

Cardell

Submission No. 1

(DFAT Nairobi)

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CONSTRUCTION OF THE NEW AUSTRALIAN HIGH COMMISSION

NAIROBI, REPUBLIC OF KENYA

STATEMENT OF EVIDENCE FOR PRESENTATION TO
THE PARLIAMENTARY STANDING COMMITTEE ON
PUBLIC WORKS

SUBMISSION 1



Australian Government

Department of Foreign Affairs and Trade

Overseas Property Office

Date of Submission: 9 December 2013

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1 IDENTIFICATION OF THE NEED

1.1 Project objectives

- 1.1.1 In 2004-05, a global review of physical security at Australia's overseas missions was undertaken which identified a number of high risk chanceries, including the current mission in Nairobi.
- 1.1.2 The Department of Foreign Affairs and Trade (DFAT) seeks approval from the Parliamentary Standing Committee on Public Works (PWC) to proceed with a purpose built new Australian High Commission (AHC) complex on Commonwealth owned land in the suburb of Rosslyn, approximately 15 kilometres from the Nairobi city centre. This facility will be developed and owned by the Overseas Property Office (OPO) within DFAT.
- 1.1.3 Under the Administrative Order Arrangements of 26 November 2001, DFAT is responsible for "overseas property management, including, acquisition, ownership, and disposal of real property". This activity is to be undertaken by OPO, which manages the overseas estate, and will fund and construct the new works.
- 1.1.4 The new AHC complex will serve as Australia's ongoing permanent mission to Kenya. The chancery will be tenanted by DFAT (including the previous AusAID); the Department of Immigration and Border Protection (DIBP); the Australian Trade Commission (Austrade); the Australian Centre for International Agricultural Research (ACIAR) and DTZ—DFAT's Overseas Property Office's overseas facilities managers. The current staff numbers in the AHC include 20 Australian based (A-Based) officers including the High Commissioner and 57 locally engaged staff (LES) plus guards, cleaners and gardeners.

1.2 Historical background

- 1.2.1 The current leased chancery is located at Riverside Drive, approximately three kilometres from the Nairobi city centre, in a free-standing purpose-built office building constructed in 1989. The lease has been extended until May 2015 with an option to renew to 2023. The existing three-storey building has been progressively modified over the years resulting in irregular and inefficient space planning, poor indoor environmental quality and severely compromised security protection in the prevailing security environment. There are also fire compliance issues. All available space, including conference rooms and staff facilities, has been refurbished for use as office space yet some AHC staff are currently working in temporary accommodation built over the obsolete tennis courts.
- 1.2.2 Pending relocation of the chancery, upgrades to perimeter security have been completed. These include a new gate, vehicle inspection point and guardhouse. While this improves security protection, the overall security risk remains high. Mitigation measures to manage fire and ongoing

compliance issues while not compliant with Australian Standards provides mitigation of key safety concerns in the interim.

- 1.2.3 Approval was given in the 2013 Budget to fund a new development, based on current physical security requirements, for the construction of a new AHC complex on a suitable site to enable appropriate perimeter security setbacks to the chancery and to accommodate all represented agencies. Further construction, refurbishment or redevelopment of the current site will not improve one of the most important security shortcomings which is to provide sufficient set back from a major thoroughfare. Various aspects of the site and the building do not comply with current security guidelines and these deficiencies can only be addressed by relocation and new construction. The option of leasing office premises for a new chancery was ruled out following an assessment of the local property market which revealed that no suitable commercial leasehold property was available that could provide the physical security required.
- 1.2.4 In February 2008 the Australian Government acquired 11,740 square metres of land for construction of a new purpose-built AHC. The site is located at Lot 7716/42 Limuru Road in the suburb of Rosslyn, which is approximately 15 kilometres from the Nairobi city centre. The main eastern site boundary extends 95 metres along Limuru Road. The site extends 105 metres to the rear creating a rough square with an irregular battle-axe section of approximately 2,600 square metres protruding into the north western corner.

1.3 Need

- 1.3.1 Advancing the interests of Australia and Australians overseas requires a secure facility to support the achievements of government outcomes in a challenging international environment
- 1.3.2 Australia's relations with Kenya are based on Kenya's key role and position in East Africa and its importance in multilateral bodies such as the United Nations, the African Union, the Commonwealth and the World Trade Organization. The AHC leads the whole of government implementation of Australia's policy of strengthening trade, investment and people to people links with East Africa. Australia and Kenya maintain High Commissions in Nairobi and Canberra respectively, and while Australia's engagement with Kenya and Africa more broadly has grown significantly in recent years, so too has Australia's representation in Nairobi. For instance DIBP at the AHC is now responsible for East, West and North Africa while the current Aid Program manages the development assistance relationship with Kenya, Tanzania, Uganda, South Sudan, Eritrea and Somalia.
- 1.3.3 The existing chancery building no longer meets the security, operational and accommodation needs of the represented agencies in an environment of worsening security conditions in Africa, particularly in light of the recent terrorist event in Nairobi. While the new development proposal is driven by the imperative to provide more secure accommodation, it should also be noted that the existing chancery premises have for some time not provided appropriate office accommodation. While various retrofits and

modifications have been made to accommodate increased and changing agency requirements, many aspects such as security setbacks, compound access, building engineering services, office layouts, staff facilities and office space availability have become deficient.

- 1.3.4 Most of the office layouts are dysfunctional and fail to meet basic requirements. Incremental alterations over the life of the building have meant that operational functions have been accommodated on an ad hoc basis. The resultant layouts do not allow for efficient operations within the chancery, while currently some staff work in temporary office accommodation constructed over obsolete tennis courts in the grounds. A new secure purpose-designed chancery will provide an efficient and effective modern office work environment.
- 1.3.5 The current leased chancery, although compliant with local Standards, has significant fire compliance and general building compliance deficiencies when benchmarked against Australian Standards issues. The new chancery will be designed to meet the requirements of the Building Code of Australia (BCA) and the Disability Discrimination Act (DDA), and will meet the appropriate Work, Health & Safety Act (WHS) requirements.
- 1.3.6 As well as meeting the DFAT physical security requirements for the protection of staff and visitors, the new chancery will be planned to meet current and future tenancy operational and technological requirements. The proposed building configuration will facilitate provision of future expansion space if required. As owner, the Australian Government will have management and maintenance control of the chancery complex and therefore will be able to provide reliable and self-sufficient services not available in leased office accommodation.

