 1-2: Showing project stakeholders

Client	MoES
User	Kisozi Seed Secondary School - Gomba P.O. Box 134, MPIGI
Funding agency	Government of the Republic of Uganda
Implementing agency	MODVA
Contractor	UPDF – EBDE, P.O. Box 310, LUGAZI
Others	Gomba DLG, Community of Kisozi

1.4 Main objective of the project

To improve access to inclusive and quality education services in the communities of Gomba District.

1.4.1 Specific objectives of the project.

a) To figure out the procedures followed during the procurement process for the contractor and construction of the project.

b) To highlight the challenges faced during project implementation and how they were addressed

c) To analyze the management of cost, time and quality during the construction stages

1.4.2 The author's role in the project.

The author basically had one major role on the project. He was employed as a site engineer by the implementing agency which was Uganda Peoples' Defence Forces - Engineering Brigade (UPDF EBDE). The key roles of the author during the execution of the project included;

a) Supervision of works ensuring adherence to correct construction methodologies.

b) Organisation of site meetings and later prepared minutes.

c) Preparation of progress reports for easy tracking of project performance

CHAPTER TWO: PROCUREMENT PROCESS

2.0 Procurement of the contractor.

2.1 Selection of the Procurement Method.

Sole Sourcing/Direct procurement was adopted according to this project. The method limited the request for tenders since it was Government to Government contracting and with a known reputation of the contractor in the name of Uganda Peoples' Defence Forces Engineering Brigade under Ministry of Defence and Veteran Affairs. Although considered as one of the procurement methods, it involves award of contract to a single contractor without competitive bidding process but has it merits and demerits as well.

CHAPTER THREE: SUPERVISION AND KEY MANAGEMENT DECISIONS

3.0 Supervision of Construction Works

3.1 Project Scope

The project consisted of the construction of structures for dormitory, one unit three classroom block and other facilities. The construction works was divided into first and second phase works. The first phase involved tasks like general site clearance with its related activities, substructure and super structure construction works with different activities and operations involved such as foundation, walling, roofing works ie , internal and external wall finishes plus electrical and mechanical piping works. The walls were to be erected until the wall plate level and then erection of the structural roof i.e.. the tie beams, rafters, purlins and struts and ties were to commence before placement of the iron sheets. Electrical and Mechanical works involved first and second fix which commenced immediately after roofing of the structure. These works were done in three phases. The first phases involved the placement of the conduits and outlets for the sockets and switches. The second phase. involved provision of wiring through the conduits to the different locations having the accessories/fittings. The third phase was final installation of the fittings.

3.2 Work Supervision.

There was strict supervision by designated leaders at different levels daily allotted activities. Supervision was carried to ensure that the right quality of the works and to limit the likely occurrence of accidents at site. This helped to ensure that the project was delivered within the agreed time frame and the budget.

The personnel responsible for the supervision of the works included site engineer, the Clerk of Works on this project responsible who made sure that the construction was done as per the specifications. Several tools and techniques were adopted that helped in monitoring performance measures of quality, cost control and time on this project.

3.3 Site Management and Layout

Planning the site layout was necessary for the construction project. The primary goal of planning a proper construction site layout was to produce and maximize working environment efficiency, safe construction activities and maintain enough working space at site. The following factors were considered during the planning phase of the site layout. These include; Security, space available, Access to the site, storage of materials and Temporary services such as water, drainage and power.

