# HERITAGE IMPACT ASSESSMENT REPORT

# FOR THE PROPOSED RENOVATION OF THE LEMANA COLLEGE, ELIM, LIMPOPO PROVINCE

Proposed restoration of the historic Lemana College to serve as a 1000 pupil school

Prepared By:

Prepared For:

Limpopo Provincial Government

**Credit Sheet**

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Statement of Independence

As the duly appointed representative of G&A Heritage, I Stephan Gaigher, hereby confirm my independence as a specialist and declare that neither I nor G&A Heritage have any interests, be it business or otherwise, in any proposed activity, application or appeal in respect of which the Environmental Consultant was appointed as Environmental Assessment Practitioner, other than fair remuneration for work performed on this project.

Signed off by S. Gaigher

**Site name and location:** Proposed rehabilitation of the historic Lemana College for use as a Secondary School for 1000 learners, Elim, Limpopo Province.

**Municipal Area:** Vhembe District Municipality.

**Developer:** Department of Public Works, Limpopo Provincial Government

**Consultant:** G&A Heritage, PO Box 522, Louis Trichardt, 0920, South Africa. 38A Vorster St. Louis Trichardt, 0920

**Date of Report:** 23 August 2013

# Executive Summary

The purpose of the executive summary is to distil the information contained in the report into a format that can be used to give specific results quickly and facilitate management decisions. It is not the purpose of the management summary to repeat in shortened format all the information contained in the report, but rather to give a statement of results for decision making purposes.

**Findings**
The Lemana College original buildings are all protected under the NHRA 25 of 1999. There are several newer buildings within the campus grounds that are however not protected and which detract from the overall heritage value of the site. The project proposed the upgrading of the historic buildings to come inline with modern teaching requirements while at the same time retaining their historic character. It further proposed to demolish some of the newer buildings and to modify the remaining modern buildings to reflect the architectural language of the historic structures and in this way to increase the heritage value of the site as a whole. Additional to the protection of the NHRA the Lemana College site has significant local and national value both in terms of education as well as in the history of missionary work in the Limpopo Province. Although SAHRA erected a memorial structure on site in 2000, no records could be found of on the SAHRIS website of it being registered as a provincial or national heritage site.

**Recommendations**
It is recommended that the whole Lemana College campus be subjected to photographic, video and architectural drawing documentation as well as periodic monitoring of the development during the construction phase for a period of twelve months. Based on this information a permit for the proposed activities will be sought from the Build Environment Committee of the Limpopo Heritage Resources Agency (LiHRA).

**Fatal Flaws**
No fatal flaws were identified.

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## List of Abbreviations

| | |
|---|---|
| Bp | Before Present |
| EIA | Early Iron Age |
| ESA | Early Stone Age |
| GPS | Geographic Positioning System |
| HIA | Heritage Impact Assessment |
| LIA | Late Iron Age |
| LSA | Late Stone Age |
| MYA | Million Years Ago |
| MSA | Middle Stone Age |
| NHRA | National Heritage Resources Act no 22 of 1999 |
| SAHRA | South African Heritage Resource Agency |
| S&EIR | Scoping & Environmental Impact Reporting |
| WGS 84 | World Geodetic System for 1984 |

# Heritage Impact Assessment Report for the Proposed Restoration of the Lemana College

## 1.Introduction

### 1.1 Legislation and methodology

G&A Heritage was contacted by ELARC Architects and appointed by the Limpopo Provincial Government to undertake a Heritage Impact Assessment for the proposed renovation of the historic Lemana College at Elim in the Limpopo Province. Section 38(1) of the South African Heritage Resources Act (25 of 1999) requires that a heritage study is undertaken for:

*(a) construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;*
*(b) construction of a bridge or similar structure exceeding 50 m in length; and*
*(c) any development, or other activity which will change the character of an area of land, or water –*
*(1) exceeding 10 000 $m^2$ in extent;*
*(2) involving three or more existing erven or subdivisions thereof; or*
*(3) involving three or more erven, or subdivisions thereof, which have been consolidated within the past five years; or*
*(d) the costs of which will exceed a sum set in terms of regulations; or*
*(e) any other category of development provided for in regulations.*

While the above describes the parameters of developments that fall under this Act., Section 38 (8) of the NHRA is applicable to this development. This section states that;

(8) *The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent.*

In regards to a development such as this that falls under Section 38 (8) of the NHRA, the requirements of Section 38 (3) applies to the subsequent reporting, stating that;

*(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2) (a): Provided that the following must be included:*
*(a) The identification and mapping of all heritage resources in the area affected;*
*(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6 (2) or prescribed under section 7;*

*(c) an assessment of the impact of the development on such heritage resources;*
*(d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;*
*(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;*
*(f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and*
*(g) plans for mitigation of any adverse effects during and after the completion of the proposed development.*

A heritage impact assessment is not limited to archaeological artefacts, historical buildings and graves. It is far more encompassing and includes intangible and invisible resources such as places, oral traditions and rituals. A heritage resource is defined as any place or object of cultural significance i.e. of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This includes the following:

(a) places, buildings, structures and equipment;
(b) places to which oral traditions are attached or which are associated with living heritage;
(c) historical settlements and townscapes;
(d) landscapes and natural features;
(e) geological sites of scientific or cultural importance;
(f) archaeological and paleontological sites;
(g) graves and burial grounds, including –
(1) ancestral graves,
(2) royal graves and graves of traditional leaders,
(3) graves of victims of conflict (iv) graves of important individuals,
(4) historical graves and cemeteries older than 60 years, and
(5) other human remains which are not covered under the Human Tissues Act, 1983 (Act No.65 of 1983 as amended);
(h) movable objects, including ;
(1) objects recovered from the soil or waters of South Africa including archaeological and paleontological objects and material, meteorites and rare geological specimens;
(2) ethnographic art and objects;
(3) military objects;
(4) objects of decorative art;
(5) objects of fine art;
(6) objects of scientific or technological interest;
(7) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings; and
(8) any other prescribed categories, but excluding any object made by a living person;
(i) battlefields;
(j) traditional building techniques.

A '**place**' is defined as:
(a) A site, area or region;
(b) A building or other structure (which may include equipment, furniture, fittings and articles associated with or connected with such building or other structure);
(c) a group of buildings or other structures (which may include equipment, furniture, fittings and articles associated with or connected with such group of buildings or other structures);

and (d) an open space, including a public square, street or park; and in relation to the management of a place, includes the immediate surroundings of a place.

'**Structures**' means any building, works, device, or other facility made by people and which is fixed to land and any fixtures, fittings and equipment associated therewith older than 60 years.

'Archaeological' means:
(a) material remains resulting from human activity which are in a state of disuse and are in or on land and are older than 100 years, including artefacts, human and hominid remains and artificial features and structures;
(b) rock art, being a form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and is older than 100 years including any area within 10 m of such representation; and
(c) wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land or in the maritime cultural zone referred to in section 5 of the Maritime Zones Act 1994 (Act 15 of 1994), and any cargo, debris or artefacts found or associated therewith, which are older than 60 years or which in terms of national legislation are considered to be worthy of conservation;
(d) features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found.

**'Paleontological'** means any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.

**'Grave'** means a place of interment and includes the contents, headstone or other marker of and any other structures on or associated with such place. The South African Heritage Resources Agency (SAHRA) will only issue a permit for the alteration of a grave if it is satisfied that every reasonable effort has been made to contact and obtain permission from the families concerned.

The removal of graves is subject to the following procedures as outlined by the SAHRA:

- Notification of the impending removals (using English, Afrikaans and local language media and notices at the grave site);
- Consultation with individuals or communities related or known to the deceased;
- Satisfactory arrangements for the curation of human remains and / or headstones in a museum, where applicable;
- Procurement of a permit from the SAHRA;
- Appropriate arrangements for the exhumation (preferably by a suitably trained archaeologist) and re-interment (sometimes by a registered undertaker, in a formally proclaimed cemetery);
- Observation of rituals or ceremonies required by the families.

## 1.2 Lemana College in terms of the above legislation

It is important to evaluate the protections provided by the NHRA to the Lemana College as a site of heritage value, however the legislation does also make provision for certain management guidelines in terms of the use of sites of outstanding heritage value. It is important that we look at the relevance of these as it pertains to the Lemana site.

### 1.2.1 Section 5 (5) (6) (7) a-f

This section of the NHRA states the following;

*(5) Heritage resources contribute significantly to research, education and tourism and they must be developed and presented for these purposes in a way that ensures dignity and respect for cultural values.*

*(6) Policy, administrative practice and legislation must promote the integration of heritage resources conservation in urban and rural planning and social and economic development.*

*(7) The identification, assessment and management of the heritage resources of South Africa must-*

*(a) take account of all relevant cultural values and indigenous knowledge systems;*
*(b) take account of material or cultural heritage value and involve the least possible alteration or loss of it;*
*(c) promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs;*
*(d) contribute to social and economic development;*
*(e) safeguard the options of present and future generations; and*
*(f) be fully researched, documented and recorded.*

The NHRA therefore not only provides for the protection of sites such as Lemana College, it also encourages the active preservation through use of such resources. In this way the Lemana project falls neatly within these categories. The implication of this is the following;

***Section 5 (5)***
The Lemana College restoration will contribute to research through the documentation and preservation of the buildings and their cultural historic setting. The restored college and components such as the table of remembrance will add greatly to the value of tourist's experience when visiting the site. Probably the largest contribution of this project will be to education as the end result is a secondary school for 1000 pupils. All the above will uphold the dignity and respect for the cultural character of this site by keeping to the historic design of the buildings.

***Section 5 (6)***
The design principals inherent in the historic nature of this site will be reflected in the rural planning of the new site as is evident from the design of the new structures conforming to the historic character of the school site as a unit.

***Section 5 (7) a-f***

***(a)*** The design and implementation phase of this project is uniquely guided by the cultural values inherent in the school site as an entity. Where possible indigenous knowledge is applied in places such as stone terraces and gardening husbandry.
***(b)*** The design of the new proposed buildings and the alterations to exiting structures is all geared towards celebrating the overall design character of the site. Where newer buildings (added at a later stage) does not reflect this, their design will be altered and facades rendered in such a way as to conform to the general sense of place.
***(c)*** The use of the site as a school (it's intended purpose) is the best way of celebrating the character of the site while at the same time promoting access and enjoyment from the site. Designs and alterations will be strictly managed by the preservation requirements of the site and access and layout will promote

interaction while at the same time ensuring the preservation and protection of more sensitive areas of the site.

***(d)*** The building of the school will greatly contribute to social and economic upliftment in an area of historic neglect.

***(e)*** The development will most definitely safeguard the options of future generations as all developments proposed will be totally reversible.

***(f)*** The management of the heritage component of the project will ensure that the site is not only fully documented and recorded but that it will also be monitored for a period of no less than 24 months to ensure that the development does not trigger some unforeseen impact.

From the above it is clear that the approach outlined for the Lemana College project is not only allowable under the requirements of the NHRA, but the Act also actively encourages this type of development and responsible use of heritage resources.

The cultural and natural significance for the Estate, together with the individual demarcated zones, have been determined following the guidelines as set out by the South African National Heritage Resources Act (NHRA) 25 of 1999 (which has incorporated aspects re significance as stated in the Australia ICOMOS Burra Charter, 1999). In the Australia Burra Charter cultural significance means "aesthetic, historic, scientific or social value for past, present or future generations". According to the NHRA 25 (1999) cultural significance similarly means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. The rating of significance defined below includes these concepts.

In terms of the (NHRA) 25 (1999) Chapter 1:
3 (3) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the national Estate if it has cultural significance or other special value because of:

(a) Its importance in the community, or pattern of South Africa's history;
(b) Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
(c) Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
(d) Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
(e) Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
(f) Its importance in demonstrating a high degree of creative or technical achievement at a particular period;
(g) Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
(h) Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
(i) Sites of significance relating to the history of slavery in South Africa.

The entire Lemana School cultural landscape is weighed against the criteria above and a draft statement of significance is developed for use in future deliberations with stakeholders and planning purposes.

| **LEVEL OF CULTURAL SIGNIFICANCE OF THE LEMANA HIGH SCHOOL SITE** | | |
|---|---|---|
| **NHRA Category** | **Significance** | **Rating** |
| **(a)** | Lemana College is an important node in the teaching community in the Limpopo Province and is strongly associated with the | **High** |

| | | |
|---|---|---|
| | Missionary history of Southern Africa. | |
| **(b)** | The Lemana College contains a high level of rare cultural content. | **High** |
| **(c)** | The cultural resources at Lemana college can add significantly to the understanding of the missionary history of South Africa as well as the changes that Black education has undergone in the last century and the role missionaries played in this. | |
| **(d)** | The Lemana college buildings are a unique example of missionary buildings and facilities. | **High** |
| **(e)** | The site especially due to its placement has medium aesthetic value. | **Medium** |
| **(f)** | The buildings and engineering is a good example of the technical achievements of a rural 1920's community in the interior of South Africa. | **High** |
| **Mean Cultural Significance** | | **High** |

## 1.3 Assumptions and Limitations

The limitations and assumptions associated with this study are as follows;

- The site was evaluated by means of description of the cultural landscape and analysis of written sources and available databases.
- It was assumed that the layouts and data provided by Elarc Architects were reliable and accurate.
- We assumed that the public participation process performed as part of the Scoping process would be sufficiently encompassing not to be repeated in the Heritage Impact Assessment.

Table 1. Impacts on the NHRA Sections

| Act | Section | Description | Possible Impact | Action |
|---|---|---|---|---|
| National Heritage Resources Act (NHRA) | 34 | Preservation of buildings older than 60 years | Yes | Documentation and management |
| | 35 | Archaeological, paleontological and meteor sites | None | No |
| | 36 | Graves and burial sites | None | No |
| | 37 | Protection of public monuments | ? | ? |
| | 38 | Does activity trigger a HIA? | Yes | HIA |

Table 2. NHRA Triggers

| Action Trigger | Yes/No | Description |
|---|---|---|
| Construction of a road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length. | Yes | Access road to site |
| Construction of a bridge or similar structure exceeding 50m in length. | No | N/A |
| Development exceeding 5000 $m^2$ | Yes | Lemana College Restoration |
| Development involving more than 3 erven or sub | No | N/A |

| | | |
|---|---|---|
| divisions | | |
| Development involving more than 3 erven or sub divisions that have been consolidated in the past 5 years | No | N/A |
| Re-zoning of site exceeding 10 000 $m^2$ | No | N/A |
| Any other development category, public open space, squares, parks or recreational grounds | No | N/A |

# 2. Background Information
# Proposed Lemana College Restoration

### 2.1 Project Description

Existing buildings will be renovated and new facilities will be added to meet the requirements to facilitate a Secondary School for 1 000 learners.
The development proposal is divided into seven zones each with it's own development parameters and goals. The development of new classrooms and the restoration of existing buildings along historic lines will form the basis of the work proposed. Along with these will also be landscaping, some areas of remembrance and access paths and roads. The existing services infrastructure will also be improved to keep abreast of the new development.

This HIA report is accompanied by a development proposal report, which outlines specific actions proposed per zone and therefore these will not be reproduced here.

**Existing buildings:**
Repairs and renovation will be applicable to all the existing buildings except for the demolition of the ablution facilities and a small store, which are structurally unsafe.

**New Buildings:**
The following new buildings are planned:
- New Gathering Hall
- Two new Nutrition Centres
- Administration Block
- 15 New Class Rooms
- Two new Ablution Blocks

### 2.1. **Site Location**

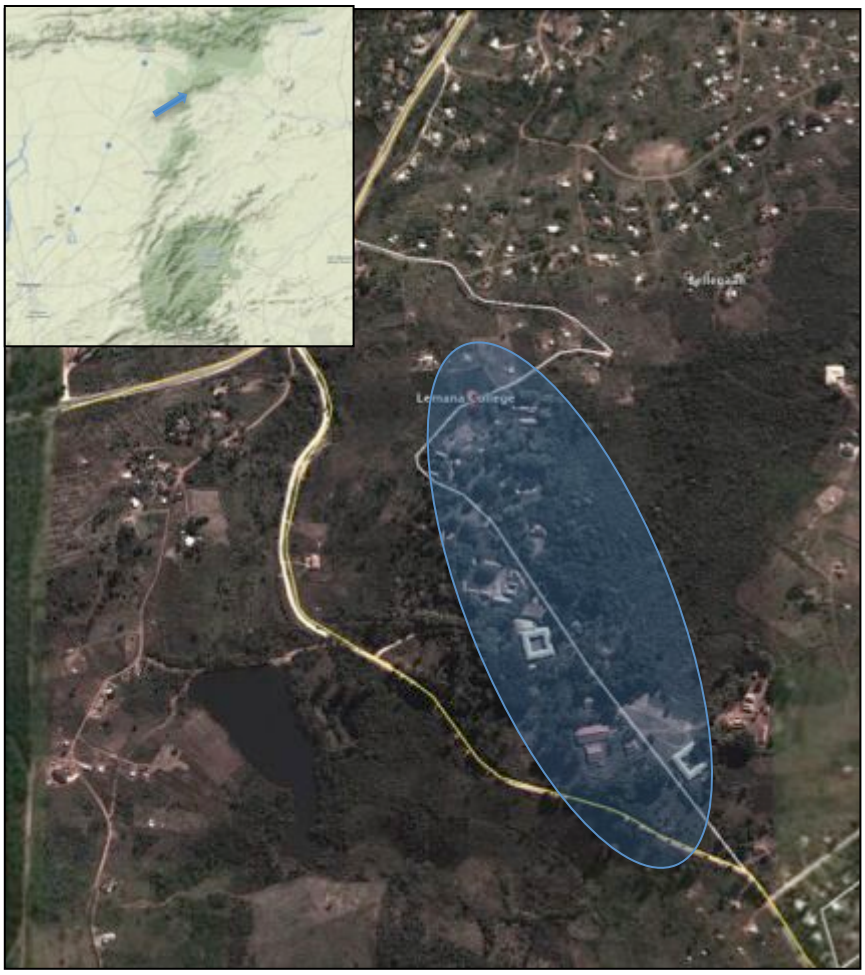


Figure 1. Location of Lemana College

The Lemana College site is located approximately 18km east of the town of Louis Trichardt. It is 2km south of the town of Elim in the Limpopo Province, Vhembe district municipality.

# 3.Methodology

This study is focussed on the historic Lemana College and aims to determine the extent of possible impacts that the restoration of this site as well as the addition of new buildings for a proposed 1000 pupil school will have on the existing historic structures. It can be seen as a second phase investigations since the historic importance of the Lemana College has already been determined and this study aims at managing the impacts of the proposed developments within these known parameters. The upgrading and restoration of the school will impact on the historic structures located here and purpose of this study will be to manage the impacts in such a way that their effects are positive rather than negative in terms of the preservation of the historic character of the site as a whole. Due to the protection status afforded the site by the NHRA it will also be necessary to obtain a permit for these activities from the South African Heritage Resources Agency (SAHRA) and its relevant provincial representative the Limpopo Heritage Resources Agency (LiHRA). As the project deals mostly with the built environment the provincial Built Environment Committee (BECOM) will also be involved in the necessary permitting.