1.4 Description of proposal

- 1.4.1 The Nairobi High Commission proposal encompasses the design and construction of a new chancery complex on an 11,740 square metre site located at Lot 7716/42 Limuru Road in the suburb of Rosslyn located approximately 15 kilometres from the Nairobi city centre in a district known as 'Karura Forest. The site is situated on top of a rise, with nominal surrounding development, with frontage to Limuru Road and approached from the city through residential and diplomatic enclaves,. The chancery will provide appropriate physical security to address the DFAT threat assessment. The project will also provide an efficient, modern, functional chancery complex to accommodate DFAT; DIBP; Austrade and ACIAR including a recreational pavilion, an energy services building, car parking, landscaping and two entry guardhouses all enclosed within a secure perimeter.
- 1.4.2 The High Commission Complex, through the use of public spaces, conference rooms and outdoor areas, facilities will be able to accommodate events such as official receptions, exhibitions and trade displays, meetings, lectures and business missions.

- 1.4.3 The project design also includes all necessary engineering services infrastructure to provide full support facilities such as emergency power, sewerage treatment, potable and fire-fighting water storage, potable water treatment along with official and Australian-based staff private car parking situated in landscaped surrounds within the secure compound.

1.5 Options considered

- 1.5.1 Following the decision on security grounds to proceed with the planning for a new complex, a number of development options were reviewed. These were:
- (a) Remain in current location and lease additional space in other premises;
 - (b) Lease alternative accommodation; or
 - (c) Construct a new purpose designed chancery on a 'greenfield' site.
- 1.5.2 Investigations, including preliminary design work and preparation of feasibility estimates, have been undertaken by DFAT for the options. These studies considered the mandatory building security setback requirements in order to mitigate blast and the ongoing operational requirements of the mission, the availability of temporary space, and the relative costs.

1.6 Reasons for adopting proposed course of action

- 1.6.1 The construction of a new chancery on a 'greenfield' site will offer the following advantages:
- (a) Provision of appropriate physical security arrangements;
 - (b) A purpose-designed building with appropriate spatial, functional and efficient office space along with contemporary information, communication and technology (ICT) infrastructure for the occupying agencies;
 - (c) A building which complies with BCA, DDA and WH&S requirements and standards;
 - (d) Minimal disruption to the operation of the AHC as the existing facility can continue to operate until the new facility is ready for occupation; and
 - (e) The opportunity to build-in space to accommodate future office expansion.
- 1.6.2 Construction of a new or refurbished and extended chancery on the site of the present leased complex was rejected as the physical security requirements could not be met.
- 1.6.3 The option of leasing commercial office premises for a new chancery was ruled out following an assessment of the local property market which revealed that no suitable leasehold property or opportunity for a pre-

commitment lease that was cost effective was available that could meet the physical security requirements.

1.7 Environmental impact assessments

- 1.7.1 There is no known requirement for this proposal to undergo an environmental impact assessment.
- 1.7.2 The site will be cleared of all existing minor vegetation and any in-ground services.
- 1.7.3 Consultation with local engineers indicates that the geology of the site should not present any difficulty to the proposed structural design of the building.
- 1.7.4 Site earthworks will be required to raise the chancery ground floor in order to enhance the arrival presentation of the building and avoid any possibility of localised flooding.
- 1.7.5 Although the site is not in a heavily built-up area, implementation of and adherence to suitable noise and dust mitigation measures, including a traffic management plan and suitable restrictions on any noisy night work during the construction period may be necessary depending on the circumstances of the neighborhood at the time of construction.

1.8 Heritage considerations

- 1.8.1 The new complex will be designed in sympathy with the surrounding environment using local materials where appropriate.
- 1.8.2 There are no known heritage considerations associated with the construction on the site of the new complex.

1.9 Details of organisations consulted

- 1.9.1 Consultations have been held with DFAT's Security and IT Branch's as well as with Commonwealth departments and agencies represented in Nairobi. The space and functional requirements have been confirmed by the relevant agencies.

Key information sought from agencies during the briefings was as follows:

- a) Functional requirements at the new location, in terms of types of spaces required (expressed in functional terms, e.g., "meeting room"), of what size and what quantity;
- b) Spatial relationships internally within each agency, and to other agencies and/or shared use facilities, e.g., "should be adjacent to large conference room";
- c) Key issues in relation to building services and maintenance, both in terms of "lessons learned" from the existing and similar facilities and important considerations for the design of the new facility. Other spatial implications in respect of building services, including plant

room sizes, car parking, workshops and bulk storage requirements were also sought;

- d) Feedback on improvements to the nature and configuration of existing facilities;
- e) Extent and nature of interaction between agencies, the public, businesses and other parties both currently and in the future; and
- f) The role of individual agencies and the overall role of the AHC in delivering government objectives in East Africa.

1.9.2 Following agency consultations a detailed Functional Design Brief (FDB) was formulated. The proposed design for the complex has been developed in response to the FDB to meet each agency's individual functional, spatial and inter-agency relationship requirements.

1.9.3 The design has been developed to incorporate energy efficient solutions throughout to reduce the buildings' operational costs and environmental footprint. It is proposed that as the design develops consultation will occur with the Australian Government Energy Efficiency Team based on the policy adopted under the Energy Efficiency in Government Operations (EEO).

1.10 Amount of revenue derived from the project

1.10.1 Occupying agencies will be charged market based rent as determined by an independent valuer prior to occupation in accordance with the "Rent Setting Policy for the Commonwealth Overseas Owned Estate, July 2011".

1.10.2 The independent valuer's assessment will take account of the quality and standard of the property (excluding tenant funded items) in the local market and to the local market rent the valuer considers applicable, without a requirement, necessarily, to achieve a fixed commercial rate of return.

1.10.3 This approach was agreed by Ministers following the Joint Review of OPO and is consistent with the "Governance Framework for the Commonwealth Overseas Owned Estate, July 2011" and the "Commonwealth Property Management Framework" where applicable.

2 TECHNICAL INFORMATION

2.1 Location and climate

2.1.1 Nairobi is situated close to the Equator at an altitude of 1,795 metres above sea level. It enjoys an equable climate providing a generally comfortable diurnal temperature range. The main climatic features are the definite wet and dry seasons, and the absence of any large seasonal change in temperature.