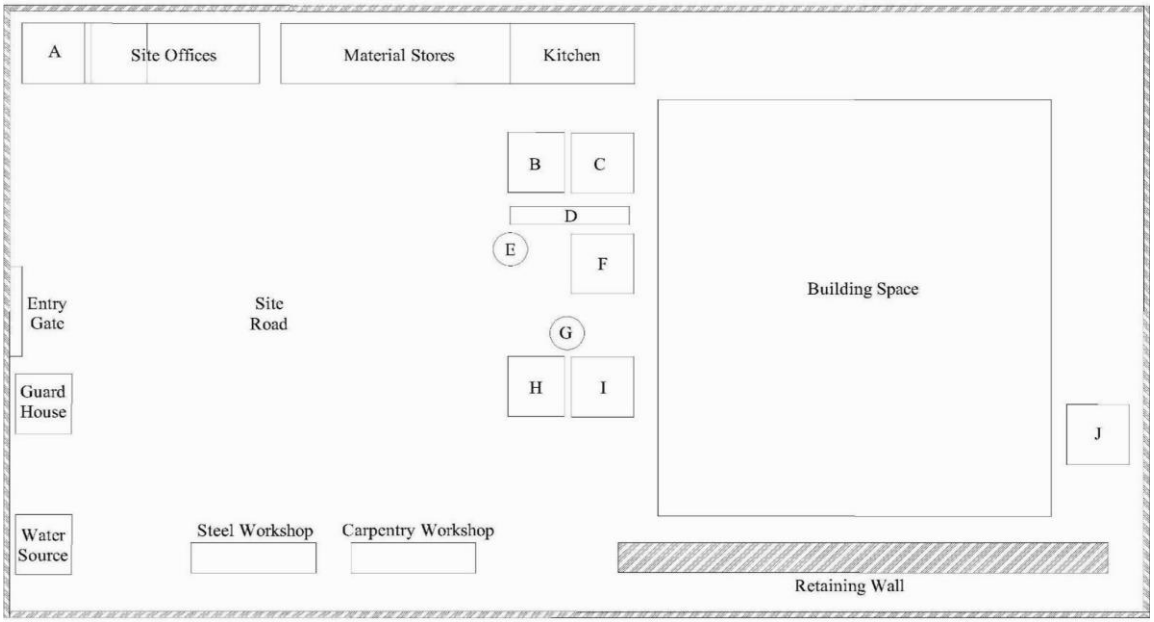

Figure 3-1: Showing the site Layout

Key

A – Toilets, B – Rubble Storage, C – Sand Storage, D – Power Source. E – Water bath for curing concrete cubes, F – Coarse aggregates. G – Water drum, H – Hardcore stock pile. I – Sand Storage and J – Diesel Concrete Mixer.

3.3 Issues that require management decisions

During the project implementation, a number of issues that required management decisions came up such as;

a) Employment of non-skilled youth. The community pushed forward the issue of employing the young people to the attention of the management how the contractor had deliberately ignored to employ the locals at site
b) Contractor's intention to ignore environmental and social safeguards
c) Site hoarding. The community was equally concerned about the learning environment while construction was taking place.

3.4 Key management decisions taken

a) Management decided that employment of the non-skilled local workers would depend on existing gap and directed the contractor to implement that decision accordingly.

b) Environmental and social issues. The contactor was directed to ensure that at 100 trees be planted around the school as environmental mitigation measure but also sensitise the school community about good social practices.
c) Management observed that since it was direct labour employed at site and no contingence funds were provided for in the BOQ any attempt to carryout hoarding work at site would affect other scope items. The contractor was encouraged to deploy equipment which produce less noise in order not interfere with the learning sessions.

3.5 Quality Assurance.

Quality Control and Quality Assurance was carried out to ensure that the expected quality was achieved. The Clerk of Works together with the General foreman and gang leaders were tasked with the duty of making sure that the quality of works was up to the agreed specifications and requirements. Different techniques were employed by the contractor as well as the Clerk of Works to ensure that the right quality was achieved.

The contractor submitted material samples as well the material test results to the Clerk of Works for approval before use. Through material testing, they were able to judge the reliability of the materials to ascertain whether they can be used for engineering.

The Clerk of Works regularly took site progress photos and supervised the works to ensure that quality was not compromised. Supervision was done to ensure that the accepted building materials, as well as the recommended material mixes, were being used.

There was proper arrangement the storage of some materials, for example, cement was placed on wooden stacks to avoid contact with the ground. To avoid overstocking of materials on-site, the site engineer opted to have an organized material schedule and delivery was for required quantities. Daily stock taking helped to handle material requisitions.