This report focuses on the anticipated heritage impact that the proposed development will have on the Lemana College Campus. An additional report will be submitted with this report that will outline the necessary documentation that will form the basis for the permit application to SAHRA.

## 3.1 Evaluating Heritage Impacts

This Heritage Impact Assessment relies on the analysis of written documents, maps, aerial photographs and other archival sources combined with the results of site investigations and interviews with effected people. Site investigations are not exhaustive and often focus on areas such as river confluence areas, elevated sites or occupational ruins, however this study was focussed only on the Lemana Campus.

The following documents were consulted in this study;

- South African National Archive Documents
- SAHRA Database of Heritage Studies
- Schoemansdal Museum Information
- Internet Search
- Historic Maps
- 1936 and 1952 Surveyor General Topographic Map series
- 1952 1:10 000 aerial photo survey
- Google Earth 2011 & 2003 imagery
- Published articles and books
- JSTOR Article Archive

## 3.2 Field Methodology

Much of the needed information for this site has already been documented in previous publications. In this regard the *Site Analysis of Lemana High School Campus Elim, Northern Province: Heritage Analysis and Assessment of the Cultural Landscape* by Cultmatrix cc & Liana Muller (2009), proved invaluable. For these reasons and due to the small general scale of the college campus, fieldwork was limited during the analysis phase of the project. During the documentation stage of the project, however extensive fieldwork was performed.

# 4. Measuring Impacts

In 2003 the SAHRA compiled the following guidelines to evaluate the cultural significance of individual heritage resources:

## 4.1 TYPE OF RESOURCE

- Place
- Archaeological Site
- Structure
- Grave
- Paleontological Feature
- Geological Feature

## 4.2 TYPE OF SIGNIFICANCE

### 4.2.1 HISTORIC VALUE

It is important in the community, or pattern of history

- Important in the evolution of cultural landscapes and settlement patterns

- Important in exhibiting density, richness or diversity of cultural features illustrating the human occupation and evolution of the nation, province, region or locality.
- Important for association with events, developments or cultural phases that have had a significant role in the human occupation and evolution of the nation, province, region or community.
- Important as an example for technical, creative, design or artistic excellence, innovation or achievement in a particular period.

It has strong or special association with the life or work of a person, group or organisation of importance in history

- Importance for close associations with individuals, groups or organisations whose life, works or activities have been significant within the history of the nation, province, region or community.

It has significance relating to the history of slavery

- Importance for a direct link to the history of slavery in South Africa.

### 4.2.2 AESTHETIC VALUE

It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

- Important to a community for aesthetic characteristics held in high esteem or otherwise valued by the community.
- Importance for its creative, design or artistic excellence, innovation or achievement.
- Importance for its contribution to the aesthetic values of the setting demonstrated by a landmark quality or having impact on important vistas or otherwise contributing to the identified aesthetic qualities of the cultural environs or the natural landscape within which it is located.
- In the case of an historic precinct, importance for the aesthetic character created by the individual components which collectively form a significant streetscape, townscape or cultural environment.

### 4.2.3 SCIENTIFIC VALUE

It has potential to yield information that will contribute to an understanding of natural or cultural heritage

- Importance for information contributing to a wider understanding of natural or cultural history by virtue of its use as a research site, teaching site, type locality, reference or benchmark site.
- Importance for information contributing to a wider understanding of the origin of the universe or of the development of the earth.
- Importance for information contributing to a wider understanding of the origin of life; the development of plant or animal species, or the biological or cultural development of hominid or human species.
- Importance for its potential to yield information contributing to a wider understanding of the history of human occupation of the nation, Province, region or locality.
- It is important in demonstrating a high degree of creative or technical achievement at a particular period
- Importance for its technical innovation or achievement.

### 4.2.4 SOCIAL VALUE

- It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
- Importance as a place highly valued by a community or cultural group for reasons of social, cultural, religious, spiritual, symbolic, aesthetic or educational associations.
- Importance in contributing to a community's sense of place.

## 4.3 DEGREES OF SIGNIFICANCE

### 4.3.1 RARITY

It possesses uncommon, rare or endangered aspects of natural or cultural heritage.

- Importance for rare, endangered or uncommon structures, landscapes or phenomena.

### 4.3.2 REPRESENTIVITY

- It is important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects.
- Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class.
- Importance in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality.

The table below illustrates how a site's heritage significance is determined

| Spheres of Significance | High | Medium | Low |
|---|---|---|---|
| International | | | |
| National | | | |
| Provincial | | | |
| Regional | | | |
| Local | | | |
| Specific Community | | | |

What other similar sites may be compared to this site?

## 4.4. Impact Statement

### 4.4.1 Assessment of Impacts

Direct, indirect and cumulative impacts of the issues identified through the EIA phase are assessed in terms of the following criteria:

- The nature, which shall include a description of what causes the effect, what will be affected and how it will be affected.

- The extent, wherein it will be indicated whether the impact will be local (limited to the immediate area or site of development) or regional, and a value between 1 and 5 will be assigned as appropriate (with 1 being low and 5 being high):
- The duration, wherein it will be indicated whether:

    - the lifetime of the impact will be of a very short duration (0–1 years) – assigned a score of 1;
    - the lifetime of the impact will be of a short duration (2-5 years) - assigned a score of 2;
    - medium-term (5–15 years) – assigned a score of 3;
    - long term (> 15 years) - assigned a score of 4; or
    - permanent - assigned a score of 5;

- The magnitude, quantified on a scale from 0-10, where 0 is small and will have no effect on the environment, 2 is minor and will not result in an impact on processes, 4 is low and will cause a slight impact on processes, 6 is moderate and will result in processes continuing but in a modified way, 8 is high (processes are altered to the extent that they temporarily cease), and 10 is very high and results in complete destruction of patterns and permanent cessation of processes.

- The probability of occurrence, which shall describe the likelihood of the impact actually occurring. Probability will be estimated on a scale of 1–5, where 1 is very improbable (probably will not happen), 2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).

- The significance, which shall be determined through a synthesis of the characteristics described above and can be assessed as low, medium or high; and

- The status, which will be described as either positive, negative or neutral.

- The degree to which the impact can be reversed.

- The degree to which the impact may cause irreplaceable loss of resources.

- The degree to which the impact can be mitigated.

The significance is calculated by combining the criteria in the following formula:

S = (E+D+M) P
S = Significance weighting
E = Extent
D = Duration
M = Magnitude
P = Probability

The significance weightings for each potential impact are as follows:

- < 30 points: Low (i.e. where this impact would not have a direct influence on the decision to develop in the area),

- 30-60 points: Medium (i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated),

- > 60 points: High (i.e. where the impact must have an influence on the decision process to develop in the area).

# Heritage Indicators within the Receiving Environment

# 5. Regional Cultural Context

## 5.1 Lemana College History

The history of Lemana College is closely linked with that of the Swiss Mission in Elim. Originally called the Shiluvani Training College, it was established in 1899 by Rev HA Junod and later also incorporated the Shiluvani Evangelical School in 1904. The Shiluvani Training College closed in 1905 and directly led to the creation of the Lemana Training Institute to fill this void. In 1906 the Institute was formally declared on the farm Rossbach which the Swiss Mission purchased from the then British Captain Adolf Schiel. It is widely accepted that the name "Lemana" is derived from "Lac Lemana" or Lake Geneva where many of the Swiss missionaries derived from.

With the sale of the Rossbach farm in 1920, the Lemana Training College had once again to uproot and it was moved to its current location where Mr. G Ferrier constructed the buildings. On Sunday, 11 June 1922 the new buildings were inaugurated and the Lemana Training Institution was formally opened under the superintendence of Rev Cuendet.

A separate Domestic Science school was opened at Lemana in 1927. Furthermore, in 1933, high-school education was introduced at Lemana. This was aimed at giving female students an opportunity to diversify their studies to include the nursing profession. In 1937, the influential Rev Alexandre A Jaques was appointed as Superintendent at Lemana, and apart from periods of leave, remained in this position until 1946. Another prominent Swiss missionary couple, Alfred and Jeanne Bertrand, arrived at Elim in 1936. As the main works manager, Alfred Bertrand (Metzenen?) planned and erected many buildings. The stately church at Lemana was built by the expert church builder Metzenen. In 1942, Rev. Alexandre Jaques obtained a Master of Education degree at WITS and was appointed as Head of the Lemana High School. (He however retired in 1946 and died in 1949). In the same year as Rev Jaques being appointed head, the school was renamed and the Douglas Laing Smit Secondary School was subsequently established. From January 1949, Reverend SG Organe took over as new superintendent of the school.

The Government took over control of Lemana in 1954. Based on the Bantu Education Act No.47, black education was taken away from the patronage of missionaries to be exclusively controlled by the State. In 1956 the Lemana Training Institution including the hostels were taken over by the Department of Bantu Education. In 1969, the Secondary School was renamed Lemana High School and the training institution was closed down and moved to the newly opened Tivumbeni Training School more or less 20 kilometres to the east of Tzaneen (Jeannot, 1908: 1). In 1977, the pupils at Lemana joined the nation wide opposition to Bantu Education. The building then acting as the main Hall and one of the first buildings constructed by the Swiss Mission, was burnt down as a form of protest. Lemana was re-established as a College of Education in 1992 and rationalized in 1997. In 1998, the Institution was renamed Lemana Community College and it was subsequently declared a national monument (Open Africa: Lemana Monument).

Lemana has consistently provided for the educational and spirituals needs of the community with great success. The Swiss Missionaries' efforts at Lemana Training Institution (1906) and Elim Hospital (1899) attracted Xhosas, Zulus, Tswanas, Swazis,

Ndebeles, Coloureds, Vendas, not to mention the Shangaans from South Africa and the neighbouring Mozambique. (F Maboko, The Valdezia Bulletin, Vol V, No 57, September 1935:1) as quoted in Masumbe BMC & Coetzer IA. 2001: 227). The Institution has produced many leaders in the academic and business world who have excelled within and beyond the borders of the country. The Lemana Training Institution produced eminent musicians and leaders such as the late Rev DC Marivate (Mabunda, 1995:56; Maphophe 1956). Alumni of the school are still highly respected and sought-after in the business and political spheres.

**ARCHIVAL MATERIAL (as per Cultumatrix cc Report, 2009)**
A host of additional information regarding the history of Lemana, including photographs, personal biographies and other written material are still available. Within the timescale of this project, it was however impossible to access all the information available.
Three important archival sources remain:

**Alfred Hotz:**
This man used to be a teacher at Lemana for numerous years. He currently resides in Pretoria North but has become very ill, are advanced in years and are unable to remember much. However, we have contacted his son, Robert Hotz. This man conveyed that he knows about a book, complete with photographs, written by his father about his time at Lemana. He assured us that he will search for the document and provide it for our perusal. He also stated that there are numerous boxes at his house with archival material of Lemana.

**Yvette Courtain:**
She is the great granddaughter of the first Swiss missionaries in South Africa. Her grandfather was also the principal of Lemana School from 1930 – 1935. She has consolidated all of her family's archival material on Lemana and would go through her numerous boxes to find relevant information. She currently resides in McGregor in the Western Cape. *Yvette Courtain: courtin@iafrica.com 023 625 1118 / 082 555 9660.*

**Colette Junod:**
This lady is currently residing in the house to the south of the church and is responsible for the magnificent botanical garden. Apart from her phenomenal knowledge on trees and shrubs, Colette has a number of sources on the history of Lemana. She also conveyed that her husband drew a few maps of the grounds. *Colette Junod: 015 556 3470.*

# 6. Previous Studies in the Area

The information contained within the timeline, but also a number of significant quotations on the school were gleaned from a number of sources. The M.Ed. dissertation by DC Mabunda (1995) proved insightful together with the PhD dissertation of BMC Masumbe (2002). The work of CF van der Merwe (2002) *Elim Hospital - The First 100 Years* was indispensable. *Site Analysis of Lemana High School Campus Elim, Northern Province: Heritage Analysis and Assessment of the Cultural Landscape* by Cultmatrix cc & Liana Muller (2009) once again provided much of the information contained in this report.

# 7. Cultural Landscape

The cultural landscape of the Lemana Campus will be discussed per a zoned classification that follows the proposed development. Each zone will be discussed as an individual node and

analysis of its cultural landscape and heritage significance will be given. This classification will in turn be used to determine the mitigation procedures needed.


Figure 2. Location of different Zones

### 7.1 Zone 1

- This area used to function as the centre of activity.
- The Building on the western side used to be the original library – Block M.
- The Building on the eastern side was used as a tailoring classroom and museum during different periods – Block K.
- The foundation and floor slab of the burnt down hall is on the southern side of the open square.
- A new administration building has been built on the northern side of the square.

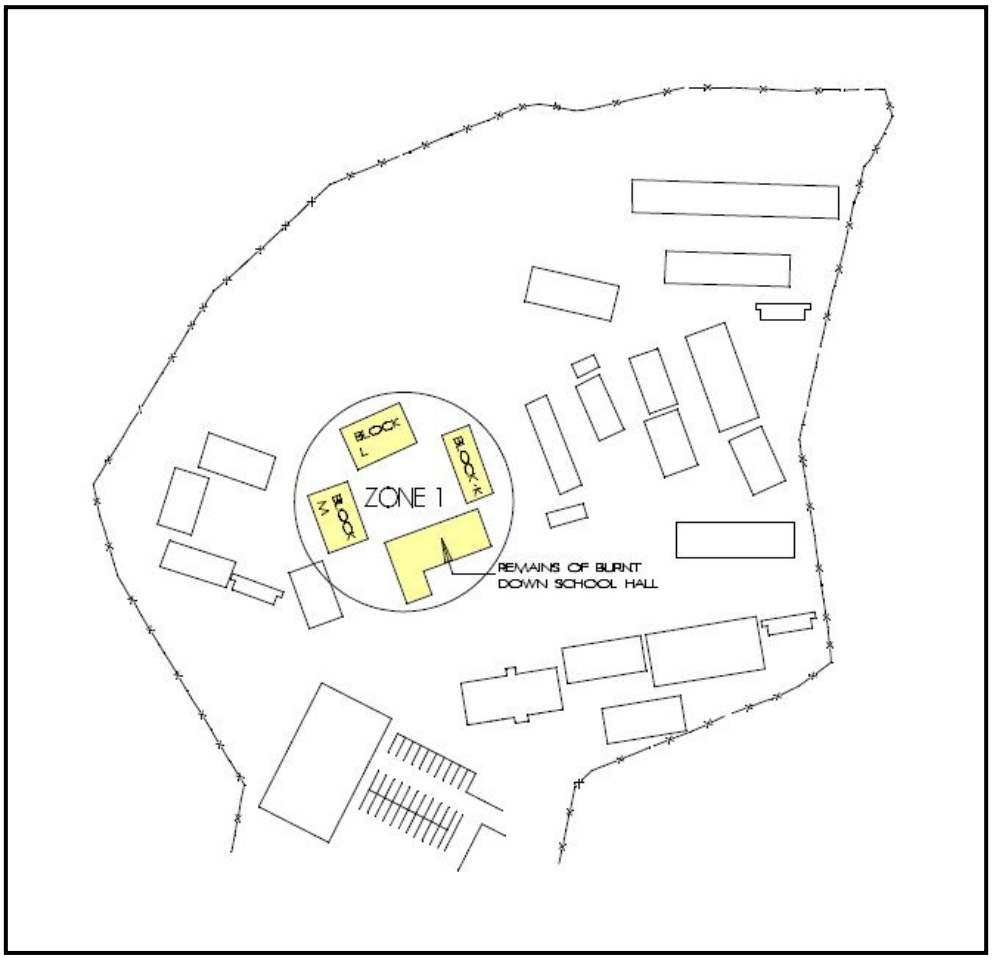


Figure 3. Location of Zone 1

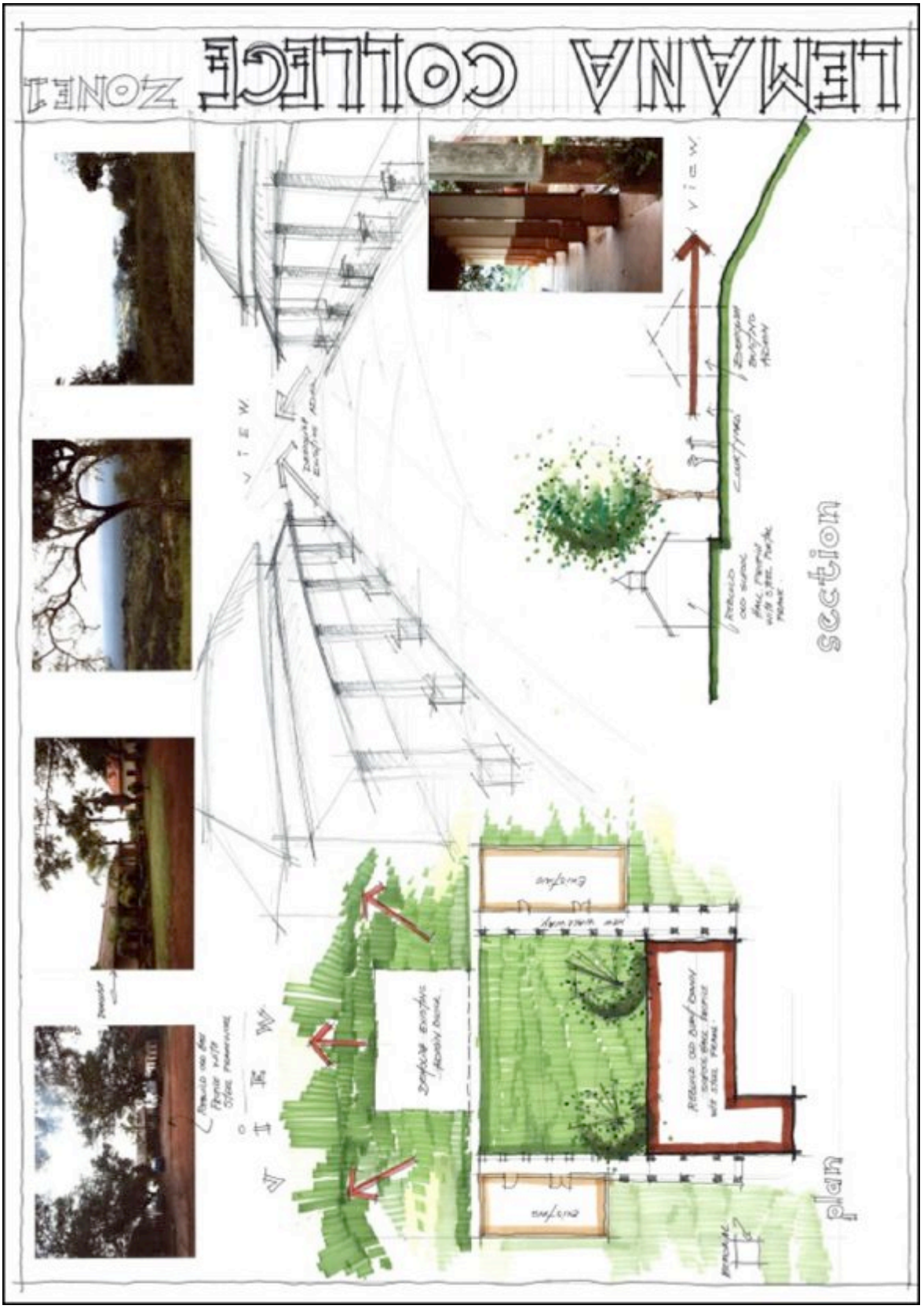


Figure 4. Proposed layout


Figure 5. Artists impression of Zone 1

### 7.1.1 Block M

This block consist of 3 Classrooms and a store room

Figure 6. Existing classroom

- The historic building on the western side of the open square proved to be of the most historic significance – Block M. According to records this building used to be the original library.
- This building will be restored as far as possible to its original state:
    - Granolith floors to be repaired.
    - Structural cracks in walls to be repaired.
    - Original windows to remain, repaint.
    - Original ceilings to be sand down and paint.
    - Original wooden cornice to be sand down and sealed.