- 2.1.2 There is an average of nearly seven (7) hours of sunshine with 30% more sunshine occurring during the afternoon than the morning. There is also considerably more direct sunshine during the period March to August when the sun is in the Northern Hemisphere. These considerations have some impact on the design of western elevations in relation to the structures and facades.
- 2.1.3 The average annual rainfall in Nairobi is about 900 mm with highly unpredictable rainfall precipitation between years. There are two rainy seasons; one from mid-March to the end of May called the "Long Rains" and the other from mid-October to mid-December called the "Short Rains". Given the double wet season, harvesting of rainwater at the site is considered an opportunity.
- 2.1.4 Located just over 400 kilometres from the ocean, Nairobi does not experience constant humid heat; however there is a very marked daily range of relative humidity. In the early mornings the air is frequently at or very close to saturation, whereas in the afternoons the humidity usually drops to around 50% and may fall as low as 10% on clear sunny days in February and March.
- 2.1.5 The wind is predominantly easterly throughout the year. The strongest winds occur during the dry season in early March when speeds of 15-20 kilometres per hour are not uncommon from mid-morning to early afternoon. During the night any wind is usually light. In the strong winds sometimes associated with thunderstorms, short-lived squalls of up to 50 kilometres per hour have been known to occur.

2.2 Scope of work

- 2.2.1 The scope of this project involves the construction of a new AHC complex including the chancery, all support and recreational buildings, the site infrastructure consisting of civil works and the hard and soft landscaping required for its operation.

The site is 'greenfield' with no existing structures on it to be retained or refurbished.

The primary function of the new chancery will be to provide a contemporary and efficient environment that facilitates the full range of activities that will be undertaken by DFAT and associated tenant agencies with nominal future office expansion accommodated within the proposed building footprint.

The composition of the chancery is to be divided into the following major functional groups;

- Public Areas
- Office Areas for Tenant Agencies
- Common Areas
- Shared Areas
- Building Plant and Facilities Service Areas

These functional groups are further defined by the various users' security classifications;

- Public Access Areas
- Controlled Access Areas
- Restricted Access Areas
- Secure Access Areas

2.2.2 The public areas within the chancery serve a pivotal role in introducing many visitors to 'Australia'. These spaces should reflect a modern, efficient and welcoming approach to business and to the general public. The public areas will include the main entry foyer, the DIBP foyer and the associated waiting rooms, reception, toilets and display areas located between the chancery's entrance doors and the secure air lock that provides access to the internal controlled areas.

Through the appropriate utilisation of Australian building materials, technologies and design expertise, the public spaces serve to represent Australia whilst supporting the functional requirements of the building. The public spaces should also serve as a venue for the displaying of Australian art and facilitating cultural, trade and other exhibitions.

The design process for the public areas including the DIBP reception and the external public access areas will give consideration to social conditions prevailing in Kenya.

2.2.3 A guardhouse and security screening facilities for pedestrians and vehicles will be required at the entrance to the site. Security screening of all persons entering the complex is to be performed by guards at the front entry gate and for vehicles through the sally-port adjacent to the guardhouse. Vehicle and pedestrian entry and exit routes will be developed as appropriate for the DFAT nominated guardhouse type. Pedestrian paving from the guardhouse to the chancery main entry will be designed with consideration to its role as the potential evacuation route in emergencies or crises.

If required and site constraints allow, a separate dedicated staff entry may be provided and located away from the pedestrian visitors' entry. The provision of on-site locally engaged staff (LES) parking outside of the secure perimeter will inform the siting of the main guardhouse and staff and visitor entries.

An additional emergency pedestrian egress point from the site will be required.

Critical points include:

- Positioning of the guardhouse should maximise sight-lines overlooking and along the street;
- Allow for all-weather 24 hour, seven (7) days a week access for selected staff and visitors;
- Provide equitable entry access and exit for all users;
- Allow for supervision of all entry and exit points by a contract guarding service;
- Provide a porte-cochere at the chancery main entry for staff and VIP visitors permitted to bring vehicles within the grounds; and
- Access for courier and service deliveries on behalf of all agencies.

- 2.2.4 Much of the AHC business will involve visits by the general public as well as by government officials and representatives from other diplomatic missions, and international non-government organisations.

The main entrance to the chancery will serve as a screening point and serve as a 'meet and greet' facility from which visitors can be escorted by the relevant agency staff through the public foyer into the controlled areas of the chancery as required.

- 2.2.5 The public foyer is to serve as the primary entry space for the chancery and is accessed directly from the external entry area. The foyer will be linked to the controlled areas of the chancery through a secure airlock operated from within the reception counter.

The secure reception counter in the public foyer will handle general enquiries. In addition there will be a dedicated consular service counter and the consular interview room. The foyer will include a public waiting area with access to male, female and PWD toilets along with a baby change/mothers' room.

- 2.2.6 The secure reception counter will address general enquiries and control access for all visitors to the chancery other than for DIBP clients. The reception module will be the obvious first point of contact and will be adjacent to the secure airlock to control access from the public reception into the controlled access general office areas beyond. The reception counter will provide a seated position for reception staff with public standing on the other side of the secure barrier. The counter should have direct access to the consular and administrative staff and ideally will have a small and separate waiting area in the foyer near the counter.

- 2.2.7 The secure counter for consular and passport enquiries is to handle the consular clients. Staff will be in a seated position with clients standing on the other side of the counter. Ideally the consular counter will be separate from the reception counter allowing for voice privacy.

- 2.2.8 A consular interview room is to be provided with direct access from the public foyer and from the secure airlock or lobby/waiting area within the controlled access area. This room is to be utilised by clients who may be in distress or others requiring the services of the AHC.

- 2.2.9 A separate entrance is to be provided for use by DIBP clients. This entry and waiting area should be able to operate during work hours as determined by DIBP. The DIBP waiting area is to be equipped with forced entry/ballistic resistant (FE/BR) enclosed counters with quick service counters as briefed.

A separate entrance for DIBP staff is to be provided allowing their paths of travel to be removed from the DIBP public entry and waiting area.

Visitors to the AHC in almost all cases will call by appointment. AHC operational hours are from 9.00am until 5.00pm with the first two hours of business dedicated to specific client appointments. Current daily visitations to the AHC number around 35 people. In Nairobi family groups including young children are frequent visitors and therefore suitable space should allow for large family groups.