There was good housekeeping maintained daily to minimize accidents and not to compromise the quality of work. It was a requirement for the site to be cleaned daily.

3.5 Time Management.

The client gave Six months as contract period within which the project was to be delivered successfully since all project funds were released to MODVA. Because of a proper Work plan designed by the site engineer, all activities were properly scheduled and executed which led to timely completion of the project.

3.6 Cost Management.

Cost control is the practice of managing and/ or reducing business expenses. The relevance of cost control is to avoid cost overruns, attain value for money and effectively utilize resources. Cost control techniques and measures should be used at all stages of the project i.e., conception, design, construction and during the life of the structure to ensure that the project is delivered within the set budget. Cost management on site was ensured through the following ways;

a) Through using detailed work programs. The contractor used schedules to monitor progress and financial performance. It was a good method since physical progress could be measured and related to cost.
b) Using a checklist, during site inspection, the contractor and the client were able to quickly harmonise issues of financial performance throughout the entire construction period and thus work was never halted due to any financial issues.
c) Through having site meetings. Meetings were periodically held to review the progress of work and compare to the monetary allocations.
d) Recordkeeping. All the activities carried out were documented to enable early detection of any deviations from the set standards.
e) Periodic site meetings were held to review the progress of works in relation to the money allocated.
f) Evaluation of works carried out. It included quantification of works and comparing with the costs in the bill of quantities. Inspection was also used to evaluate works and this helped to ascertain that the progress of work was on the right track.

3.6 Overall Project Management.

3.6.1 Site Organogram

It was crucial that the project teams were structured properly from the outset, and the team members were selected carefully you give the project the best prospect of success. From the site Organogram, the roles, responsibilities, and reporting mechanism were clearly defined.

This helped in project management as the roles and responsibilities were identified, what actions individuals needed to take, whether there are any gaps, and what additional resources needed to complete the project. The main function of the site organizational structure was to ensure that the project is completed within the agreed contract time, with the right quality and within budget.