- External:
    - The damaged roof on building and veranda to be repaired.
    - External walls to be painted in darker tone on plinth on rough cast plaster.
    - Upper part of wall to be painted in lighter tone on upper part of walls.
    - Damaged doors to be replaced.

### 7.1.2 Block K

Figure 7. Existing classroom

- A covered walkway reflecting the architectural language of the building on the western side will be added onto the western façade of the building.
- The covered walkway will provide shelter from rain and sun and improve the functionality of the building.
- The covered walkway will be interactive to the square and will enhance the quality of space

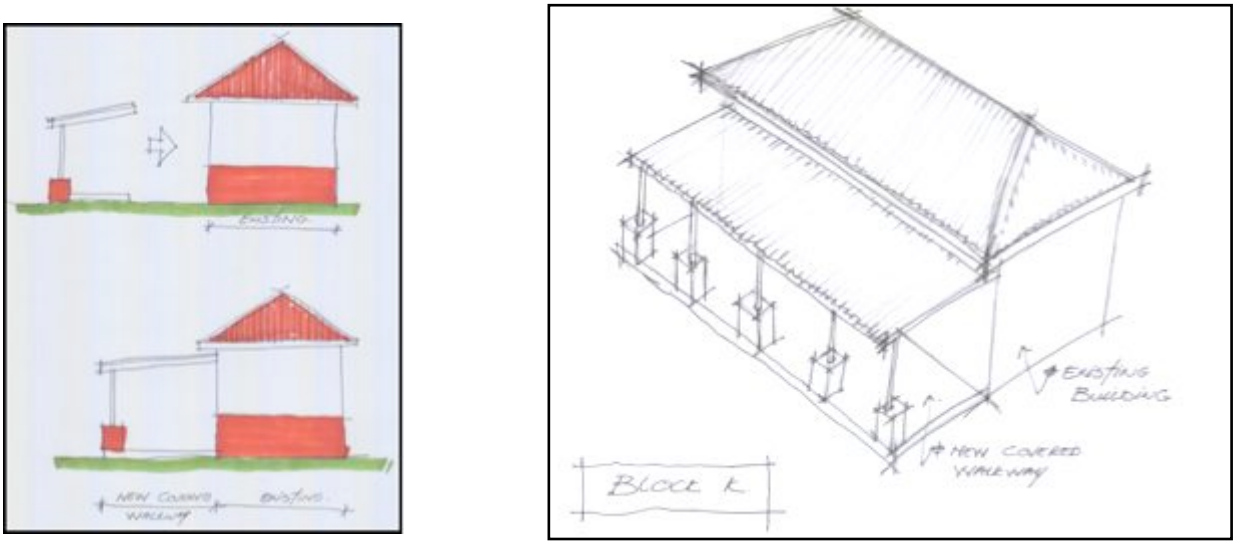


Figure 8. Proposed addition of veranda

### 7.1.3. Block L

This block consists of four offices, a kitchen, a men's toilet and a ladies toilet.

Figure 9. Offices

- This building is largely out of context. It has been built in recent years. The historic buildings around the square were not taken into consideration.
- A new Administration Block will be built in zone 5 to meet the needs of the new Secondary school. This block therefore becomes redundant.
- This building will be demolished in order to re-establish the view over the Elim village.

<u>Foundations of Burnt Down School Hall:</u>

- The remaining platform of the burnt down hall to become a remembrance platform.
- There are not sufficient photographic evidence of the elevations of the burnt down school hall.
- It was therefore decided against rebuilding a replica of the hall.
- Instead a steel portal frame will be installed over the platform remembering the profile of the hall.
- The existing foundation walls and floor slab will be repaired.
- The platform will be utilized as a platform of remembrance.
- Photos reflecting the history of Lemana will be applied onto the concrete slab.
- Benches around the platform will allow visitors to meditate on the history.
- The PVC water tank on the platform will be removed.
- A timber boardwalk to be installed on the platform to allow visitors to access the platform.

Figure 10. Remains of old hall foundations

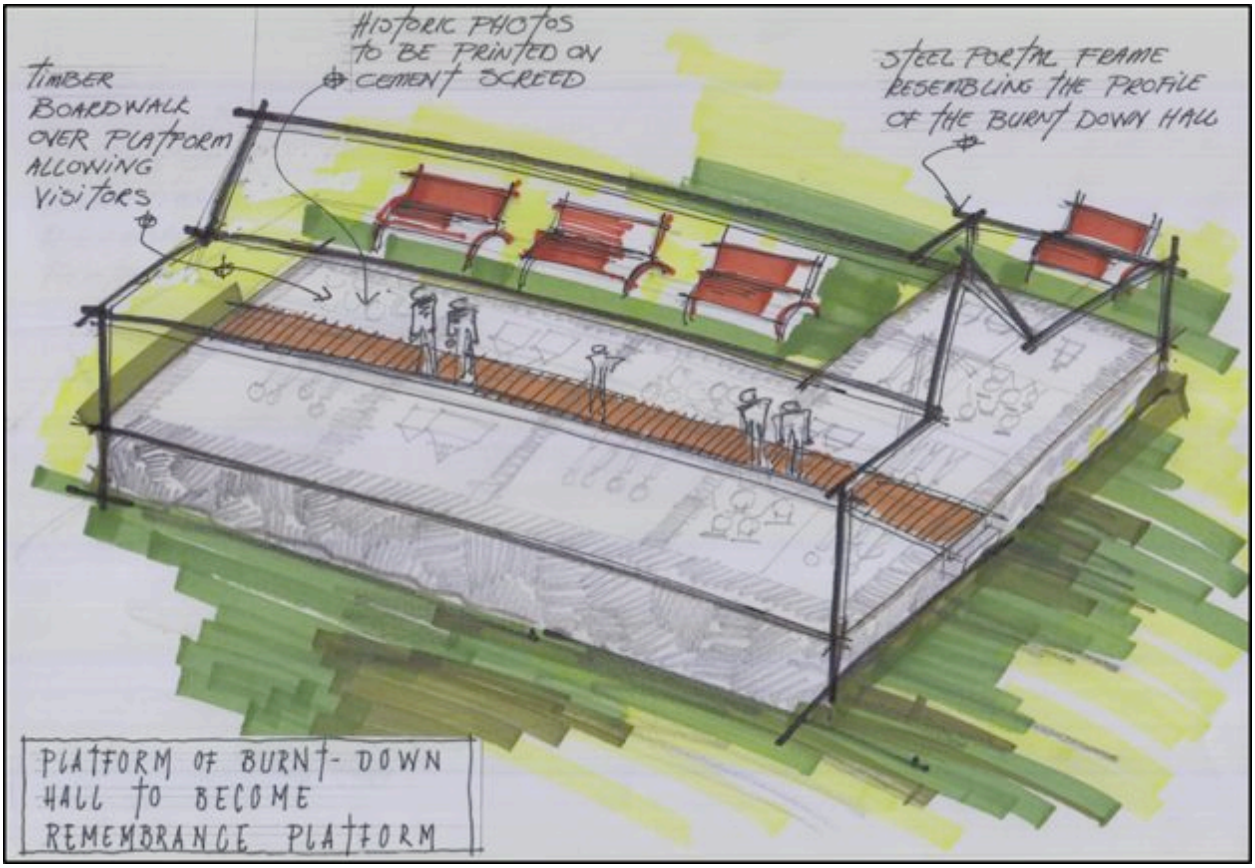


Figure 11. Artist impression of proposed hall foundations remembrance platform

### 7.2 Zone 2

- In this area there are three stone terraces (1950), and three historic buildings and one newer one.
    - Block A – Known as the "Matrics" room
    - Block B – The Art Room, later converted into Science and Biology classrooms
    - Block C – Training College
    - Block D – A newer Laboratory
    - There is a small info kiosk, which is in a very poor structural condition, and it will be demolished.
- The historic classrooms have medium value and will be upgraded to meet current teaching requirements.
- Two new blocks will be added in this zone with two classrooms each.


Figure 12. Zone 2 layout

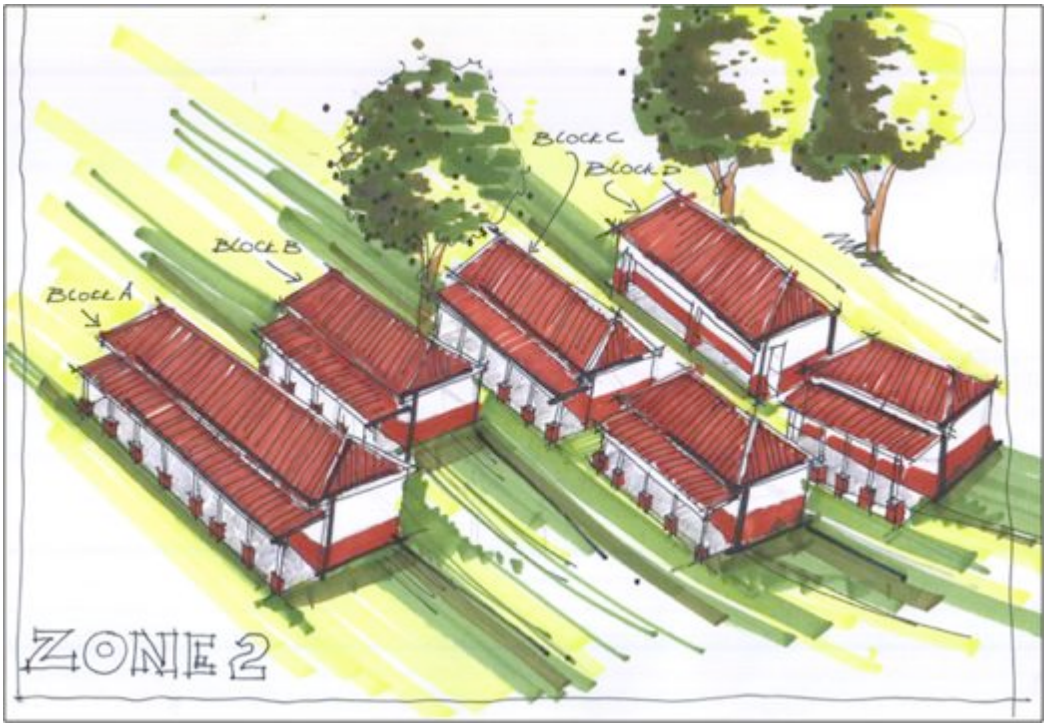


Figure 13. Artist rendering of Zone 2

### 7.2.1 Block A

- Block A Consist of three classrooms.

- A covered walkway will be added onto the Northern façade. This covered walkway to be in the same architectural language as the historic buildings (Block M in zone 1)

Figure 14. Existing classroom

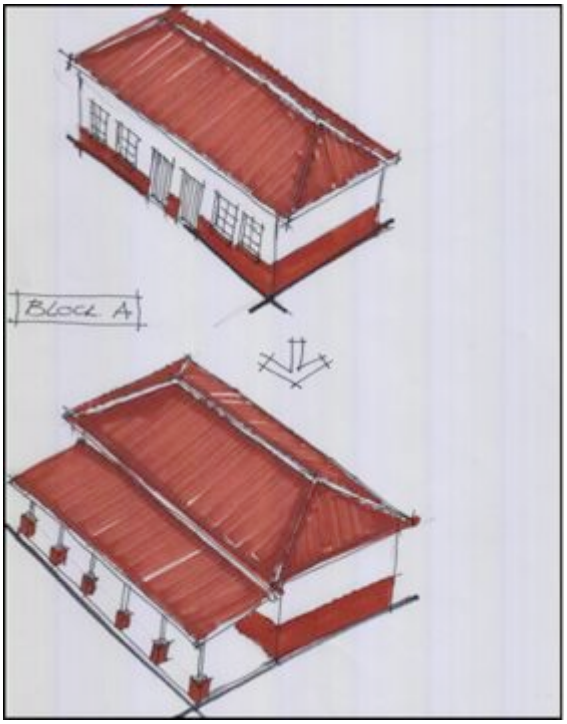


Figure 15. Addition of proposed covered walkway

### 7.2.2 Block B

- Block B Consist of two classrooms.
- A covered walkway will be added onto the Northern façade. This covered walkway to be in the same architectural language than the historic buildings (Block M in zone 1).
- Old kiosk will be renovated to be used as a Store room

Figure 16. Classroom

### 7.2.3 Block C

- Block C consists of two classrooms.
- A covered walkway will be added onto the Northern façade. This covered walkway to be in the same architectural language than the historic buildings (Block M in zone 1).

Figure 17. Existing classroom

### 7.2.4 New Block

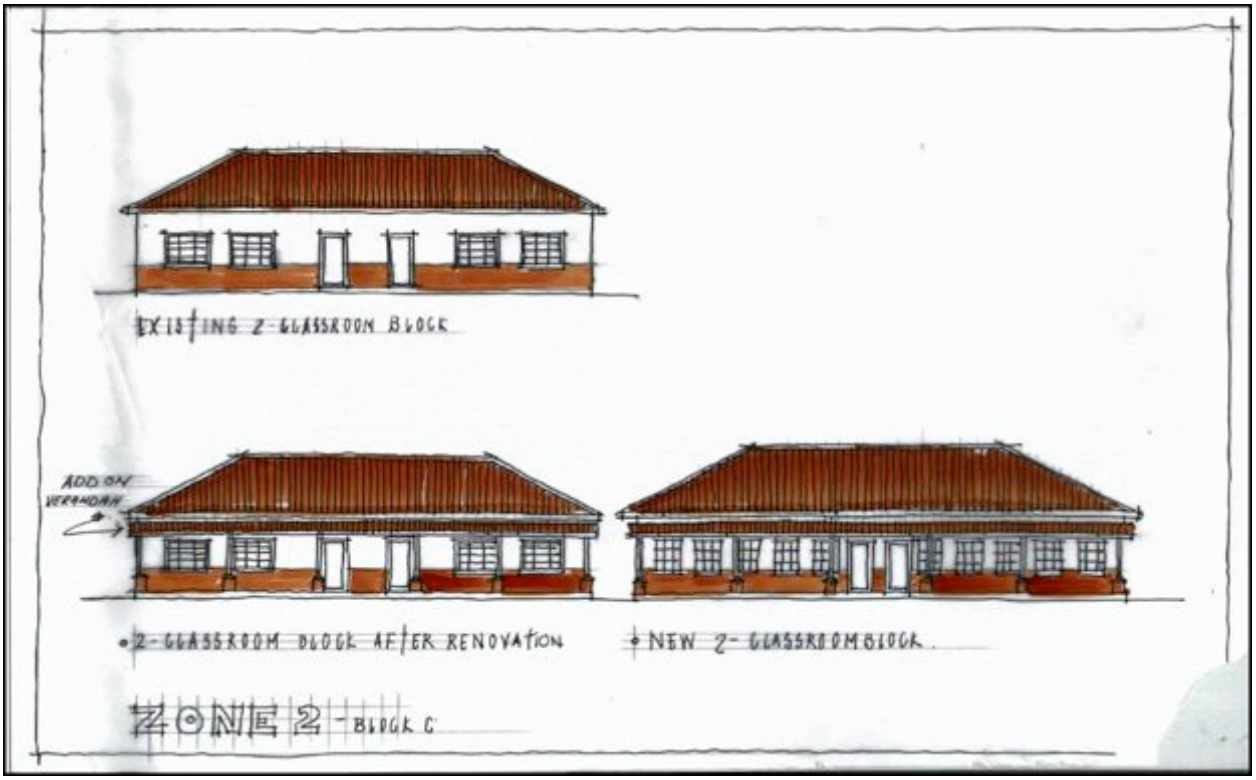


Figure 18. Planned new classrooms

- A new two Classroom Block will be positioned 2,5m away from the existing two Classroom Block.
- The architectural language of this block will be the same than the historic block (Block M) in Zone 1.
- The new building will be painted white with a scratch plaster plinth, which will be painted in a darker colour.
- Standard school-type windows will be used.
- The pitch roof will be at the same angle as the historic building and will also be done in s-rib corrugated iron.
- A covered walkway will be positioned on the northern façade.

### 7.2.5 Block D

- Block D consists of two Science Laboratories and two science Store Rooms.
- The existing Science Lab has been built in recent years. The building is out of context and not at all relating to the historic buildings.
- The building will be plastered and painted in white with a scratch plaster plinth, which will be painted in a darker colour.
- The Harvey tile roof to be removed and replaced with a S-rib corrugated iron roof. The roof will be painted in the same colour as rest of development.

Figure 19. Existing science lab


Figure 20. Science lab with modern building style and proposed alterations

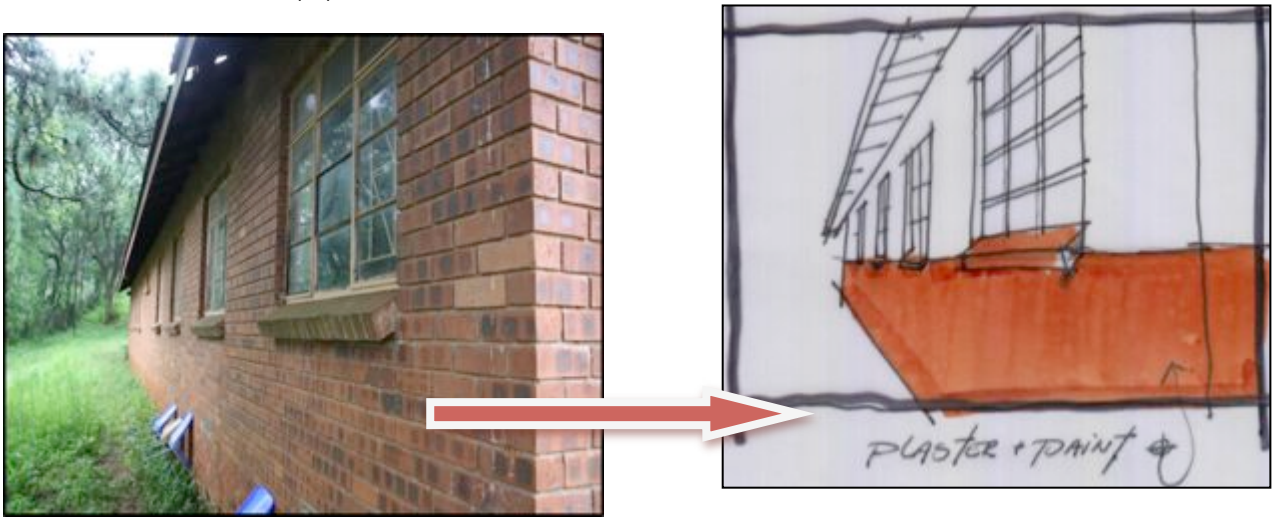


Figure 21. Existing science building with proposed renovations

### 7.2.6 New Block

- Another new two Classroom Block will be positioned 2,5 m away on the western side of the existing Science Lab.