- 2.2.10 Shared or common-use spaces within the chancery will include bookable areas available for use by the various agencies. These spaces will be generally located within the controlled area and consist of meeting/training

rooms and areas for regular use such as resource rooms, staff amenities and incoming goods receipt and dispatch areas.

Generally requirements for conference, training and meeting rooms for each individual agency are specified in the FDB. While some spaces will be specific to an agency's needs; shared spaces utilised between agencies may be adequate.

Where possible the design will maximise the use of all meeting/training rooms. The opportunity to position shared spaces in functional proximity to each other will be examined during the early design stages.

- 2.2.11 A multi-purpose room, located in the public area of the ground floor will be flexible and readily accessible for use by all agencies. It will be suitable for hosting official functions and exhibitions.

The space will offer a high level of finish and servicing thereby ensuring a durable and attractive space that will remain appropriate for use as technology and user requirements change.

The commercial kitchen that will service the staff canteen will also be utilised to cater for functions held in the multi-purpose room. An adjacent outdoors break-out area should be considered without compromising the mandatory security requirements. Public toilets will also be provided in the immediate zone of the public entry foyer and multi-function room.

Opportunities for display areas within public circulation space servicing the multi-function room will be investigated.

- 2.2.12 A large conference room is required to be available for use as a training space, a meeting area or a display space. The room is to operate in addition to the multi-function room and be located within the public access area, in close proximity to the multi-purpose room and accessible from the public entry foyer to enable use by visitors without having to enter the controlled or restricted areas of the building.

- 2.2.13 A staff canteen is to be included in the design providing an informal break-out area removed from the office areas. The canteen is to be used by staff as a retreat from the office, to make coffee and tea, eat lunch and generally to relax. Ideally it should include a space both for active (e.g. table tennis) and passive recreation, including dining and kitchen areas with easy access to a paved covered external zone. The space is to operate during office hours whilst also in evenings as a venue for social events. In addition, the kitchen will provide food and drink support services for events that may be held in the adjacent multi-purpose room.

- 2.2.14 Dependent upon the overall site configuration, areas for the facilities management (FM) support can be most effectively located in the adjacent energy services buildings.

Requirements for the FM tenancy include an office for an Australian-based manager plus an open-plan workstation space for LES staff and workshops and storage areas.

- 2.2.15 Preliminary building plant and services area calculations have been established in the FDB and will be developed during the concept and schematic design stages.

- 2.2.16 Delivery vehicle access will not be permitted within the chancery compound except with prior notification for special circumstances. A

dedicated goods receiving area is to be provided at the front boundary adjoining the guardhouse.

The goods receiving area is to be strategically positioned away from visible areas with access to the chancery provided by way of an efficient and covered route removed from the general public zones.

- 2.2.17 A covered garbage collection bay is to be located immediately adjacent to the vehicle sally-port either at the main Limuru Road guardhouse or at the secondary entry guardhouse. The bay is to be sized to allow for the reversing of a garbage vehicle directly from the sally-port.

Efficient ventilation and drainage for clean-down of the area will be paramount for hygiene purposes with all finishes to be appropriate and durable.

A refuse holding room within the chancery is to be included for the separating and storing of disposable waste before its daily transfer to the external collection bay.

- 2.2.18 Diesel fuel delivery will be required for maintaining power to the compound due to the irregular local authority electrical supply. Fuel stored in underground tanks will be sufficient to enable the generators to provide a 100%, 24 hour emergency power load for seven days.

A standing area for the tanker vehicle to remotely refill the tanks will be external to the site perimeter wall in a location so as not to interfere with chancery traffic flows and maintain the security requirements.

- 2.2.19 Covered parking within the secure perimeter is to be provided for official, Australian staff and VIP vehicles. The design will ensure a parking layout that satisfies the traffic flow for all anticipated functions.

A porte-cochere for is to be provided at the main entry to the chancery for arriving VIPs.

Vehicle parking areas will be provided with carport type shading that will utilise light-weight material as appropriate to the design intent of the main building. The parking areas are to be landscaped and located so as to remain attractive, secure and functional. A wash down bay for official vehicles will be provided.

A total of 30 on-site parking spaces are to be accommodated which will include the official fleet, Australia-based staff private vehicles and provision of disabled spaces.

- 2.2.20 The absence of both adequate public transport in Nairobi and unsafe street parking has necessitated the requirement for a semi-secure covered parking area in the compound for use by nominated LES and visitors to the AHC. This reflects a similar strategy to that employed at the American Embassy which has a large controlled parking area external to the secure line that is overlooked by the main guardhouse.

Subject to final security arrangements, the LES and visitor parking is proposed to be outside of the secure perimeter zone surrounding the chancery. The extent, access and parking arrangements will be controlled by fencing and gates.

2.3 Site selection and site description

- 2.3.1 The site acquired for the proposed AHC is located on Limuru Road in the suburb of Rosslyn, approximately 15 kilometre from the Nairobi City Centre.

The journey from the CBD to the site passes through residential areas, diplomatic enclaves and briefly through 'Karura Forest', a substantial natural reserve within the city precinct. When arriving from the city, the site is located on the crest of a rise in a heavily treed setting with little adjoining development. The locale is known as 'Lone Tree Estate' after the former coffee plantation that once occupied the area.

The site is approximately 11,740sqm with the eastern frontage to Limuru Road extending for 95 metres. The site extends to the rear 105 metres creating a rough square with an irregular battle-axe section of approximately 2,600sqm protruding to the north western corner.

Preliminary investigations indicate that rear road access via the battle-axe section may be available via a dedicated road easement of approximately 1,350sqm that is understood to be a publically gazetted road reserve which connects to the adjacent prestige residential enclave of 'Lone Tree Estate'. The viability of the easement for service deliveries and for AHC staff is to be determined with Nairobi City Council and the adjoining estate. The current design is based on access not being obtained or granted.

Limuru Road has a single lane in each direction and is currently without kerbs or guttering while street lighting is basic. It is anticipated that a lay-by lane would be required alongside the outbound lane allowing traffic to turn easily into the new site without disrupting traffic flow.

A local bus stop with lay-by is positioned on the north eastern corner of the new site frontage. It is anticipated that this would need to be relocated beyond the site to enable vehicle access to the new complex.