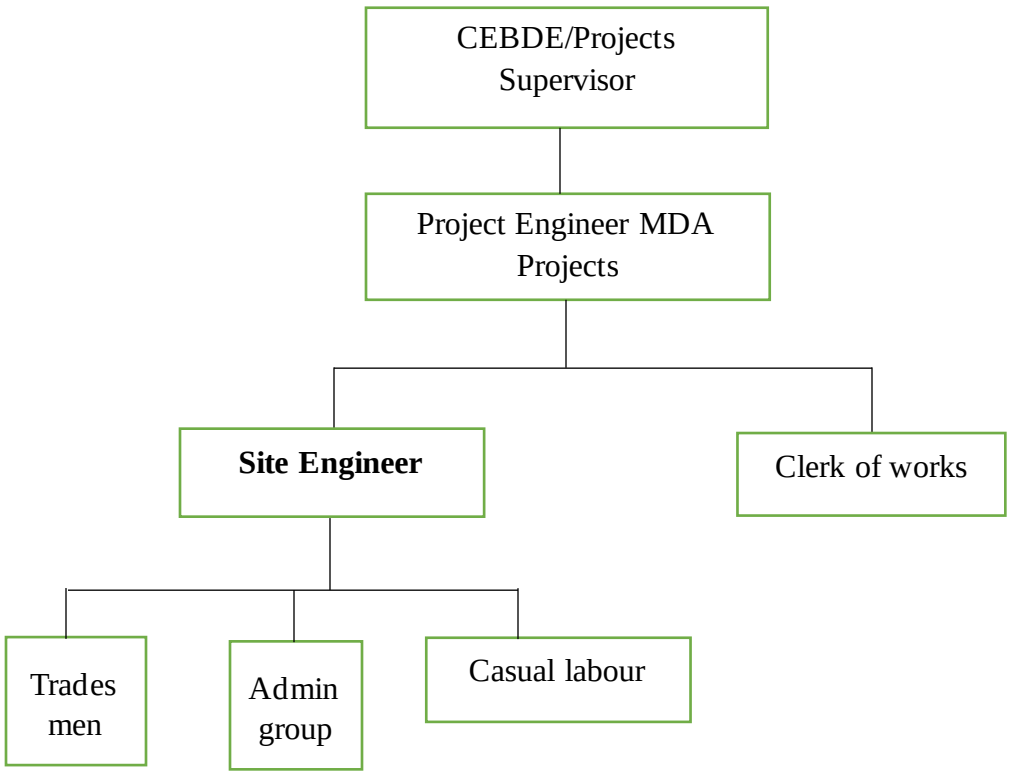

Figure 3-2: Showing the site Organisation structure

3.6.2 Site Meetings

Site Meetings was an important part of successful stakeholder management strategy. Regular site meetings were conducted between different stakeholders to assess progress of the project which also became a good communication tool and gave a shared sense of purpose that led to successful timely project completion.

3.7 Contract Documentation.

These documents spelt out the obligations and responsibilities of the respective parties that were involved in the project with detailed description of the works. MoES and MODVA entered a contractual obligation by appending signatures on the contract documents before project commencement. These documents included;

- Conditions of Contract. - Defined the terms under which the work was to be undertaken, the relationship between the client, project manager and contractor, the duties of the project manager and contractor, and the terms of payment.

- Working drawings- These included the architectural drawings, the structural drawings and the building service engineering drawings.
- Bills of Quantities- This document consisted of a schedule of items of work to be carried out under the contract with quantities entered against each item, prepared in accordance with the Standard Method of Measurement of Building Works.
- Specifications- These simply amplified the information given in the contract drawings and bill of quantities. It described in detail the work to be executed under the contract and nature and quality of materials, components and workmanship

Whenever discrepancies in the project scope arose, the contract documents contracts such as working drawings and Bills of Quantities would be revisited in order to harmonise any anomalies.

3.8 Variations

Variations arise as a result of change in agreed scope of works with in the contract documents which is usually in form of an addition, substitution or complete omission. During the implantation of this project, the site conditions especially the sloping terrain affected the desired foundation type hence the Clerk of works had to issue the variation instructions in consultation with project supervisors from MoES.

CHAPTER FOUR: CHALLENGES, CONCLUSION AND RECOMMENDATION.

4.0 Challenges, Conclusion, and Recommendations.

4.1 Challenges

. Besides that, like most construction experience setbacks some few challenges were encountered during the project implementation;

a) Being a cattle corridal, the place experiences a long dry period with limited amount of rainfall. So, water for construction works was a great challenge were a water bowzer had to move a long distance to fetch water.
b) Since quality assurance was key, all industrial materials had to be delivered from Kamplala which was risky and time delaying as well but with proper material scheduling, no shortages were experienced at site.
c) Challenge of poor-quality local material provide by the community. The contractor was requested to buy local materials from the community of which some of them were of poor quality and when rejected angered the community.

4.2 Conclusion

In conclusion, the project goals were achieved successfully within the given constraints of scope, time and cost.

a) With the application of various project management techniques such as cost management, time management and quality assurance and control at the site. throughout the implementation period, a quality project was delivered within the estimated budget and time frame
b) The direct procurement procedure was conducted since it was Government to Government. This helped to reduce on the cost and time of procurement process.
c) There was good stakeholder coordination and management that led to the success of the project

4.3 Lessons learnt

Some lessons were learnt during the construction of this project. These lessons were gathered from mainly two stages of the project that is the preconstruction stage and the construction stage.

a) During the pre-construction stage, I noticed that it always good to conduct site visits in order to assess the site conditions prior to moving any construction equipment to avoid employing a wrong one for the job.

b) Besides that, I also learnt that material testing must be an important aspect of quality control and assurance. To achieve the right quality and achieve a sound strong structure.