- New Classrooms to be positioned in such a position that no existing trees will be removed.
- The existing historic stone terraces will be restored and stabilised.

Figure 22. Location of proposed new classrooms

Figure 23. Historic stone terracing

### 7.2.6 New Toilet Block

- A new toilet block will be built on the northeaster side of Block D.
- The new building will be painted white with a scratch plaster plinth, which will be painted in a darker colour.


Figure 24. Proposed new bathroom block

### 7.3 Zone 3

- Zone three consists of two North-facing buildings. The main building which was originally the Secondary School (Block F) and the Southern building was originally the Staff and Laboratory Building (Block E).
- A Toilet Block has been built in recent years on a higher platform.
- The existing toilet block will be demolished and a new three Classroom Block will be built on the platform


Figure 25. Location of Zone 3

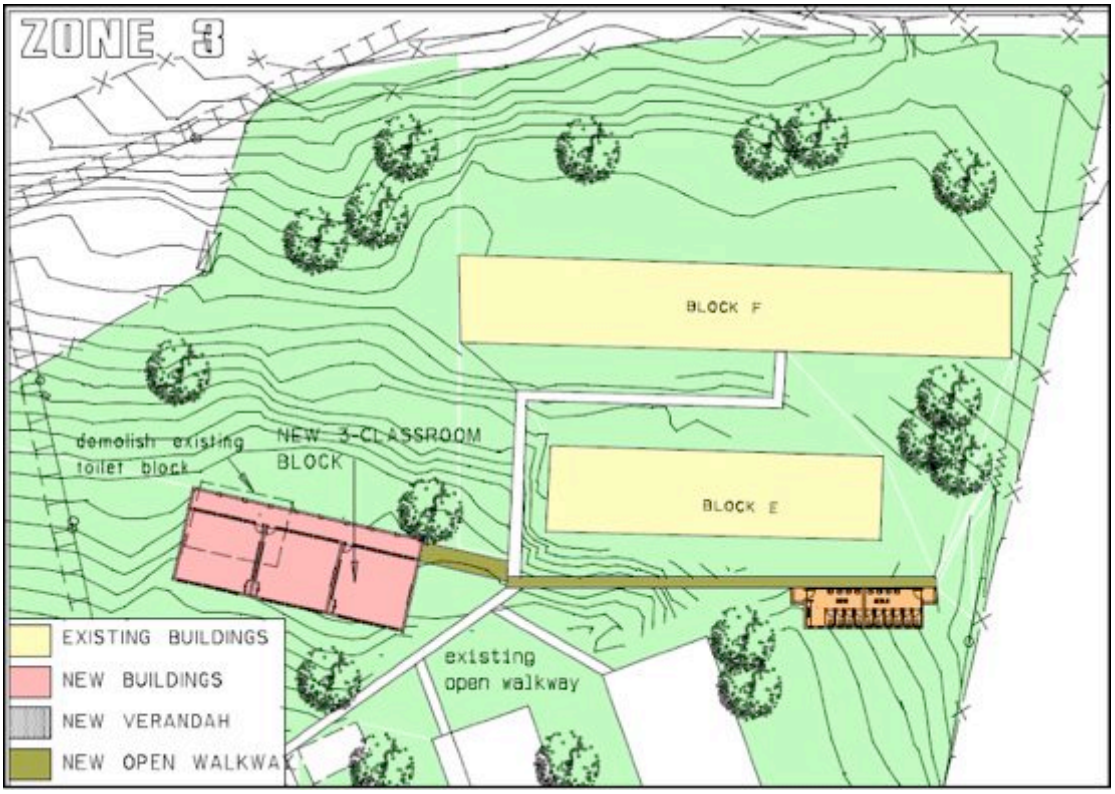


Figure 26. Layout of Zone 3

### 7.3.1. Block E

- Block E consists of five classrooms and a storeroom.
- Extensive repair needs to be done to floors, ceilings and roof.
- The historic classrooms will be upgraded to meet current teaching requirements.

Figure 27. Existing classrooms

### 7.3.2. Block F


Figure 28. Elaborate features on render

- Block F consists of an Entrance Hall, Six Classrooms and three offices. There are two verandas.
- The sculpture and date on the façade need to be cleaned and restored carefully
- The historic classrooms will be upgraded to meet current teaching requirements.

Figure 29. Main building at Lemana

**New Three Classroom Block:**

- A new two Classroom Block will be built on the platform of the existing toilet block.
- The architectural language of this block will be the same than the historic block (Block M) in Zone 1.
- The new building will be painted white with a scratch plaster plinth, which will be painted in a darker colour.
- Standard school-type windows will be used.
- The pitch roof will be at the same angle as the historic building and will also be done in s-rib corrugated iron.
- A covered walkway will be positioned on the northern façade.

Figure 30. Bathroom earmarked for demolition

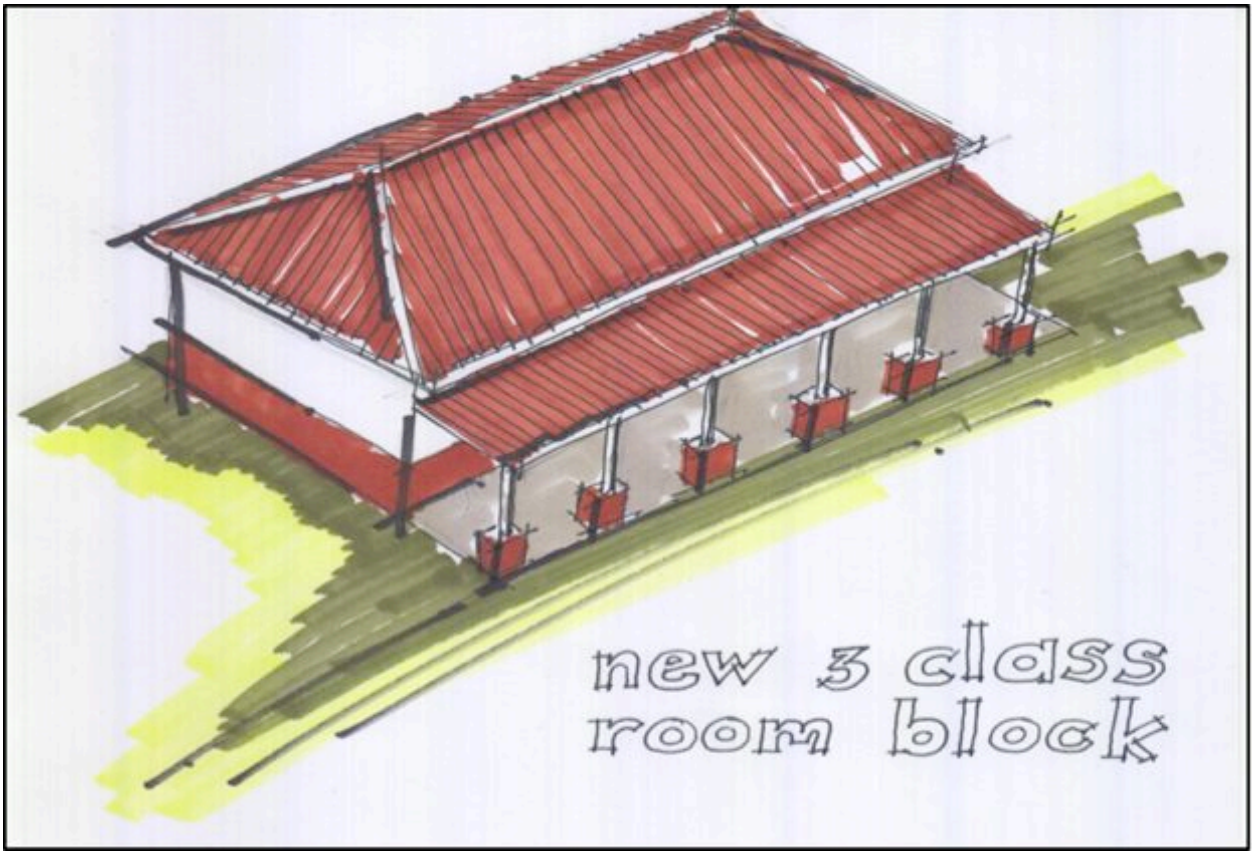


Figure 31. New proposed classroom

### 7.4 Zone 4

Zone 4 consists of the existing Food Services and Library Building, which was built in the 1970's (Block H), and a toilet Block (Block G).

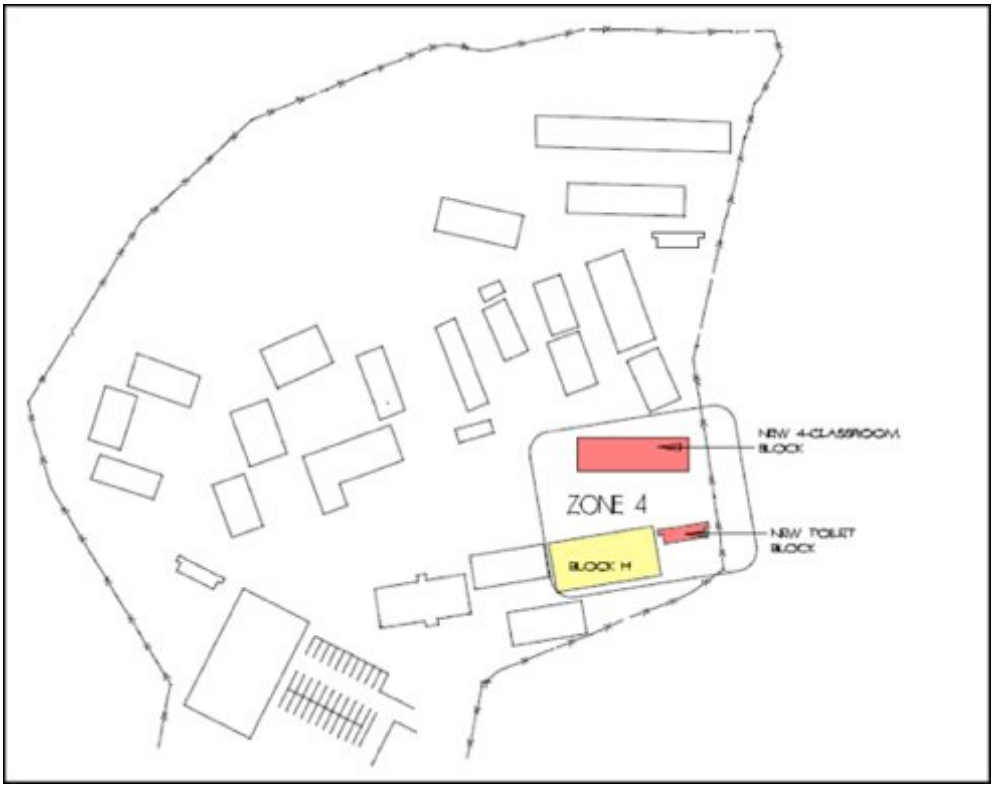


Figure 32. Zone 4 layout

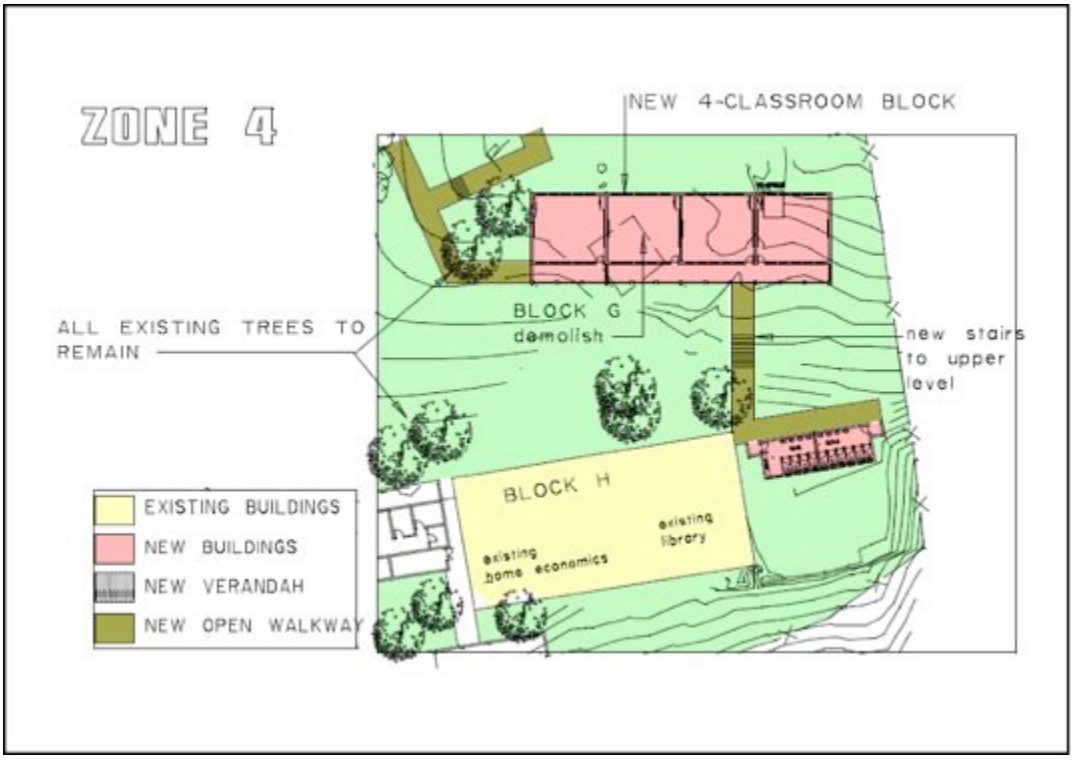


Figure 33. Zone 4 layout

### 7.4.1. Block G

- Block will be demolished

Figure 34. Ablution block to be demolished

**New Four Classroom Block:**

- The new Four Classroom Block will be built on the platform of the demolished block.
- The architectural language of this block will be the same than the historic block (Block M) in Zone 1.
- The new building will be painted white with a scratch plaster plinth which will be painted in a darker colour.
- Standard school-type windows will be used.
- The pitch roof will be at the same angle as the historic building and will also be done in s-rib corrugated iron.
- A covered walkway will be positioned on the southern façade.
- A new open walkway and staircase will link this New Building with the food services and Library Building.

Figure 35. This strcuture to be demolished for new classrooms

### 7.4.2. Block H

This Building who was built in the 1970's has no Architectural value and will be renovated to meet current teaching requirements.

Figure 36. Existing classroom

**New Toilet Block:**

- A new Toilet Block will be built on the eastern side of Block H.
- The new building will be painted white with a scratch plaster plinth, which will be painted in a darker colour.

### 7.5 Zone 5

- There are no existing buildings in this zone.
- The Monument erected in 2009 is situated in this zone.
- The following new facilities will be built:
    - New Administration Block
    - Two new Nutritional facilities.
- A new open pedestrian walkway will link the existing buildings with the monument.
- A link will also be established with the new Gathering Hall which will be built on the Western side in Zone 7