- 2.3.2 Public utility services traversing the site include a municipal water main along the southern boundary that is protected by a 10m wide easement and a municipal power line for the full length of the western boundary that requires a 5m wide easement either side of the poles.

The discharge of storm water from the site has been raised as a potential cost factor requiring further investigations in order to provide a suitable connection from the site to the closest drain network or waterway. The resolution of the storm water discharge will be taken up with the local municipality during the early design phase.

2.4 Zoning and approvals

- 2.4.1 The site is currently zoned 'Residential' under the Local Area Plan for Muthaiga as developed by the Nairobi City Council consistent with the predominant surrounding land use. Therefore an application for re-zoning to be carried out by a registered local town planning consultant will be required that will typically take up to two months to conclude.
- 2.4.2 It is noted that under the current residential zoning the Plot Ratio is limited to 25% of site area with a permitted site density of 25%. While the zoning provides a plot ratio there is no identifiable building height restriction for the site. Advice indicates a three storey structure will be permitted with

recent precedent established in the area including construction of both the Canadian High Commission and the Rwanda High Commission.

2.5 Land acquisition

- 2.5.1 The site has been procured by the Australian Government for the purpose of constructing a new High Commission within the boundaries of the property.

2.6 Codes and standards

- 2.6.1 The project will be designed in accordance with the BCA, DDA and relevant Australian Standards (AS) and/or International Standards (ISO) where they are judged to be of a higher, more relevant or contextually more appropriate Standards.

2.7 Architecture

- 2.7.1 The primary function of the new AHC is to provide a contemporary and efficient office environment, whilst satisfying the security needs particular to the location. The vision is to provide an iconic architectural presence in which to represent and further Australian interests in Kenya and the East Africa region.
- 2.7.2 The buildings contained within the site will consist of the primary guardhouse including vehicle sally-port, the chancery and the energy services centre and recreational pavilion which will house staff facilities associated with the swimming pool and multi-use court. The buildings are strategically located on the site to improve utility service efficiencies while providing the necessary juxtaposition associated with the very distinct and different functions.
- 2.7.3 The exterior and interior of the new chancery will provide a contemporary response to the unique character of Nairobi's built environment whilst maintaining a strong reference to an Australian architectural identity.
- 2.7.4 While located away from the city in a low density area, the new AHC site lies contextually within the City of Nairobi with a common typology of stand-alone facilities located within private landscaped sites. The intention is for the appearance of the new facility to draw upon this typology and to utilise as much of the scale, materials, colours and forms found in the local environment as possible.
- 2.7.5 It is proposed that the external finish for the chancery and other buildings will be 'rough sawn off-form' colour tinted concrete and timber. While recognising that variable timber face grain grades will be inevitable, the setouts of the boards and panels will encourage visual interest and will be enhanced as feature walls. This will be further enhanced by the use of a number of shades of surface applied pigments which will allow the facade to develop varied textures and shades.

The extent of external façade glazing will be limited due to blast pressure loads. Preliminary studies indicate a glazing ratio of 10% of the façade surfaces will be achieved. External shading and screening devices will offer additional thermal and environmental benefits as well as providing visual relief to the building through shadow and light. This will be important in reducing the apparent scale of the structure and will enable

the diversity of materials essential in supporting the architectural character of the proposed design.

- 2.7.6 The chancery interiors will be to a standard of design and finish comparable with those found in new office buildings in Australia. The interiors will be fit for purpose and provide contemporary spaces offering timeless design ensuring easy churn ability with physical and aesthetic durability. The office and public spaces will offer a pleasant environment for staff and visitors through the selection of high quality finishes and materials, and the use of both natural and artificial light.
- 2.7.7 While senior officers will require individual offices, the provision of a working environment that facilitates close interaction between LES and A-based staff is essential. By providing effective and well considered open planned office areas, the design will deliver a work environment that maximises staff interaction whilst ensuring that adequate withdrawal and one-on-one interaction opportunities are provided.
- 2.7.8 Respect and consideration towards the local culture and climate will be observed in the development of the design. This will be particularly important when considering the economic extremes found within Kenya and the nature and role the AHC plays principally through the public interfaces with visitors. The landscape architectural design that will be utilised across the site will respect the local environment and plant species and will enhance the experience of visiting or working in the new compound.

2.8 Master planning and site planning

- 2.8.1 The chancery and associated structures have been strategically sited to achieve the necessary security setbacks within the confines of the site whilst achieving the necessary operational requirements to ensure ease of access for both pedestrians and vehicles.
- 2.8.2 The following reflects the Gross Floor Area (GFA) inside the building envelope including the external walls.

Chancery building

Level 1 GFA – 1562 sqm

Level 2 GFA – 1476 sqm

Level 3 GFA – 1476 sqm

Roof Plant GFA - 78 sqm

TOTAL CHANCERY BUILDING GFA – 4592 sqm

Guardhouse 1 GFA – 215 sqm

Guardhouse 2 GFA – 48 sqm

Energy Services Building

Level 1 GFA – 203 sqm

Level 2 GFA – 316 sqm

TOTAL ENERGY SERVICES BUILDING GFA – 519 sqm

Pavilion GFA – 97 sqm

Pavilion Covered Area UCA – 170 sqm (UCA = Unenclosed Covered Area)

Covered walkways UCA – 221 sqm (UCA = Unenclosed Covered Area)

2.8.3 The chancery has been designed to accommodate office expansion space within each tenant agency of up to 10% should future growth be required.

2.8.4 The absence of adequate public transport in Nairobi and the question of safety related to on-street parking has resulted in the requirement for a semi-secure parking area for use by LES and visitors to the AHC.

2.8.5 The Master Plan provides four distinct zones being:

1. Main Entry (guardhouse No. 1);
2. Chancery;
3. Recreation Pavilion (and landscaping);
4. Energy Services Centre; and
5. Car parking.

All zones are enclosed within a layering of secure perimeter boundary walls. The importance of the strategic location and relationships is captured within the site master plan achieved through the following:

- a) Street access from Limuru Road only;
- b) Chancery building footprint sitting within a minimum 25m setback from all boundary walls and vehicle entry points;
- c) LES parking and access into the complex through guardhouse No. 2 providing direct, discreet connectivity to the Energy Services Centre
- d) Controlled vehicular and pedestrian movement around the site;
- e) Separate entrances to specific functions within the chancery;
- f) Alternative emergency escape route to an adjoining property; and
- g) Staff recreation facilities and pavilion located to rear of site away from the main public interface.