4.4 Recommendation.

a) The Contractors should ensure that all workers wear proper personal protective equipment when executing any task on site. Having the proper protective wear guarantees a certain degree of safety when executing the activities.
b) The PPDA should put more emphasis on assessing construction schedules during tender evaluation. This will ensure that the time constraint of project management is given the same attention as the cost and quality constraints.
c) Value engineering should be applied in the construction process since it has enormous benefits for developers. The following aspects should be given the uttermost attention namely; cost reduction, value addition, life cycle analysis and maintainability.
d) The project managers should also ensure that the contractor maintains the same site management team as approved before the awarding of the contract.
e) Project managers should engage quantity surveyors on design teams just after preparation of the project initiation documents. Quantity surveyors should take it upon themselves to carry out market research on material rates prior to preparation of preliminary cost estimates. This will ensure the rates provided by contractors are more realistic during the bidding and evaluation process because the client's estimates cost would be based on the prevailing market rates.
f) For future projects there should be a training for project management team for easy supervision and monitoring.
g) The community should use good quality materials to make good bricks.

REFERENCES

Contact Documents for the project.

PPDA Act 2014 (Amended).

APPENDICES/ ANNEXES.

a) Annex 1: Work Schedule

Work Schedule for the Construction of a dormitory, one unit three classroom block and other facilities at Kisozi Seed Secondary School

	FIRST MONTH				SECOND MONTH				THIRD MONTH				FOURTH MONTH				FIFTH MONTH				SIXTH MONTH			
Activity	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24
Moblisation																								
Site clearance																								
Construction of temporary structures																								
Setting out																								
Excavation of foundation																								
Concrete footing and blinding strip foundation																								
Plinth wall																								
Backfill, hardcore and blinding																								
Mass concrete slab																								
Excavation of splash																								
Walling and columns																								
Reinforced beam and beam fill																								
Roof structure																								
Roof covering																								
Ceiling fixing																								
M&E first fix																								
Doors & Window fitting																								
Lightening protection																								
External & internal plaster finishes																								
Floor finishes																								
Painting & glazing																								
External works																								
Tree planting																								
Grassing and maintenance up to first cutting																								
Site cleaning & handover																								

b) Annex 2: Completion certificate

KISOZI SEED SECONDARY SCHOOL - GOMBA

P.O Box 134, Mpigi - Uganda

The Commander

Engineering Brigade

P.O Box 310

LUGAZI, UGANDA

COMPLETION CERTIFICATE

Date of certificate: 21st November, 2023

Project works: PROPOSED CONSTRUCTIOB WORKS AT KISOZI SEED SECONDARY SCHOOL IN GOMBA DISTRICT

Scope of works: - A 3 CLASS ROOM BLOCK
- BOYS' DORMITORY
- 5 STANCE VIP LINED PIT LATRINE
- 8 UNIT OPEN SHOWERS
- A CHAIN- LINK FENCE WITH A GATE

Project value: **541,953,173 (Five Hundred and Forty-One Million Nine Hundred Fifty-Three Thousand One Hundred and Seventy-Three Shillings)**

Contractor: UPDF Engineering Brigade

Completion date: 02nd October, 2023

KISOZI SEED SECONDARY SCHOOL 21 NOV 2023 HEADTEACHER

.....

BARIGYE ROBERT
Headteacher

Received 22.11.23

"Determination Leads to Success"

c) Annex 2: Working drawings

APPENDICIES: Site photographs

Photograph showing one unit three classroom block foundation excavation

Photograph showing column footing of the one unit three classroom block facility

Photographs showing the one unit three classroom block plinth wall construction

Photograph showing a ground beam and hardcore filling

Photograph showing the slab of the one unit three classroom block facility

Photographs of superstructure walling up to wall plate

Photograph showing roofing of the one unit three classroom block facility

Roof covering for the one unit three classroom block facility

Photograph showing the finished one unit three classroom block facility

Photographs showing the plinth wall of the dormitory block

Photographs showing roofing and roof covering for the dormitory block

Photographs showing plaster finish on the wall on the dormitory block

Photographs showing a chain link fence and a gate for security purposes

Photograph showing an Eight-unit shower block