Figure 37. Zone 5 layout

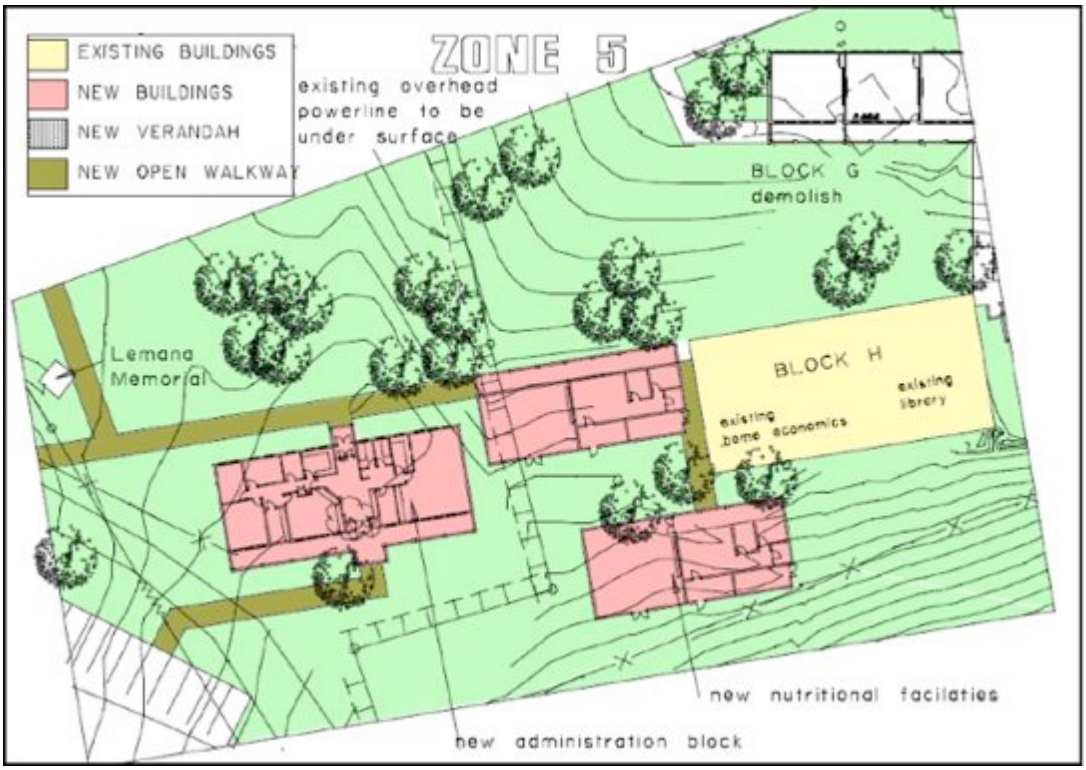


Figure 38. Zone 5 layout

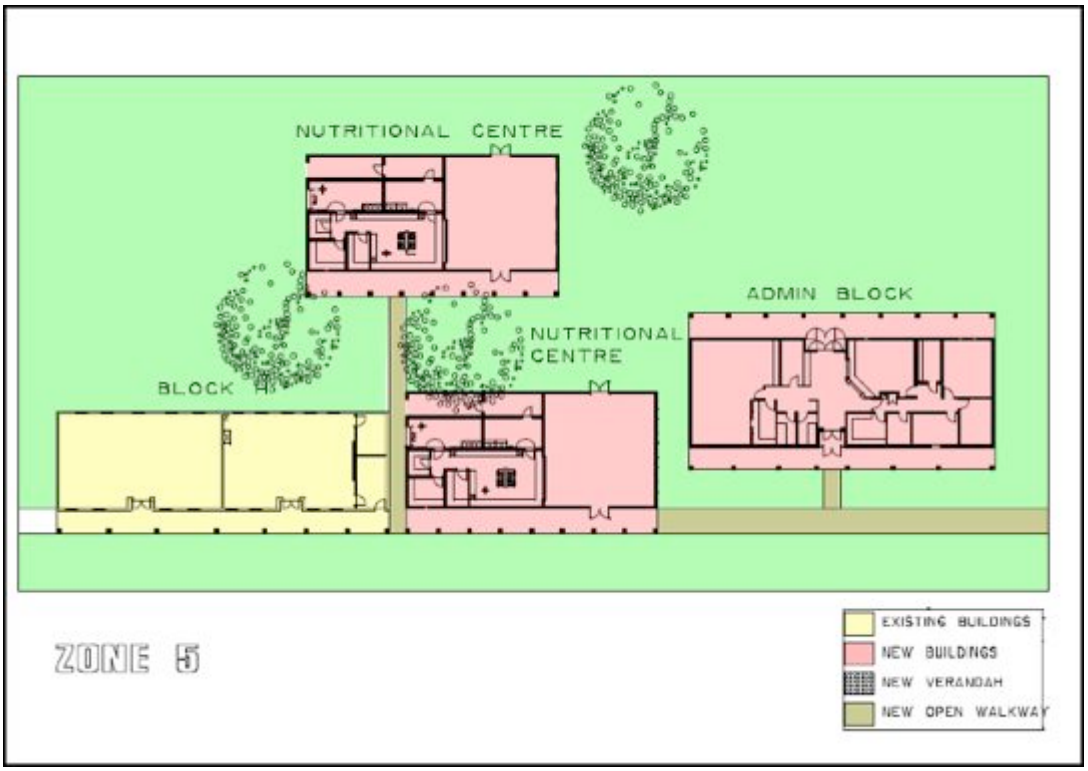


Figure 39. New building layout Zone 5

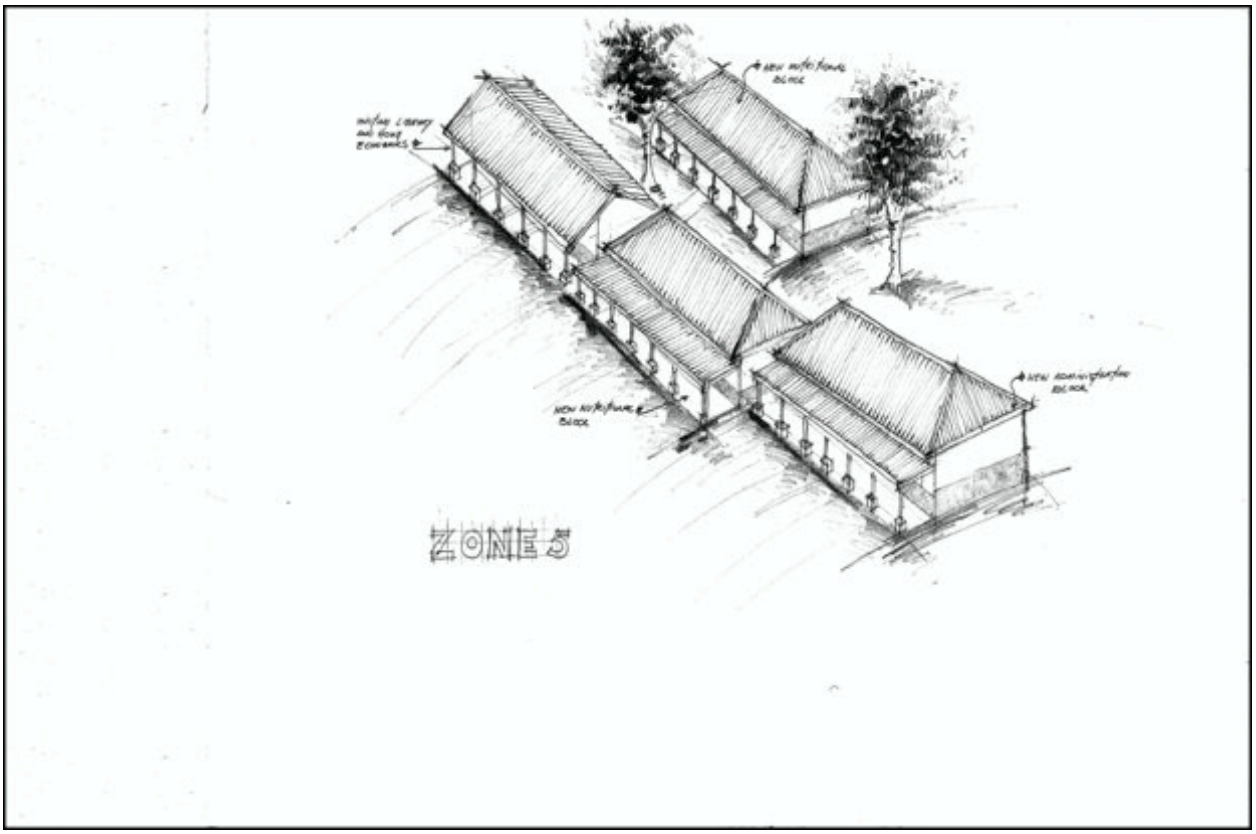


Figure 40. Artist impression of Zone 5

**New Administration Block:**

- The new Administration Block will become the new focal point when approaching the school.
- The existing tree will be removed.
- The new Administration Block will be built in a style sensitive to the architectural language of existing buildings.
- Walls to be plastered and painted white, the lower level to be scratch plastered and painted darker colour.
- School-type steel windows will be used.
- A corrugated s-rib metal hipper roof will be painted the colour as for the rest of the development.
- A veranda on the southern façade will resemble the veranda found in Block M in Zone 1.

**Nutritional Facilities:**

- The two new nutritional facilities will be positioned next to the existing home Economics Building.
- The tow new buildings will be positioned on newly constructed earthworks platforms in between existing trees.

Figure 41. Historic vegetation on site

- The new Nutritional Facilities will be built in a style sensitive to the architectural language of existing buildings.
- Walls to be plastered and painted white, the lower level to be scratch plastered and painted darker colour. School-type steel windows will be used.
- A corrugated s-rib metal hipper roof will be painted the colour as for the rest of the development.
- A veranda on the southern façade will resemble the veranda found in Block M in Zone 1.

### 7.6 Zone 6

There are two existing buildings in this Zone that had been built in the 1930's. The buildings consist of a two Classroom Block that was part of the Lemana Practicing School (Block J) and a classroom, which was part of the Teacher's Training College (Block I).

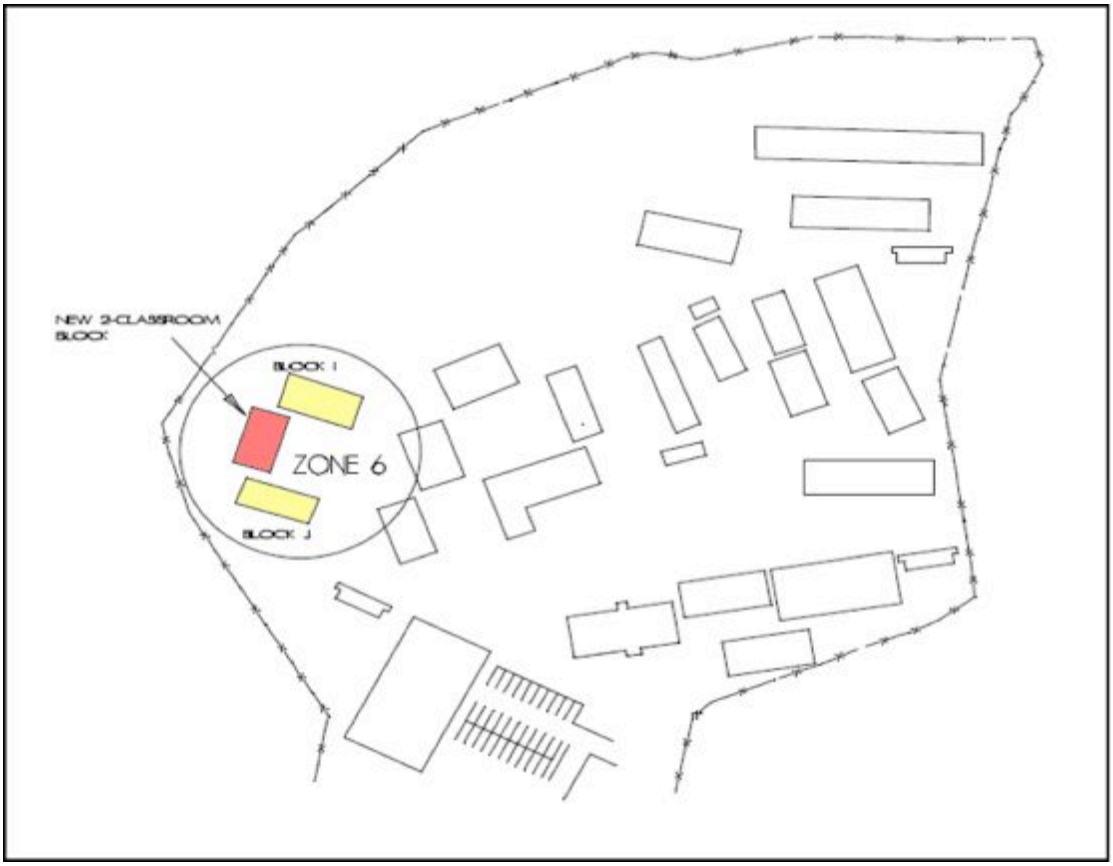


Figure 42. Layout of Zone 6

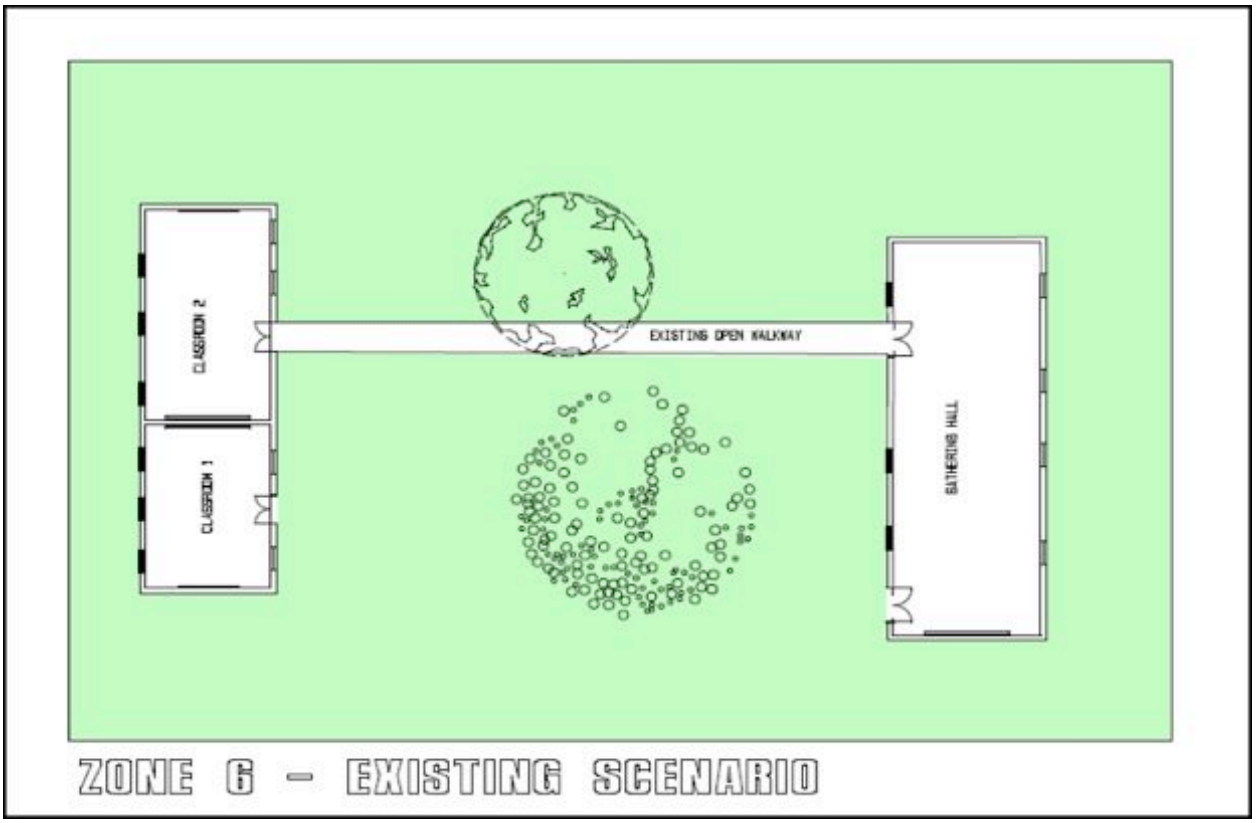

Figure 43. Zone 6 Existing scenario

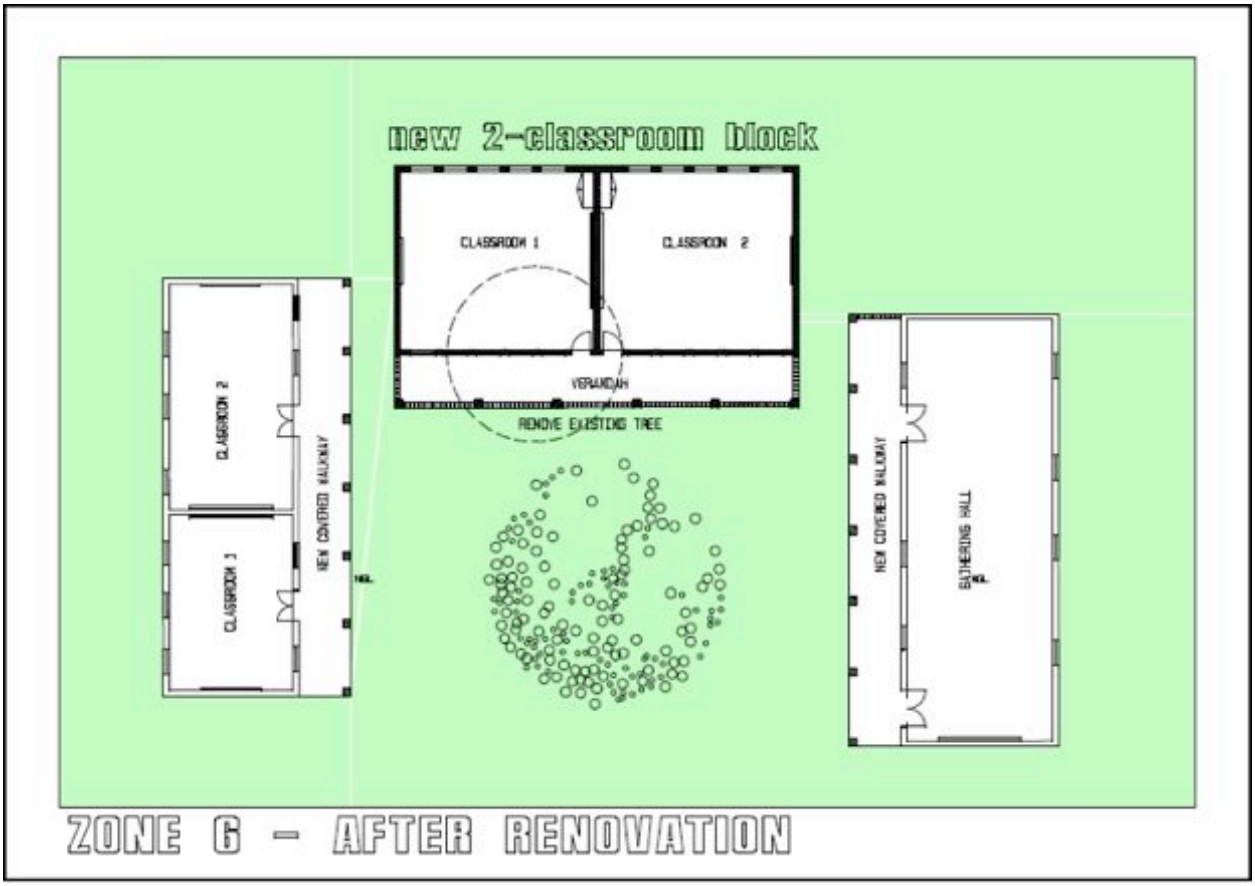


Figure 44. Zone 6 after renovation

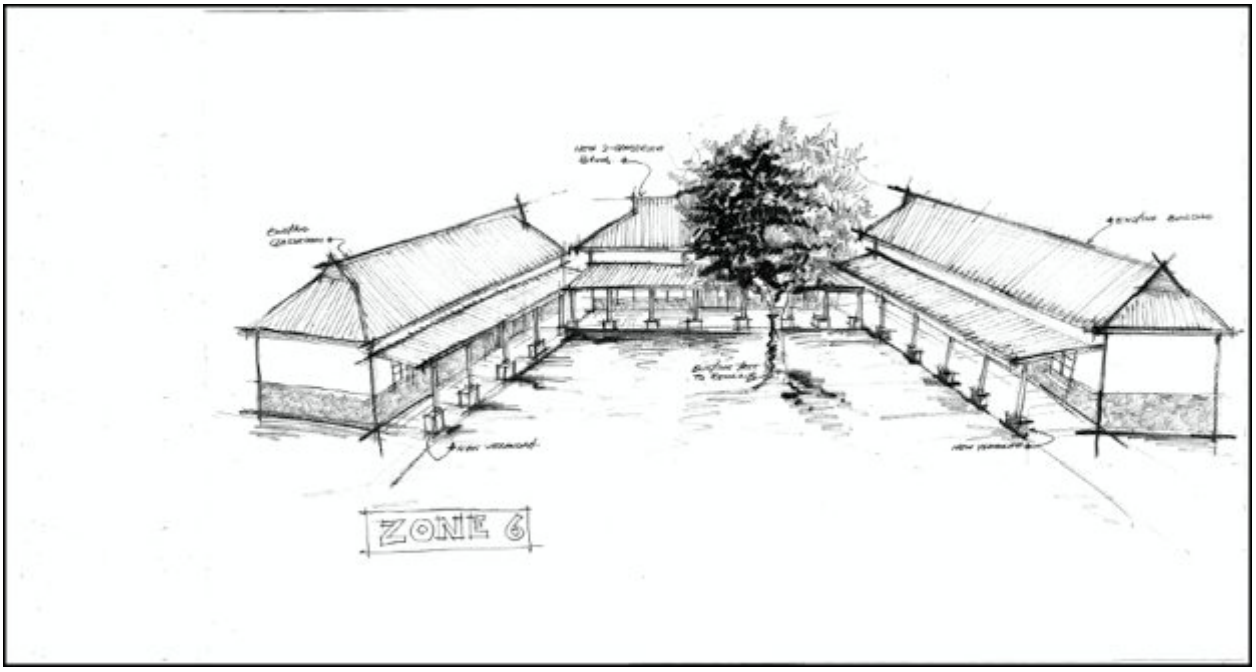


Figure 45. Artist impression of Zone 6

### 7.6.1. Block I

- This old Training College Buildings will be renovated to meet current teaching requirements.
- There is no veranda in front of the building.
- This Block will receive a veranda in similar style than the original Block M.
- The placement of this Building will enhance the courtyard.