2.8.6 Chancery entrances are to fulfill the following requirements:

- a) Provide a covered pedestrian link to connect guardhouse No.1 directly to the chancery entry forecourt which will serve as the primary path of travel for visitors;
- b) The path will diverge allowing separate and distinct covered access to both the main entry to the chancery and the DIBP public foyer and direct access from the chancery lobby to the multi-function space that also connects to the covered external courtyard;
- c) Direct access to Austrade offices and the consular counter will be available from the public entry lobby;
- d) Escorted visitor entry to the controlled areas of the chancery will be via a secure airlock located off the entry lobby which will link to the lift and stair atrium giving access to other levels of the chancery; and
- e) A separate and designated controlled entry point to be provided to the western end of the chancery for staff to connect to the recreation pavilion, the Energy Services Centre and LES car park.

- 2.8.7 Vehicular access to the complex has been developed to consider the specifics of travel and transportation in Nairobi and is based on the following arrangements:
- a) Two vehicle inspection points located at two separate guardhouses to be provided within the site: guardhouse No.1 will accommodate the main entry and vehicle sally-port. This will be sized to accommodate the local fire services and larger delivery vehicles. It is proposed that a 'slowing down/calming' slip lane will be provided as part of Limuru Road to reduce the speed of vehicles and that will provide a holding lane for those vehicles wishing to enter the compound ;
 - b) Guardhouse No. 2 will be sized to allow a car or small delivery vehicle to access the Energy Services Centre. This will form the secondary access route around the compound;
 - c) Covered parking within the main chancery grounds will be for A-based staff private vehicles and VIP vehicles. A vehicle wash down bay will be provided adjacent to the Energy Services Centre while LES vehicles will be confined to the nominated covered parking area within the complex but located outside of the chancery security perimeter; and
 - d) After clearing the security inspection all authorised service and delivery vehicles may enter the compound and proceed to a dedicated delivery setting-down zone towards the rear of the site.
- 2.8.8 Pedestrian access will be by covered walkway from the street entry to the chancery foyer with direct visitor access to the public interfaces for Austrade, immigration and consular appointments. AHC staff will require swipe card access for all other access points into the chancery and/or around the grounds of the complex.

2.9 Materials and finishes

- 2.9.1 Materials will be selected to present high quality finishes that are durable and require minimum maintenance. Consideration towards climate and the environment will strongly influence the design decisions in addition to the recognition that many of the construction materials may need to be imported into Kenya. These may include glazing components, steel window sections, mechanical plant and equipment, security components, electrical and hydraulic fixtures and fittings, structural steelwork, security gates and joinery components.
- 2.9.2 Suggested external finishes to buildings will be concrete, masonry and other suitable materials to mitigate blast and unnecessary maintenance. Applied screening will provide a sense of relief through pre-finished materials that will contrast with the concrete finishes. Locally available stone and other hardwearing materials will be used for floors in public foyers, entrances and other heavy use areas.
- 2.9.3 Non-load bearing internal walls for the general offices will be of lightweight steel stud framed partitions with painted plaster-board, or where required constructed of rendered and painted masonry. Internal security partitions will be constructed in accordance with DFAT standards.
- 2.9.4 Wet areas will be finished with ceramic or stone tiles to walls with slip resistant vitrified tiles or stone to floors.

- 2.9.5 Ceiling finishes will include suspended acoustic ceiling tiles, painted plasterboard, perforated acoustic ceilings, timber veneer and other suitable materials.
- 2.9.6 General floor finishes will be a mixture of locally available granite, carpet tiles, vinyl, treated concrete, vitrified tiles, treated cement or other materials as appropriate for the functional requirements of the nominated areas.

2.10 Structure

- 2.10.1 The design of all structures will accommodate site-specific characteristics, and comply with the BCA and relevant AS. The Republic of Kenya Building Code predominately references British Standards (BS) however this Building Code has not been significantly modified since inception in 1968. As such, the majority of the local references are not applicable and therefore the BCA will take technical precedence. In respect of testing of construction materials, such as steel reinforcement and concrete, these will be undertaken in accordance to BS to accommodate for the local testing methods. The design life of the primary building structure, which will be constructed of reinforced concrete, will be between 40 to 60 years.
- 2.10.2 Limited static design, load actions, combinations of actions, methods of analysis, robustness and confirmation of design will be undertaken to the relevant AS and “Structural Design Actions”. Consideration has been taken to include climatic, seismic, geotechnical and blast pressure impacts on the structure.
- 2.10.3 Structural elements will be designed and constructed to contain any deflections under serviceability loads and load combinations within acceptable limits for structural integrity, visual appearance, avoidance of excessive floor slopes, minimisation of cracking in floors, walls and ceilings, adequate installation and operation of machinery, and avoidance or roof ponding.
- 2.10.4 A preliminary geotechnical report of the site undertaken in 2006 indicates that low to moderately reactive inorganic red clay soil overlays bed rock in the order of 10m deep. A comprehensive geotechnical survey will be undertaken prior to commencement of design to confirm the subsoil conditions.

2.11 Mechanical services

- 2.11.1 The mechanical services will be designed to provide a high quality, safe, and comfortable indoor environment in accordance with the best current Australian practice for office accommodation.
- 2.11.2 The chancery will be air conditioned throughout including small support and store areas distributed throughout the floors. Large stores and other unoccupied areas will be tempered through forced ventilation air from adjacent occupied zones. The guardhouses will be air conditioned.
- 2.11.3 The air conditioning system will be designed with appropriate zoning to maintain good temperature regulation in areas with different thermal exposure or load characteristics. Plant configuration will be optimised for energy efficient zoning across the floors. The combination of split-system or plant/ducted systems will be assessed during design development.

Provision of duty stand-by arrangements to specific functional zones will be considered. The design will allow for the separating of the air handling systems for areas with different occupancy times and loads (e.g. training and conference rooms or ITC or other areas that require 24 hour operation).

- 2.11.4 The general indoor environmental conditioning of air will be as necessary to maintain occupant comfort. The comfort criterion used for design purposes will be a 'Predicted Percentage Dissatisfied' (PPD) rating not exceeding 10%.