Figure 46. Existing classroom

**Block J:**

- This old Practicing School Buildings will be renovated to meet current teaching requirements.
- There is no veranda in front of the building.
- This Block will receive a veranda in similar style to the original Block M.
- The placement of this Building will enhance the courtyard

Figure 47. Existing school building

**New Two-Classroom Block:**

- A new Two-Classroom Block will be constructed on the Western side of the Courtyard.
- The architectural language of this block will be the same than the historic block (Block M) in Zone 1.
- The new building will be painted white with a scratch plaster plinth, which will be painted in a darker colour.
- Standard school-type windows will be used.
- The pitch roof will be at the same angle as the historic building and will also be done in s-rib corrugated iron.
- A covered walkway will be positioned on the southern façade

Figure 48. Existing classroom and historic vegetation

## 7.7 Zone 7

Zone 7 consists of the following Buildings:

- Woodwork Room
- Maintenance Workshop
- Tuck Shop

These buildings will not be renovated and it will not be part of the new Lemana Secondary School.

The Tuck shop has no Heritage or Architectural value and will be demolished to make room for a new Gathering Hall to accommodate 1000 learners.

An open paved parking area for 30 vehicles will be constructed in this zone.

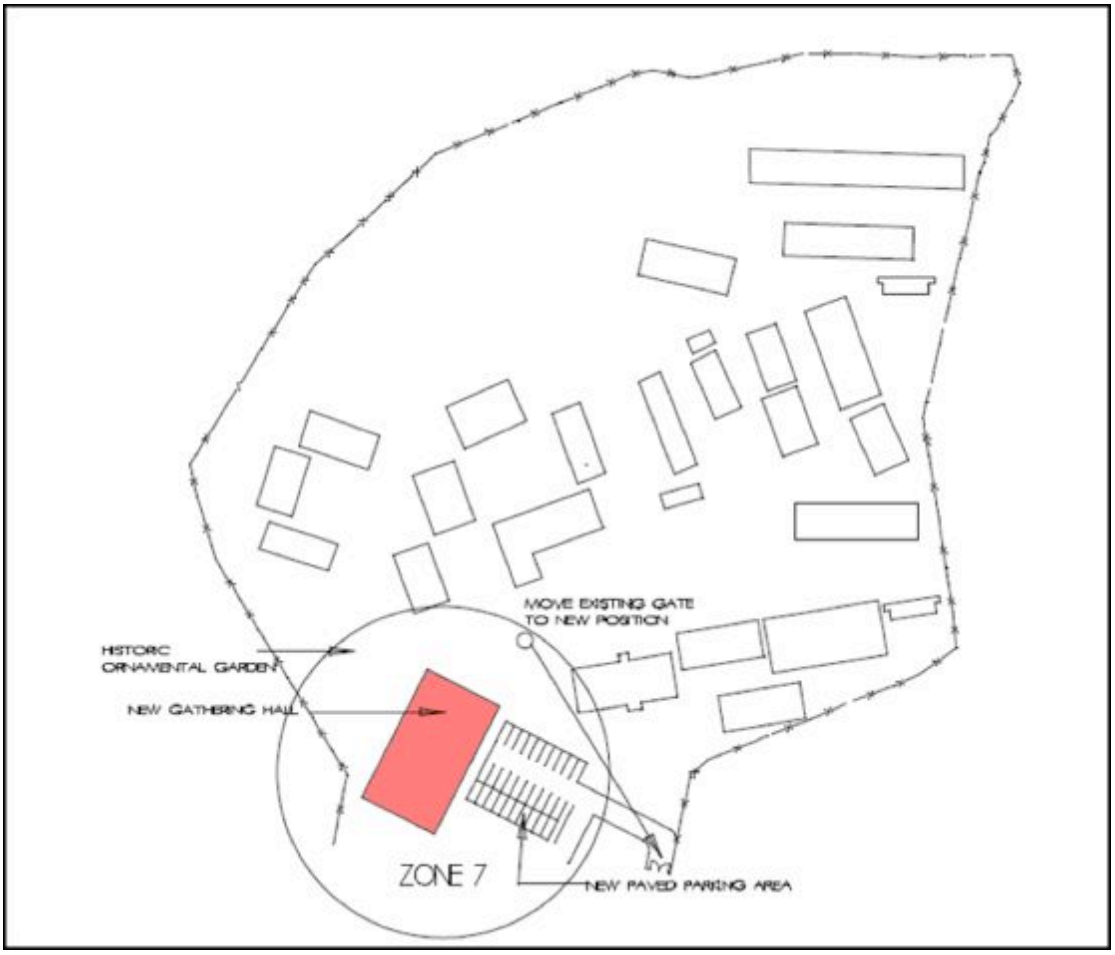


Figure 49. Zone 7 layout

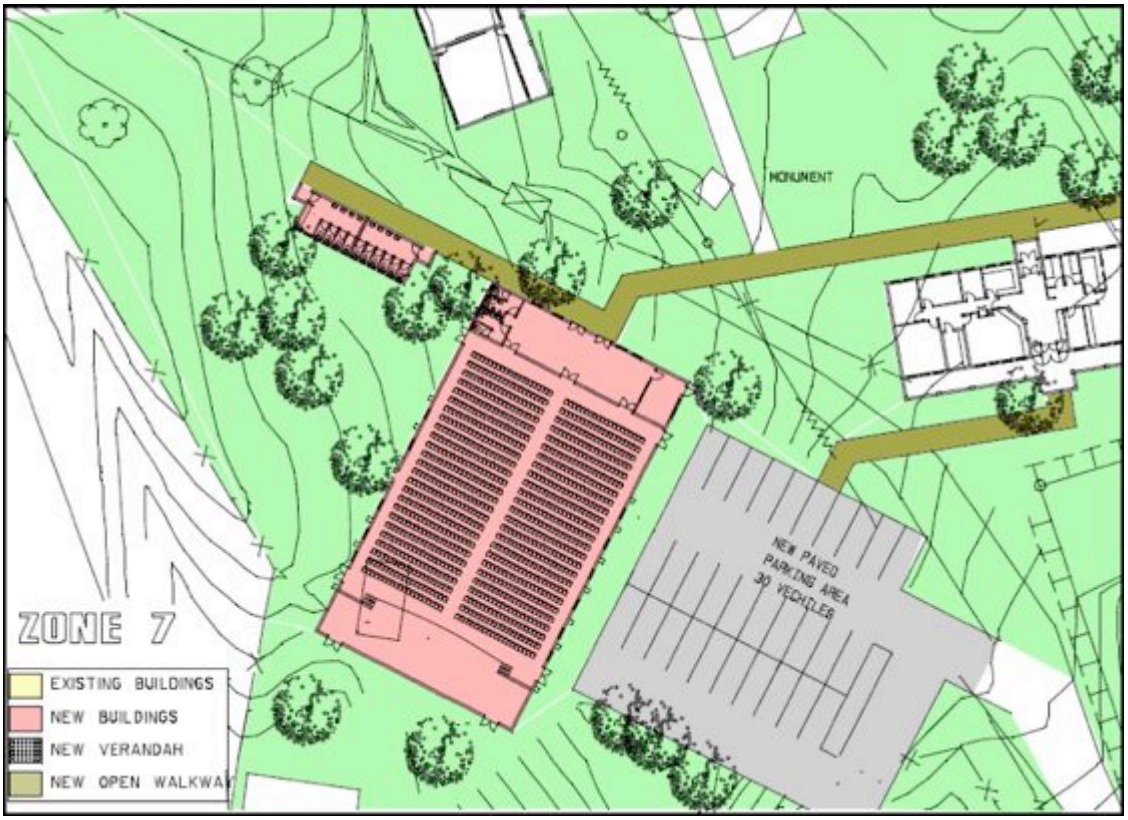


Figure 50. Zone 7 layout

**Tuck Shop**

- The Tuck shop has no Heritage or Architectural value and will be demolished

Figure 51. Tuck Shop

**New Gathering Hall:**

- The new Gathering Hall will be able to accommodate 1000 learners.
- The Hall will be constructed in a style sensitive to the existing architectural language.
- The mass volume of the hall will be broken down to a human scale.
- Walls to be plastered and painted white, the lower level to be scratch plastered and painted darker colour. School-type steel windows will be used.
- A corrugated s-rib metal hipper roof will be painted the colour as for the rest of the development.

Figure 52. Proposed location of new gathering hall

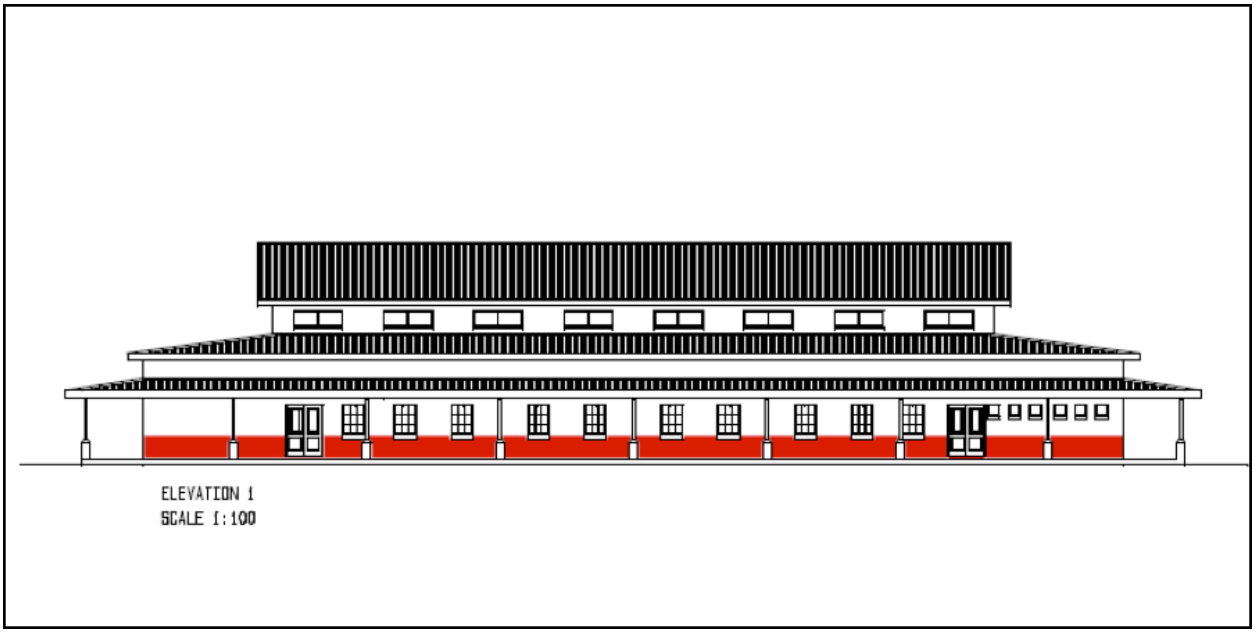


Figure 53. Proposed new meeting hall

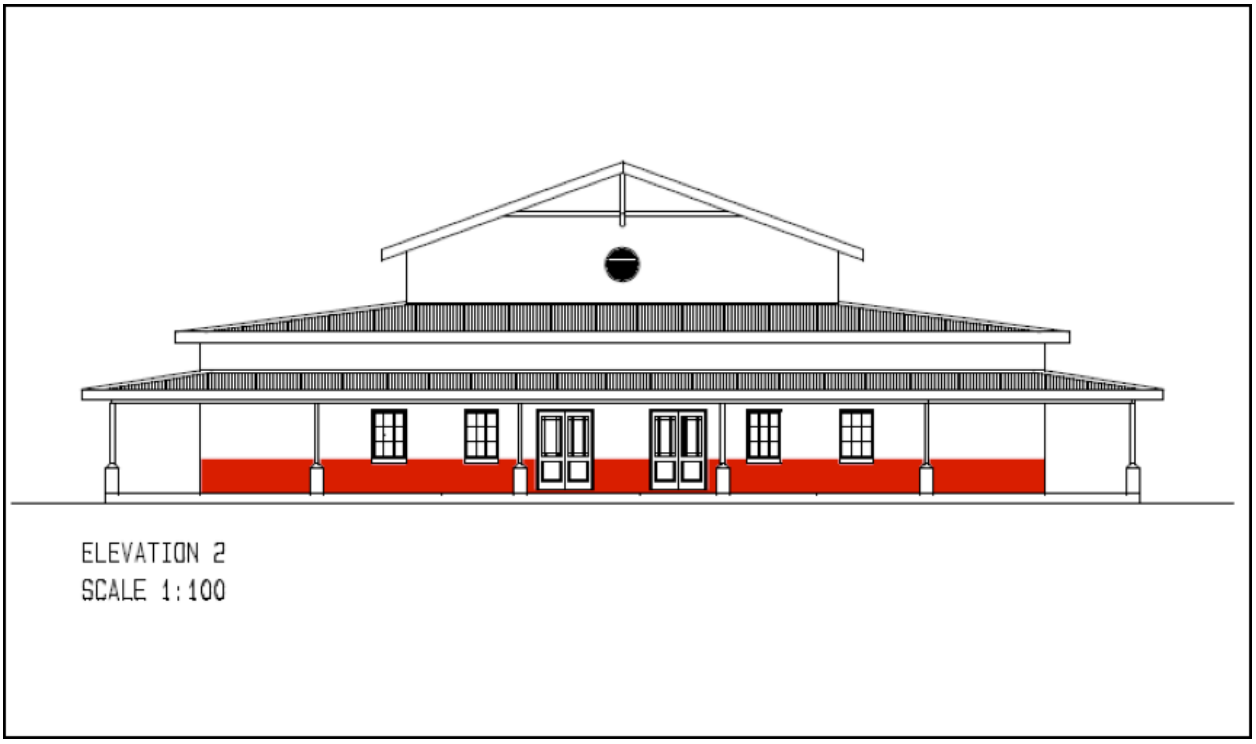


Figure 54. Proposed new meeting hall front view


Figure 55. Artist impression of the proposed new meeting hall

# Management Actions

In this section the cultural significance of each of the Zones identified in the previous section will be analysed and described. The new proposed work will be compared to the heritage significance of the Zone and the actions measured as positive or negative. Development management guidelines will then be given for each proposed activity. These guidelines will then also serve as the basis for the historic documentation work required for the permitting of actions by SAHRA. Specific construction parameters are given in Appendix A of this report.

**Heritage Significance Table**

| Zone | Section | Description | Heritage value | Demolish | Renovate | New |
|---|---|---|---|---|---|---|
| 1 | Block K | Historic classroom | Medium | No | Yes, add veranda | No |
| | Block L | Modern building (1980) | Negative | Yes | No | No |
| | Block M | Historic classroom | High | No | Yes | No |
| 2 | Block A | Historic classroom | Medium | No | Yes, add veranda and walkways | No |
| | Block B | Historic classroom | Medium | No | Yes, add veranda | No |
| | Block C | Historic classroom | Medium | No | Yes, including lean-to turned into storeroom | No |
| | Block D | Modern science building | Negative | No | Changed into style contemporary with other buildings | No |
| | Info kiosk | Concrete noticeboards | Low | Yes | No | No |
| | New class | 2 new classrooms to be built | N/A | N/A | N/A | Yes |
| | Toilet | 1 new toilet room | N/A | N/A | N/A | Yes |
| 3 | Block E | Classes and teacher accommodations | Medium | No | Yes, extensive renovation | No |
| | Block F | Main historic building | High | No | Yes and murals | No |
| | New Class | 3 new classrooms to be constructed | N/A | N/A | N/A | Yes |
| 4 | Block G | Existing toilet room | Low | Yes | No | No |
| | Block H | Library and food services building | Negative | No | Yes, into style contemporary with rest of campus | No |
| | New class | New 4 classroom block to be built in place of Block G | N/A | N/A | N/A | Yes |
| | New Toilet | New toilet building on eastern side of Block H | N/A | N/A | N/A | Yes |
| 5 | New Admin | A new administration block to be built | N/A | N/A | N/A | Yes |
| | NuFa | 2 x new nutritional facilities to be built | N/A | N/A | N/A | Yes |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6 | Block I | Existing classroom | Medium | No | Yes, add veranda | No |
| | Block J | Existing classroom | Medium | No | Yes, add veranda | No |
| | New class | 2 new classrooms to be built | N/A | N/A | N/A | Yes |
| 7 | Tuck shop | Existing tuck shop to be demolished for the construction of a new meeting hall | Negative | Yes | No | No |
| | New hall | Construction of a new 1000 person meeting hall | N/A | N/A | N/A | Yes |

Medium to Low Heritage Significance

Negative Heritage Significance

High Heritage Significance

New Buildings

# 8. Zone 1

## 8.1 Cultural Significance

The vegetation study performed during 2009 indicated that while the exotic *Tipuana tipu* growth is classified as a category 2 invader, it does represent a cultural characteristic of mission stations of a certain era and this needs to be preserved. The palms and other vegetation have low or no cultural significance and can be removed as needed. The *Tipuana* trees add significantly to the *genius loci* of the site by creating a sense of inclusion in the core of the campus. The sense of enclosing and being enclosed within this area is promoted to a large extent by the placement of these trees. It is uncertain if this was the original intent of the landscaper, however it is undeniably the result. The singular focus of this enclosed area would originally have been outwards towards the larger Elim area, however this vista has been blocked by the addition of the new Administration building. The effect of enclosure around the square has therefore been emphasised even more. The new administration building was also not designed with the sense-of-place of the historic campus in mind. The building style does not reflect the overall historic character of the site and as such is having a negative effect on the site as a whole.

## 8.2 Mitigation Actions

- The design ensures that the *Tipuana tipu* trees are preserved on site to further their defining function for the square.
- The water tank will be removed and relocated.
- A memorial garden will be put in place around the foundation remains of the old hall. New technology will be employed to transfer historic pictures of the Lemana School directly on to the concrete remains of the hall while a silhouette, steel frame will be constructed on the perimeter.
- No new landscaping will be performed.
- The new administration building at Block L will be demolished to re-instate the corridor view over the valley that was the original character of this unit.

# 9. Zone 2

## 9.1 Cultural Significance

The three large stone terraces, defining both the practical layout and character of this area, outline the central heritage component of this zone. The stone terraces were constructed in typical rural VhaVenda building style reminiscent of the Late Iron Age although they have been secured with cement. As such these terraces express the intrinsic interaction between the western missionary character and the rural traditional identity that illustrates the unique appeal of the campus as a unit. The stone terraces are therefore not just a practical landscaping component, but also a visual reminder of the duality of the site's character, with one leg in the western world and one leg in the African world.

The strategic planting of *Jacaranda mimosifolia* results in a characteristic component of the landscape that is associated with the school and many other mission related sites from this era. This effect is especially noteworthy in regards the lane planting along the entrance to the school.

## 9.2 Mitigation Actions

- The restoration work planned for this zone will have no impact on the stone terraces. Where necessary rehabilitation and stabilisation of the terrace walling and slopes will be undertake. These actions will not impact on or alter the façade of the stonewalling and is merely aimed at stabilising and preserving this feature.
- None of the trees in this area will be removed.

# 10. Zone 3

## 10.1 Cultural Significance

This zone contains many of the defining architectural components of the Lemana Campus. Specifically some of the facia structures on the main building and the entrance hall define the architectural character. Once again *Jacaranda* trees are a defining aspect as well as the large indigenous *Cussonia spicata* located to the west of the footpath to the school. The relief of a face on the southern façade of the building is that of Flora Maphophe. Rev. Alexander Jacques who was the Principal of the school in 1942 commissioned the artwork.

## Mitigation Actions

- The Jacaranda trees will be retained and where necessary protected from decay.
- The terrace in front of the main building will be preserved and stabilised.
- Landscaping will be performed in context with existing and previous designs.
- A covered walkway will be added to these buildings to create architectural conformity.
- The recent toilet block to the west will be demolished and replaced with a period specific classroom building.

# 11. Zone 4

## 11.1 Cultural Significance

This area was traditionally the meeting site for recreational purposes of students during break times and before and after class. At present this area is strewn with dumped building rubble and other debris. The terrace walling in this area is much more informal than the walling

previously noted with the exception of the terrace near the boundary wall in the north. This terrace is supported by *Ptaeroxylon obliquum* and *Bridelia micrantha* and these will be retained for structural as well as cultural reasons. A single bathroom building is located to the north of the terrace wall. This building's architectural style does not conform to the general character of the campus. It is also not aligned with the rest of the buildings. The building is of a more recent nature and detracts from the site as a whole. The only features that are conducive to improving the heritage significance of the site are some large trees (*Cussonia spicata, Spathodea campanulata* and *Grevillea robusta*). The rest of the features, such as electrical boxes and lines detract from the site's heritage significance.
A prominent retaining wall behind the new Food Services and Library buildings are a distinct feature that will also be retained.

## 11.2 Mitigation Actions

- All features that are defacing Zone 4 will be removed. The building rubble will be removed, electrical wires will be placed underground and the new out of character bathroom building will be demolished to be replaced by a new classroom with similar design features.
- The Jacaranda trees and Vlamboom trees will be retained due to their edge delineation and spatial definition, while the exotic Silk Oak trees will be removed.
- A new classroom will be constructed on the site of the present bathroom building, which will be demolished. This building is of recent nature and detracts from the heritage value of the site as a whole.
- The terrace walls will be rehabilitated and stabilised without changing their design or build characteristics.

# 12. Zone 5

## 12.1 Cultural Significance

This zone is devoid of buildings. The Lemana Monument erected in 2000 is located here. Although there are no buildings at this location there are some remains of other features that have heritage significance. This will be the location of the new administration building and will as such also serve as the focal point of the school campus. According to oral traditions, there used to be a path from the old hall area to the superintendent's house. Along this path, Mr MacDonald, a previous principal of the school, established a rose and ornamental garden together with planting pine and fig trees. Remnants of this garden are still present on the site and have significant heritage value. These include ornamental bulbous species, aloe species, flowering ornamentals, *Philodendron selloum* and *Draceana species*. An opening in the boundary fence of the superintendent's residence marks the position of the original footpath. The southern boundary of this area is demarcated by a large *Ficus natalensis*. The original stone pillars of the entrance gate are still lying in the undergrowth indicating the original location of the entrance to the school.

## 12.2 Mitigation Actions

- The development of the new administrative building as the focal point of the campus will ensure that the very significant monument (erected in 2000), will also be better celebrated due to it's therefore more prominent location within this view shed.
- Zone 1, Zone 5 and the access road is axially aligned and this will frame a new vista over the Elim area.
- The remains of the ornamental garden will be documented and where possible rehabilitated as the heritage significance of this feature is illustrated through oral traditions.
- The original footpaths will be documented and rehabilitated and stabilised.

- Where possible the original footpaths have been incorporated in the new design.
- The original entrance posts will be relocated to the site of the demolished hall to form part of the garden of remembrance.
- The gate located to the south of the site will also be relocated to a more practical location.
- The present access road will be aligned with Zone 1 and Zone 2's configuration.

# 13. Zone 6

## 13.1 Cultural Significance

The ensemble (1930's) is made up of two classrooms that used to be part of the Lemana Practicing School (part of the teacher's training college).

The ensemble follows a 'quad' or courtyard typology, even though it just has a building to the north and south – the low terrace wall and trees, as well as the fact that the two buildings are symmetrically opposed and 'speak to one another', help to give this ensemble a strong sense of unity and place identity.

The architecture of the original buildings consists of rectangular painted (white), plastered buildings on a rough stone plinth and with galvanised CSM gutter less hipped roof (complete with triangular ventilators on apex of the side hips) with new fascia boards, with facades having almost square steel windows with horizontal mullions (typical of the 1930'early 1940's Deco period) punctured into the wall surfaces with two asymmetrically (north building) and symmetrically placed (south building) doors facing the court – a painted (in dark brown) dado ending at window sill level, follows vertically on the stone plinth, with entrance doors being accentuated through vertical paint brackets.

The buildings are architecturally very basic – however, due to being a part of the original buildings of the school and training college, these two buildings have medium/high value.

## 13.2 Mitigation Actions

- The historic south and north buildings will be retained, and any upgrading or additions will sustain the value of the original.
- The ensemble will be developed as an open-sided square with a new building to be built on the west side. The new building will be in dialogue with the whole ensemble.
- A veranda will be added to both the existing buildings

# 14. Zone 7

## 14.1 Cultural Significance

The woodwork buildings are architecturally very basic - as part of the original buildings of the school and training college, the two buildings has medium value due to their remote location. The 'tuck shop' has no architectural value, but is usable. It has strong associational value.

## 14.2 Mitigation Actions

- The historic workshops and garages must be retained, but upgrading to meet current training and safety requirements/standards is necessary – any upgrading, alterations or additions must sustain the value of the originals. Accretions on the east building must be used as memory in additions/alterations.
- New buildings can augment the ensemble.

- The ‘tuck shop’ can be augmented to fulfil the same need in the community (possibly on a place with trees that can be used for parking)
- The area west and north of the tuck shop is ideal for staff parking.
- The area south of the woodwork centre is ideal for additional staff housing.

# Assessment of Impacts

## 15. Historic Sites - Post-Contact Heritage

The Lemana College is an important historical site both due to its age and its connotation with the missionary history of the Limpopo Province. The site is protected under the NHRA due to its age as well as its heritage value.

The main impacts of the project on this site are anticipated to be positive. Only recent buildings, with no heritage significance, will be demolished in an effort to improve the heritage significance of the site as a whole. The remaining new buildings will be renovated to a style, which is in line with the existing architectural and historic style. The only alteration to the historic buildings will be the replacement of modern features that have been installed as a result of on-going maintenance as well as the addition of a covered walkway that will be in tune with the covered walkway at building Block M in Zone 1. This feature will serve a practical purpose as well as bind the architecture of the different buildings to a similar style.

*Nature of Impacts*: Renovation of the Lemana Buildings will result in the improvement of the heritage value of the site.

*Extent of Impacts*: Localised alterations and demolition of non-protected buildings. All planned activities that will impact on historic structures are completely reversible.

| Nature of Impact: Impact of renovation action son the Leman College Campus | | |
|---|---|---|
| | Without Mitigation | With Mitigation |
| Extent | Local (2) | Local (2) |
| Duration | Short term (3) | Short term (1) |
| Magnitude | Low (5) | Low (1) |
| Probability | Probable (3) | Improbable (1) |
| Significance | Medium (30) | Low (4) |
| Status | Negative | Positive |
| Reversibility | Irreversible | Reversible |
| Irreplaceable loss of resource | No | No |
| Can impacts be mitigated | Yes | Yes |
| Mitigation | Documentation of the complete campus by video, photographs and architectural drawings as well as descriptions to ensure that all activities are reversible. | |
| Cumulative impacts | Future maintenance of the buildings could result in a return to negative attribute promotion. | |
| Residual impacts | No residual impacts are anticipated. | |

# Heritage Management Planning

## 16. Minimising the Impact on Archaeological Sites (as per the NHRA)

| Objective 1: Minimising the impact on historic sites |
|---|
| The proposed activities will impact positively on the historic character of the Lemana College. To ensure this, monitoring and documentation will be needed. |

| | |
|---|---|
| Project Component | Renovation of Lemana College Campus |
| Potential Impact | Return of the Lemana College to its original historic character |
| Activity/Risk source | Lemana College Renovation |
| Mitigation Target | Restoration of original character of Lemana College |

| Mitigation: Action | Responsibility | Time Frame |
|---|---|---|
| Documentation of the existing buildings by video, photography, architect drawings and descriptions. | Contracted Heritage Practitioner | Before construction commences, during construction phase. |

| | |
|---|---|
| Performance Indicator | Complete documentation of architectural features of Lemana College Campus to ensure reversibility. |
| Monitoring | During construction phase for 12 months |

## 17. Draft Statement of Significance

*The Lemana High School and Teachers Training College is a cultural landscape resulting from the Swiss Mission Society's beginnings in South Africa and most successfully reflecting their integrated approach to religion, education and health, as it manifested in the Elim region. As an educational institution with a strong missionary Christian basis it played a major role in the training of African teachers in the north of South Africa, and producing a large number of alumni who have made a significant mark in South African society. The evolution of the Lemana cultural landscape is indicative of major epochs in the socio-political evolution of South African society as it pertains to race relations and the approach to the education and cultural progress of the African segment of society. The current revival of Lemana is indicative of a cultural renaissance brought about by alumni from the institution and the democratic Government of South Africa for the good of South African society. The built fabric, landscaping and places of the Lemana cultural landscape, as well as the intangible heritage that is intertwined with the heritage place, has a high amount of remaining authenticity and integrity and has high significance as example of a Missionary School and Training complex as well as an important Botanical centre with old and rare specimens – the historic remains and stories act as important symbols of Missionary intent, State intervention in Missionary education as well as the struggle towards emancipation from oppression, and reflects the dedication inherent in*

*the African component of society, before, during and after Apartheid, to transform their environment through knowledge and to better humankind.*

# 18. Conclusion and Recommendations

The proposed work on the Lemana College Campus will result in the return of the campus to its historic architectural character. All the proposed work is totally reversible and the only buildings that will be demolished are structures of a recent nature that is intruding on the historic character of the site.

It is recommended that the proposed activities are made subject to a permit issued under the NHRA from the Built Environment Committee at the Limpopo branch of the South African Heritage Resources Agency. It is further recommended that the issuing of the permit be subject to the complete documentation of the Lemana Campus via video, photography and architectural drawings. This will ensure that all proposed work can be reversed should the need arise. Further to this study, a Spatial Development Framework (SDF) will have to be formulated for the work on site;

A future detailed Spatial Development Framework should address the following issues:

- Re-establish connection with Rossbach and Valdezia – honouring the people that paved the way to establish Lemana
- Waste management
- Paving type and design
- Landscape policy and vegetation policy
- Lighting
- Construction methods and materials for new roads and parking
- Inclusive design in all interior and exterior spaces
- Accessibility and legibility
- The possibility of additional food production on site
- Sustainable design of all new buildings

The evaluation of Heritage Value for the Lemana Cultural landscape is currently identified as MEDIUM – however, it is important to note that the inherent, but degraded HIGH heritage value of the site can be retrieved through, various conservation methods as well as appropriate planning and design, resulting in a sensitive development with a high positive and permanent impact.

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**APPENDIX A**

**Architects Report of Proposed Work on Site**

*Classroom 1:*

1. Floors and skirting:
    - Replace existing vinyl tiles with new Superflex 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

2. Walls:
    - Prepare and repaint the internal wall.
    - Remove loose and flaking paint.
    - Spot prime bare areas with Alkali resistant Primer.
    - Apply two coats Superior quality universal low-gloss enamel paint.

3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door with FLB doors.
    - Ironmongery as per ironmongery schedule.

4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat

universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.

- Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
- Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
- Service all window latches.

6. Black Boards:
    - Replace.

7. Built in Cupboard:
    - Service all hinges and handles.

8. Ceilings:
    - Replace existing ceiling with Nutec
    - 6mm fibre cement ceiling.
    - New Meranti Cornices.

9. Electrical
    - Light fittings – as per provisional amount
    - Power points – as per provisional amount
    - Air conditioner – None

*Classroom 2:*

1. Floors and skirting:
    - Replace existing vinyl tiles with new Superflex 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.

3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

- Replace external door with FLB doors.
- Ironmongery as per ironmongery schedule.

4. External Security gates:
   - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:
   - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
   - Window sill – stop, sand down, and apply two coats clear eggshell enamel varnish.
   - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
   - Service all window latches.

6. Black Boards:
   - Replace

7. Ceilings:
   - Replace existing ceiling with Nutec 6mm fibre cement ceiling.
   - New Meranti Cornices.

8. Electrical
   - Light fittings – as per provisional amounts
   - Power points – as per provisional amounts
   - Air conditioner – None

*Classroom 3:*

1. Floors and skirting:
   - Replace existing vinyl tiles with new Superflex 2.5mm vinyl tiles.
   - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
   - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.

3. Doors and Doorframes:

- Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
- Replace external door with FLB doors.
- Ironmongery as per ironmongery schedule.

4. External Security gates:

- Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:

- Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
- Window sill – stop, sand down, and apply two coats clear eggshell enamel varnish.
- Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
- Service all window latches.

6. Black Boards:

- Replace

7. Ceilings:

- Replace existing ceiling with Nutec 6mm fibre cement ceiling.
- New Meranti Cornices.

8. Electrical

- Light fittings – as per provisional amount
- Power points – as per provisional amount
- Air conditioner – none

External Work:

- Previously Painted Walls:

    - Sand down to a matt finish; Apply one coat Alkali Resistant Primer; Apply two coats Dulux Weatherguard– colour as per architect.
- Facia – prepare and paint two coats Acrylic PVA.
- Roofs:

    - Allow for a percentage resealing of roof screws.
    - Allow for resealing of all flashing and counter flashing.
- Roof Painting
    - All previously painted roof sheeting
    - Remove rust and oxidation mechanically.
    - Clean with GP cleaner water solution.
    - Apply one coat Prominent Paints Rust Primer.
    - Apply two coats Prominent Premium Roof Paint. Colour as per architect.
- Roof overhangs:
    - Repaint all exposed timber with carbinoleum.

**Block B**

*Classroom 1:*

1. Floors and skirting:

- Replace existing vinyl tiles with new Superflex 2.5mm vinyl tiles.

- Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

2. Walls:

- Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.

3. Doors and Doorframes:

- Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
- Replace external door with FLB doors.
- Ironmongery as per ironmongery schedule.

4. External Security gates:

- Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:

- Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
- Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
- Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
- Service all window latches.

6. Black Boards:

- Replace

7. Ceilings:

- Replace existing ceiling with Nutec 6mm fibre cement ceiling.
- New Meranti Cornices.

8. Electrical

- Light fittings - as per provisional amount
- Power points - as per provisional amount
- Air conditioner – none

*Classroom 2:*

1. Floors and skirting:
    - Replace existing vinyl tiles with new Superflex 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.

3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door with FLB doors.
    - Ironmongery as per ironmongery schedule.

4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window sill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.

6. Black Boards:
    - Replace

7. Ceilings:
    - Replace existing ceiling with Nutek 6mm fibre cement ceiling.
    - New Meranti Cornices.

8. Electrical

- Light fittings - as per provisional amount
- Power points - as per provisional amount
- Air conditioner – none

External Storeroom:

1. Floors and skirting:

- Replace existing vinyl tiles with new Superflex 2.5mm vinyl tiles.
- Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

1. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
2. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
3. External Security gates:
    a. Prepare and paint
4. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
5. Electrical
    - Light fittings - as per electrical engineer.
    - Power points - as per electrical engineer.
    - Air conditioner – none

External Work:

- Previously Painted Walls:
    - Sand down to a matt finish;
    - Apply one coat Alkali Resistant Primer;
    - Apply two coats superior quality Exterior textured paint; colour as per architect.
- Facia – prepare and paint two coats Acrylic PVA.
- Roofs:
    - Allow for a percentage resealing of roof screws.
    - Allow for resealing of all flashing and counter flashing.
- Roof Painting
    - All previously painted roof sheeting
    - Remove rust and oxidation mechanically.

- Clean with GP cleaner water solution; Apply one coat Rust Primer; Apply two coats superior quality Roof Paint - Colour as per architect.

- Roof overhangs:
  - Repaint all exposed timber with carbolineum.
- Tree felling:
  - Allow for Landscape Architect for trimming of trees.
- Add veranda as per detail.

**Block C**

Classroom 1:

1. Floors and skirting:
   - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
   - Meranti Skirting –
     Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
   - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.


3. Doors and Doorframes:
   - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
   - Replace external door as per door schedule
   - Ironmongery as per ironmongery schedule.
4. External Security gates:
   - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
   - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
   - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
   - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.

- Service all window latches.

6. Black Boards:
    - Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
8. Electrical
    - Light fittings - as per electrical engineer
    - Power points - as per electrical engineer
    - Air conditioner – None

Classroom 2:

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
    - Prepare and repaint the internal wall.
      Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars –
      Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.

    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.

6. Black Boards:
    - Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
8. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – none

External Work:

- Previously Painted Walls:
    - Sand down to a matt finish;
      Apply one coat Alkali Resistant Primer;
      Apply two coats Dulux Weatherguard– colour as per architect.
- Facia – prepare and paint two coats
  Acrylic PVA.
- Roofs:
    - Allow for a percentage resealing of roof screws.
    - Allow for resealing of all flashing and counter flashing.
    - All concrete roofs to be water proofed – 4mm "Derbigum SP"
- Roof Painting
    - All previously painted roof sheeting
    - Remove rust and oxidation mechanically.
    - Clean with GP cleaner water solution.
    - Apply one coat superior quality Rust Primer.
    - Apply two coats superior quality roof paint. Colour as per architect.
- Roof overhangs: Repaint all exposed timber with carbolineum
- Add veranda as per detail.

**Block D**

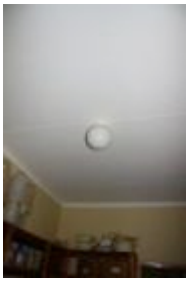
Laboratory 1 & 2:

1. Floors and skirting:
    - Install over existing Grano floor with new 2.5mm vinyl tiles.

- Install new 75x19mm Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Black Boards:
    a. Replace
7. Ceilings:
    - Repaint existing ceiling.
    - Paint existing cornices.
8. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

<u>Science Store 1 & 2:</u>


1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.

- Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.

4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Black Boards:
    - Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
8. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

**Stoep:**

External Work:

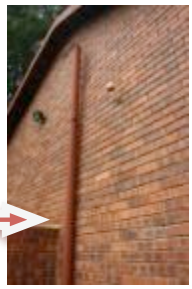

- Walls and columns:
  Plaster existing face brick walls.
  Apply one coat Alkali Resistant Primer;
  Apply two coats superior quality exterior textured paint:
  colour as per architect.
- Facia – prepare and paint two coats Acrylic PVA.
- Roof


  - Allow to replace broken roof tiles
  - Apply two coats superior quality Roof Paint. Colour as per architect.

- Repaint all exposed timber at roof overhangs with carbolineum.
- Allow for Structural Engineer to investigate cracks in wall.