Room dry bulb temperature will be regulated to achieve 25°C that will provide sensory comfort for indoor healthy environment. In general the range for thermal comfort will be designed for 24°C ± 1.5°C.

- 2.11.5 Containment and provision of localised exhaust will be the preferred method of control for fumes, noxious contaminants, odours and intense heat. Systems will be designed to meet typical Australian statutory requirements or applicable AS and will accord with good engineering practice.

- 2.11.6 Noise levels in occupied areas due to the operation of localised plant or equipment will not exceed the maximum recommended levels set out in the relevant AS.

Executive offices, training and conference rooms and other areas requiring acoustic isolation will be designed with appropriate sound attenuation in air paths which traverse the acoustic barrier and in accordance with DFAT security requirements as applicable.

- 2.11.7 Noise levels at site boundaries will meet the requirements of any local environment or planning regulations. Particular attention should be paid to any equipment that will operate 24 hours per day (such as air cooled condensers).

Standby diesel generator plant will have operating noise levels as low as practicable.

2.12 Hydraulic services

- 2.12.1 The Municipality water supply is intermittent and is not guaranteed to be of a quality equivalent to treated potable water in Australia. Bore water is also commonly employed, however the viable aquifer is reported to be several hundred metres deep and it is understood there is a moratorium on the sinking of new wells. As such the municipal water supply will be taken as the primary supply source, supplemented by rainwater harvesting. Storage, pressure and flow regulation and water treatment up to potable level will be provided.

- 2.12.2 All reticulated water throughout the chancery will be potable. A secondary non-potable recycled 'grey water' network will be employed for external applications such as for landscaping and cleaning.

- 2.12.3 The Municipal water supply will incorporate appropriate backflow prevention in order to prevent possible contamination. A flow-pulse meter will be incorporated to enable use to be monitored.

- 2.12.4 Storage for seven (7) days consumption of potable water will be provided. Hot water will be generated by electricity as natural gas will not be

provided to the site. Investigation of alternative or supplementary heating options including solar and 'Combined Heat & Power' (CHP) from the generator plant will be investigated during design development. Provision will be made such that hot water generation can be linked to a Building Management System (BMS) enabling monitoring of energy and hot water usage. Hot water management will be achieved by enabling shutdown of the system out of hours.

- 2.12.5 Water supply fixtures and fittings will be specified to meet the requirements of the BCA and the Australian Government's 'Water Efficiency Labeling and Standards' (WELS) Scheme will also be referenced in relation to establishing acceptable consumption rates. The WELS Scheme will be considered in specifying all fixtures and fittings for the complex so as to enable reduced water usage in toilets, basins, sinks and showers.
- 2.12.6 All internal spaces of the complex are to be fire sprinkler protected controlled from a sprinkler valve room which will be designed to accommodate all valves and pumps. Installation of a diesel and electric booster pump assembly with pressures and flows suitable for the sprinkler system will be provided using water from on-site storage tanks.
- 2.12.7 All ceiling and roof void spaces in excess of 800mms depth also will be sprinkler protected with sprinkler heads positioned to provide drenching to all primary steelwork. Sprinklers are to be provided to the lift shafts along with smoke detection within the lift plant room as required.
- 2.12.8 Hose reels, hydrants & extinguishers for internal spaces and within the chancery compound will be designed and installed in accordance with the BCA.

2.13 Electrical services

- 2.13.1 Applicability of energy targets established in the Australian Government's 2006 policy EEGO will be considered during design development. All electrical, security and telecommunication systems must demonstrate proven reliability and performance, ease of maintenance and replacement, energy efficiency and cost effectiveness, and will consist of current technology and standards.
- 2.13.2 The philosophy of supply connection is to enable the use of the local authority electricity network, but with provision for 100% back-up supply. The complex will be provided with emergency stand-by generators with sufficient diesel fuel for 24 hours continuous operation for seven (7) days at full load.
- 2.13.3 A low voltage 400/230V, 3 phase, 4 wire earthed wiring system will be required. The design and installation will comply with the requirements of local statutory authorities. In addition, the WH&S regulations require that the installations should comply with the latest or equivalent versions of the relevant AS.
- 2.13.4 An initial load assessment confirms that a dedicated substation will be required. It will be essential that 24-hour access is provided to the substation to enable the electricity authority to carry out switching and maintenance of their installed equipment. The substation should form an integral part of the compound and be as close as is practical to the major

load centre in the chancery. To provide security of supply it is envisaged that the incoming high voltage supply will be a duplicate branch from a local ring supply, or a dedicated radial supply direct from a local HV substation.

- 2.13.5 Diesel generators will be provided for possible daily power supply as well as for emergency purposes. The generators will start automatically as a result of mains power failure and likewise shutdown when mains power resumes. The generators will be specified to operate as a prime power source with unlimited running capability and not just operate for provision of emergency power. The generators will be sized to accommodate the total diversified load across the complex.

Electrical distribution boards will be provided to dedicated areas supplying general lighting and power. The boards will be equipped with miniature circuit breakers (MCB's) rated for potential fault current levels and should not be less than 10kA fault rating with integral incoming switch disconnect.

Consideration will be given to power factor correction equipment with detuned capacitors to reduce the overall kVA demand, thereby reducing electricity running costs. This will be investigated in more detail with the local electricity authority.

2.14 Light systems

- 2.14.1 Electric lighting of all spaces is required. The lighting is to be functional, aesthetic and energy efficient and designed to provide sufficient illumination for tasks and to create ambience.

The lighting levels are to be designed in accordance with AS 1680: 2006. Internal lighting will generally be facilitated by either linear or compact fluorescent luminaires with high frequency ballasts and where appropriate, T5 energy efficient fluorescent lamps. For specific usage or enhanced aesthetics and where dimming is required, low voltage LED lamps may be used if readily available. Proposed colour temperature of fluorescent lamps will be 3500K. To avoid excessive lamp changing the halogen lamps will be powered by good quality 'constant voltage' output 230/12V transformers providing a maximum output voltage of 11.8V.

- 2.14.2 External lighting will be provided to the whole site perimeter, all internal roadways, and footpaths as well as the perimeter of buildings for both security and aesthetic reasons. Luminaires will be selected for visual appearance, energy efficiency and effects created. The lamp colour and output is important for CCTV coverage and therefore metal halide discharge lamp sources are proposed.