- Allow for Ground Works

- Remove all gutters and downpipes



**Block E**

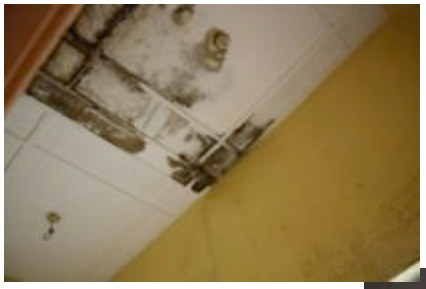
Classroom 1 & Store Room:

1. Floors and skirting:
    - Repair existing grano floors.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
    - Prepare and repaint the internal wall.
      Remove loose and flaking paint.
      Spot prime bare areas with Alkali resistant Primer.
      Apply two coats Superior quality universal low-gloss enamel paint.

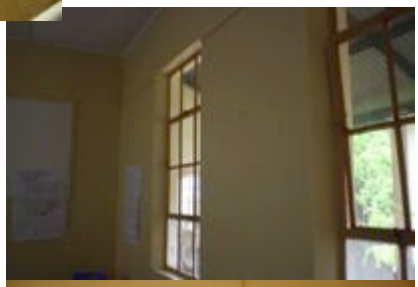
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.

6. Black Boards:
    - Replace

7. Ceilings:



    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.



8. Electrical
    - Light fittings – as per provisional amount
    - Power points – as per provisional amount
    - Air conditioner – None
    -

Classroom 2, 3 4 & 5:

1. Floors and skirting:
    - Repair crack in floor – allow for Structural Engineer to investigate
    - Replace existing vinyl floor tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting:
    - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.

3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat;

Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

- Replace external door as per door schedule.
- Ironmongery as per ironmongery schedule.

4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:
    - Frames: Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Black Boards:
    - Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
8. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

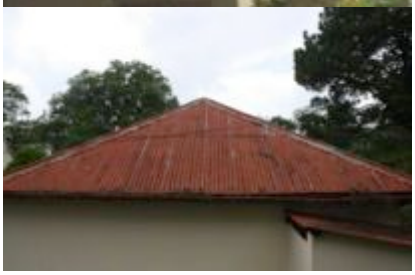
<u>Veranda</u>:

- Columns to be painted
- Grano floors to be repaired.

<u>External Work:</u>



- Previously Painted Walls:
    - Sand down to a matt finish; Apply one coat Alkali Resistant Primer; Apply two coats superior quality exterior textured paint– colour as per architect.



- Facia:
  - Repair broken fasia
  - Prepare and paint two coats Acrylic PVA.
- Roofs:
  - Allow for a percentage resealing of roof screws.
  - Allow for resealing of all flashing and counter flashing.
- Roof Painting
  - All previously painted roof sheeting
  - Remove rust and oxidation mechanically.
  - Clean with GP cleaner water solution.
  - Apply one coat superior quality Rust Primer.
  - Apply two coats superior quality roof paint. Colour as per architect.
- Roof overhangs:
  - Repaint all exposed timber with carbolineum

**Block F**

Entrance Hall:

Classroom 1:

1. Floors and skirting:
   - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
   - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
   - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
   - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal

undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
- Replace external as per door schedule.
- Ironmongery as per ironmongery schedule.

4. External Security gates:
   - Remove all rust and treat with rust neutralizer;
   - Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:
   - Frames and Burglar Bars – Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint: colour as per architect.
   - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
   - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
   - Service all window latches.

6. Black Boards:
   a. Replace
7. Ceilings:
   - Replace existing ceiling with 6mm fibre cement ceiling.
   - New Meranti Cornices.
8. Electrical
   - Light fittings: as per electrical engineer.
   - Power points: as per electrical engineer.
   - Air conditioner – None

<u>Classroom 2:</u>

1. Floors and skirting:
   - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
   - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
   - Prepare and repaint the internal wall. Remove loose and flaking paint.
   - Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:

- Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
- Replace external door as per door schedule.
- Ironmongery as per ironmongery schedule.

4. External Security gates:
    a. Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.

6. Black Boards:
    a. Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.

8. Electrical
    - Light fittings: as per electrical engineer.
    - Power points: as per electrical engineer.
    - Power Skirting: As per Electrical engineer.
    - Air conditioner – None

<u>Classroom 3:</u>

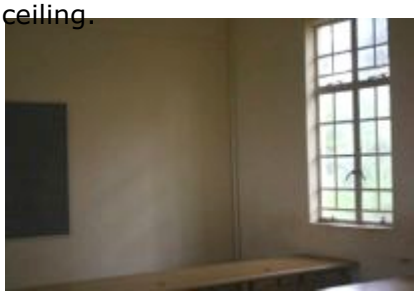
1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

2. Walls:

- Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.

3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear Eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.

6. Black Boards:
    a. Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.



8. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – none

<u>Classroom 4:</u>

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:

- Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
- Replace external door as per door schedule.
- Ironmongery as per ironmongery schedule.

4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars – Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint: colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Black Boards:
    a. Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
8. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

<u>Classroom 5:</u>

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

- Replace external door as per door schedule.
- Ironmongery as per ironmongery schedule.

4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Black Boards:
    a. Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
8. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

<u>Classroom 6:</u>

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Black Boards:
    a. Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
8. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

<u>Office 1:</u>

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.

- Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
- Service all window latches.

6. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
7. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

Office 2:

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
7. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

Office 3:

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
7. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

<u>Verandas 1 and 2</u>:

<u>External Work:</u>
<u>Front Facade:</u>


- Previously Painted Walls:



  - Sand down to a matt finish; Apply one coat Alkali Resistant Primer; Apply two coats superior quality exterior textured paint– colour as per architect.

a. Facia – prepare and paint two coats Acrylic PVA.
b. Roofs:
   - Allow for a percentage resealing of roof screws.
   - Allow for resealing of all flashing and counter flashing.

c. Roof Painting
   - All previously painted roof sheeting
   - Remove rust and oxidation mechanically.
   - Clean with GP cleaner water solution.
   - Apply one coat Rust Primer.
   - Apply two coats superior quality roof paint. Colour as per architect.

d. Roof overhangs:
   - Repaint all exposed timber with carbolineum.

**Block G:**
**Ladies Toilets & Gents Toilets**

- Block G to be demolished.

**Block H:**
Library & Home Economics:

1. Floors and skirting:
   - Install over existing Grano floor new 2.5mm vinyl tiles.
   - Install new Meranti Skirting - Sand down to a matt finish;
   - Apply two coats Eggshell Enamel paint.

2. Walls:
   - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:

- Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
- Replace external door as per door schedule.
- Ironmongery as per ironmongery schedule.

4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
7. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

<u>Store Room 1 & 2:</u>

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.

3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Ceilings:

- Replace existing ceiling with 6mm fibre cement ceiling.
- New Meranti Cornices.

6. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

Veranda:

- Repair Grano floors.

External Work:

- Previously Painted Walls:
    - Sand down to a matt finish; Apply one coat Alkali Resistant Primer; Apply two coats superior quality exterior textured paint– colour as per architect.
- Facia – prepare and paint two coats Acrylic PVA.
- Roofs:
    - Allow for a percentage resealing of roof screws.
    - Allow for resealing of all flashing and counter flashing.
- Roof Painting
    - All previously painted roof sheeting
    - Remove rust and oxidation mechanically.
    - Clean with GP cleaner water solution.
    - Apply one coat Rust Primer.
    - Apply two coats superior quality roof paint. Colour as per architect.
- Roof overhangs:
    - Repaint all exposed timber with carbolineum.

**Block I**

Gathering Hall:

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting –
      Sand down to a matt finish;
      Apply two coats Eggshell Enamel paint
2. Walls:
    - Prepare and repaint the internal wall.
    - Remove loose and flaking paint.
    - Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss Enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

- Replace external door as per door schedule.
- Ironmongery as per ironmongery schedule.

4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.

6. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.

7. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

<u>External Work:</u>

- Previously Painted Walls:

    - Sand down to a matt finish; Apply one coat Alkali Resistant Primer; Apply two coats superior quality exterior textured paint– colour as per architect.
- Facia – prepare and paint two coats Acrylic PVA.

- Roofs:
    - Allow for a percentage resealing of roof screws.
    - Allow for resealing of all flashing and counter flashing.

- Roof Painting
    - All previously painted roof sheeting
    - Remove rust and oxidation mechanically.
    - Clean with GP cleaner water solution.
    - Apply one coat Rust Primer.
    - Apply two coats superior quality roof paint. Colour as per architect.
- Roof overhangs:
    - Repaint all exposed timber with carbolineum.
- Add veranda as per detail.

**Block J:**

Classroom 1:

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.

2. Walls:
    - Repair crack in wall.
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss Enamel paint.

3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:

- Frames and Burglar Bars –
  Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint: colour as per architect.
- Window cill – stop, sand down, and
- apply two coats clear Eggshell Enamel varnish.
- Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
- Service all window latches.

6. Black Boards:
   - Replace
7. Ceilings:
   - Replace existing ceiling with 6mm fibre cement ceiling.
   - New Meranti Cornices.

8. Electrical
   - Light fittings –
     as per electrical engineer.
   - Power points – as per electrical engineer.
   - Air conditioner – None

Classroom 2:

1. Floors and skirting:
   - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
   - Meranti Skirting - Sand down to a
   - matt finish; Apply two coats
   - Eggshell Enamel paint.
2. Walls:
   - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss Enamel paint.

3. Doors and Doorframes:
   - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
   - Replace external door as per door schedule.
   - Ironmongery as per ironmongery schedule.
4. External Security gates:

- Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Black Boards:
    a. Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
8. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – none

<u>External Work:</u>

- Previously Painted Walls:

    - Sand down to a matt finish; Apply one coat Alkali Resistant Primer; Apply two coats superior quality exterior textured paint– colour as per architect.
- Facia – prepare and paint two coats Acrylic PVA.
- Roofs:
    - Allow for a percentage resealing of roof screws.
    - Allow for resealing of all flashing and counter flashing.

- Roof Painting
    - All previously painted roof Sheeting - Remove rust and oxidation mechanically.
    - Clean with GP cleaner water solution.
    - Apply one coat Rust Primer.
    - Apply two coats superior quality roof paint. Colour as per architect.

- Roof overhangs:
    - Repaint all exposed timber with carbolineum.
- Add veranda as per detail.

**Block K**

Classroom 1 & 2:

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Windows:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
    - Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
    - Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
    - Service all window latches.
6. Black Boards:
    a. Replace
7. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.

- New Meranti Cornices.

8. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

External Work:

- Previously Painted Walls:

    - Sand down to a matt finish; Apply one coat Alkali Resistant Primer; Apply two coats superior quality exterior textured paint– colour as per architect.
- Facia – prepare and paint two coats Acrylic PVA.
- Roofs:
    - Allow for a percentage resealing of roof screws.
    - Allow for resealing of all flashing and counter flashing.

- Roof Painting
    - All previously painted roof sheeting
    - Remove rust and oxidation mechanically.
    - Clean with GP cleaner water solution.
    - Apply one coat Rust Primer.
    - Apply two coats superior quality exterior textured paint- Colour as per architect.
- Roof overhangs:
    - Repaint all exposed timber with carbolineum.
- Add veranda as per detail.

**Block L:**

- Block L to be demolished.

**Block M:**

Rooms 1, 2 & 3:

1. Floors and skirting:
    - Repair existing grano floor.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.


2. Walls:
    - Allow for structural engineer's input with regards to the cracks in the walls.

    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.

5. Windows:

- Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.
- Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
- Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
- Service all window latches.

6. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - Add meranti cleat grid system to match existing.

7. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – None

<u>Store Room:</u>

1. Floors and skirting:
    - Replace existing vinyl tiles with new 2.5mm vinyl tiles.
    - Meranti Skirting - Sand down to a matt finish; Apply two coats Eggshell Enamel paint.
2. Walls:
    - Prepare and repaint the internal wall. Remove loose and flaking paint. Spot prime bare areas with Alkali resistant Primer. Apply two coats Superior quality universal low-gloss enamel paint.
3. Doors and Doorframes:
    - Doorframes - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
    - Replace external door as per door schedule.
    - Ironmongery as per ironmongery schedule.
4. External Security gates:
    - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint.
5. Window:
    - Frames and Burglar Bars - Remove all rust and treat with rust neutralizer; Spot priming bare metal surfaces with Zinc Phosphate Alkyd Resin Primer; Apply one coat universal undercoat; Apply two full coats of ail Alkyd Low-Gloss Enamel Paint – colour as per architect.

- Window cill – stop, sand down, and apply two coats clear eggshell enamel varnish.
- Glass - Clean all glass and remove paint spots; Replace broken or cracked glass with 4mm clear glass.
- Service all window latches.

6. Ceilings:
    - Replace existing ceiling with 6mm fibre cement ceiling.
    - New Meranti Cornices.
7. Electrical
    - Light fittings – as per electrical engineer.
    - Power points – as per electrical engineer.
    - Air conditioner – none

<u>Veranda:</u>

- Repair Grano floor.
- Replace roof sheeting

<u>External Work:</u>

- Previously Painted Walls:
    - Sand down to a matt finish; Apply one coat Alkali Resistant Primer; Apply two coats Superior quality exterior textured paint– colour as per architect.
- Facia – prepare and paint two coats Acrylic PVA.
- Roofs:
    - Replace damaged roof sheeting as per roof plan.
- Roof Painting
    - Apply one coat Rust Primer;
    - Apply two coats Superior quality roof paint- Colour as per architect.
- Roof overhangs:
    - Repaint all exposed timber with carbolineum.

**APPENDIX B**

# CIVIL ENGINEERING SERVICES AT LEMANA COLLEGE: VHEMBE DISTRICT

## ENGINEERING SERVICES REPORT

## TABLE OF CONTENTS

# 1.INTRODUCTION

WSM Leshika Consulting (Pty)Ltd was appointed by Department of Public Works as Engineers for the construction of Lemana College. The Engineering Report is prepared for Heritage Report purposes.

# 2.LOCALITY

The proposed site for Lemana College is located in Vhembe District of Limpopo Province as shown on Figure 1 below.

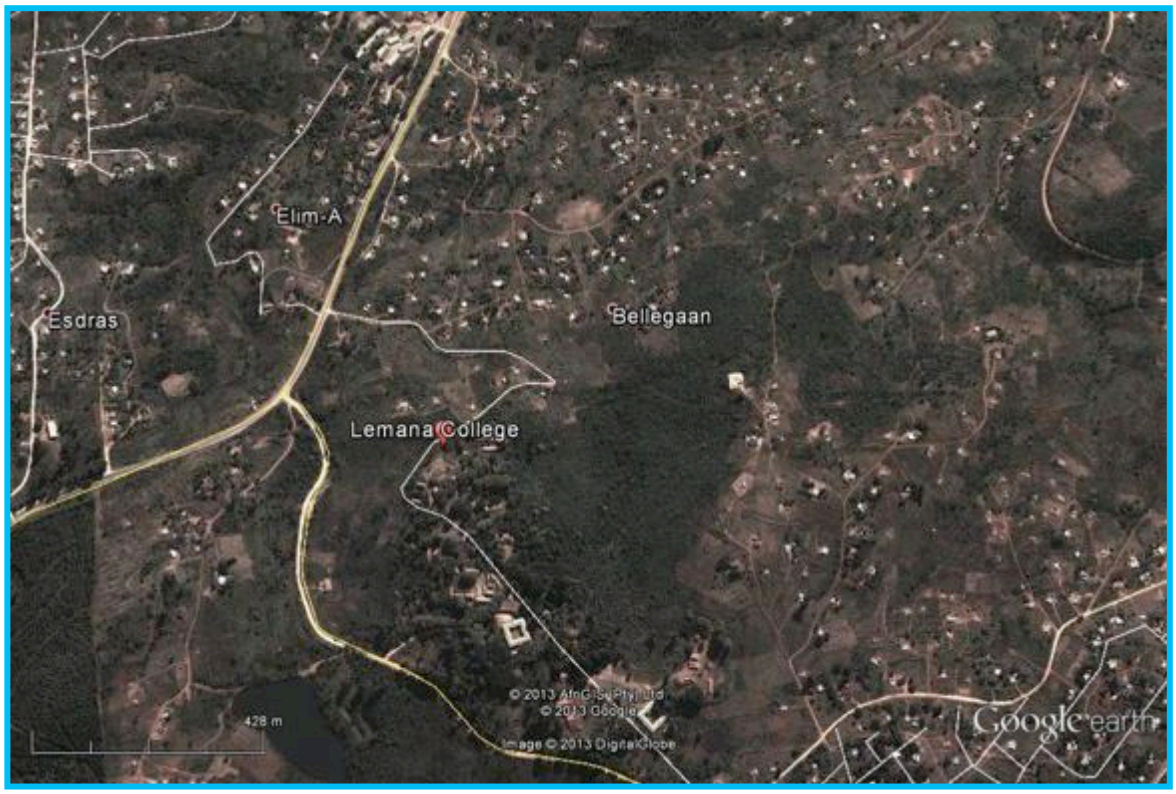



**Figure 1 – Locality of proposed Lemana College**

# 3.GENERAL DISCRIPTION

The site is the location of an old Lemana College, some of old buildings are currently used by the Department of Education. No schooling activity at present.

In future the site will be used for education purposes only. No residential area/ school hostel is envisaged in the proposed development.

Number of learners is planned at 1000 and the staff is estimated to be approximately 100 people.

List all the proposed rights that the development will have. This is needed for the water, sewer and solid waste calculations.

# 4. WATER SERVICES

## 4.1 WATER SUPPLY

There are three boreholes located at the site of the Lemana College.

However only one borehole will be used for future development. This borehole will be tested and the yield of the borehole and quality of water will be established.

**Figure 2: Water pumped from the borehole to the elevated tank located at the site**

## 4.2 WATER DEMAND

Current water demand is not known as the information regarding number of people working currently in the offices or staying on the premises is not available, use 0,8kl/day/100m$^2$ of office.

Future water demand, due to the presence of approximately 1100 learners and staff members, will be 20,000l/ day. This includes usage of water for sanitation, kitchens, laboratories, etc.

The area of the school has extensive gardens which will require regular watering and estimated water demand for this purpose is also 20,000 l/day.

## 4.3 WATER STORAGE

There is an elevated tank available on site. This tank will not be used for the new development of the school.

Future demand of water of 40,000 l/day will require installation of additional elevated tanks of total capacity of 40,000l – one day water demand.

Water will be reticulated from the tank to the toilets, administration block (toilets) and Nutrition Centers (cooking). Water will be also reticulated to the gardens.

# 5.SANITATION SERVICES

Currently a septic tank and french drain are used for the toilets. Due to the fact that the condition of the system is not up to the standard it will not be used for the new development.

It is proposed that the system of two septic tanks, built of bricks and sealed with the french drains will be provided for the kitchens, administration block and toilets.

# 6.ROADS

There is an access road from the gate to the site of new development. The length of the road is approximately 250m. The road is a gravel road in bad condition.

There are also existing walk ways between the buildings, concrete and paved

It is proposed that the access road will be reconstructed as gravel with the paved parking area. All existing walkways will be rehabilitated.

This Services Report was approved by Jan Fanoy, in his capacity as Director, on behalf of WSM Leshika Consulting (Pty) Ltd.

Jan Fanoy Pr. Eng.
Director