Emergency lighting will be provided throughout the chancery in accordance with AS 2293:2005 'Emergency Evacuation Lighting in Buildings' and will be developed in consideration of local standards and requirements.

Illuminated and maintained exit signs will be located throughout the complex so as to clearly indicate the direction of escape all in accordance with Australian or local fire regulations, whichever is the more stringent.

2.15 Lightning protection system

- 2.15.1 Lightning protection will be provided to all the buildings on the compound.

2.16 Smoke detection system

- 2.16.1 A Smoke Detection System covering all buildings will be provided. The Fire Indicator Panel will be located in the main foyer of the chancery with a mimic repeater panel in the main guardroom.

2.17 EWIS/Public address system

- 2.17.1 The emergency warning & intercommunication system (EWIS) will include a voice evacuation system to facilitate swift and safe evacuation of the facility during fire and other emergencies. All cabling will be approved fire retardant type. The emergency intercommunication system can also be employed as a public address system.

The EWIS will be zoned on a floor by floor basis with speakers mounted in all finished ceiling areas along with speaker horns in all non-ceiling areas, as well as utility and external recreation areas including car park areas. A Master Evacuation Control Panel (MECP) will be provided, along with warden intercom at the main exit points, visual warning notification at MECP and in high-noise areas.

2.18 Security

- 2.18.1 Intruder alarm systems for the restricted and secure areas of the chancery will be supplied, installed and maintained by DFAT.
- 2.18.2 CCTV coverage will be required to all external areas of the compound, at the street access locations and to public and other areas within the chancery; all designed and installed in accordance with DFAT requirements.
- 2.18.3 An Electronic Access Control Systems (EACS) will be required throughout all the areas of the chancery and around the compound.

2.19 Communications

- 2.19.1 A structured data cabling system will be employed for the distribution of voice and data. The structured cabling may include a 'wireless' system for parts of the chancery. It is usual to provide fibre optic cabling for the data vertical backbone and copper cabling for the voice vertical backbone.
- 2.19.2 An integrated telephone and ICT backbone, riser and horizontal cabling system will be provided throughout the chancery.
- 2.19.3 A Master Antennae Television (MATV) system will be provided in the chancery with specific additional services as required by each agency.
- 2.19.4 Satellite dishes for communications will be provided within the grounds of the complex as required.

2.20 Lift services

- 2.20.1 Separate goods and passenger lifts will be provided for the chancery building. All passenger lifts will be DDA compliant and have stretcher capacity as required by AS.

2.21 Civil works

- 2.21.1 The design of all civil works required for the compound will accommodate site characteristics and comply with relevant AS.
- 2.21.2 Based on local advice it is likely that a 3.5m wide turning lane/slip road will be required to facilitate entry to the compound from Limuru road. The length of the access way will be dependent on the future road classification and designated speed; however a 30m length on either side of the site entrance is the expected minimum. There may also be a requirement to provide on-street parking bays to minimise vehicle queuing.
- 2.21.3 Storm water will be routed through the potable water storage and treatment facility with excess discharged underground to a storm water culvert at the road. There are likely to be some external works associated with the extension of the culvert system that runs along Limuru Road.

The site survey plan notes an existing overhead high-voltage transmission line present within the site to the west side parallel to Limuru Road with a 10m wide 'layway' (easement) along the line required by the authority.

The site survey plan also notes the requirement for a 10m wide easement along the existing underground authority water supply pipeline located along the southern boundary.

2.22 Landscape design

- 2.22.1 Nairobi as garden city has a strong tradition featuring highly maintained gardens and roadside verges. The mild high altitude climate supports a high diversity of vegetation allowing for a combination of temperate and tropical species, both local and international exemplars.
- 2.22.2 The planting palette will be appropriate for local conditions with resilience and requiring a low level of maintenance. The landscape design will consider seasonal rainfall, soil types and the availability of harvested rainwater from the site. In addition the landscape will incorporate initiatives such as grey-water harvesting, water quality control and sub-surface irrigation.

Landscape areas are to be viewed and have the capacity to support recreational and social activities as well as the local ecosystem.

Landscaping has an important role in delineating areas and providing for privacy and screening. These visual barriers should screen recreational areas such as the multi-use court and swimming pool from the more formal functional areas of the facility.

The street frontage landscape is to be considered within the context of the overall AHC complex taking into account the existing local character of the streetscape.

- 2.22.3 The external hardscape will be designed to satisfy the functional requirements of the particular location whilst offering a high level of finish that complements the building design. Hardstand areas are to satisfy the AS requirements for equitable access and slip resistance. It is desirable to use local materials, in particular the Nairobi 'Blue Stone'.

The local stone is a material suitable for contextual element use as wall facing, road and footpath paving as well cut block work. Site access roads, car parking and pavements are to be finished with functional surfaces that offer a high level of presentation and durability.

- 2.22.4 Internal planting design is to be provided where practicable to enhance the environment by highlighting architectural features as well as improving air quality and general ambience levels. Feature planting elements such as iconic plants in large pots, in planter beds or 'green walls' will enhance the character of internal spaces.
- 2.22.5 Flag poles of an appropriate scale will be located in close proximity to the main guardhouse and clearly visible from the street.
- 2.22.6 A swimming pool of sufficient length for exercise laps is to be installed in the compound protected by a child-proof fence in accordance with AS.
- 2.22.7 An all-weather surface multi-use court is to be provided. The location should allow for both day and evening use and minimise acoustic and flood light impact upon adjoining properties and the chancery. Close proximity to covered recreation area, showers and swimming pool will be planned.

2.23 Operations, maintenance and warranties

- 2.23.1 Upon completion of the testing and commissioning of the installations and at the time of practical completion of construction DFAT will be provided with 'as installed' drawings, material and equipment warranties, operational and maintenance manuals along with spare parts to enable the appropriate ongoing operation, maintenance and repairs of all engineering services and the building fabric.
- 2.23.2 Training requirements for the operation and maintenance of the building services and systems will be formulated between the building contractor and the AHC facilities management team.

2.24 Acoustics

- 2.24.1 Professional sound reduction advice to be provided from an acoustic consultant will be based on the recommended AS ambient noise ratings for both continuous and intermittent noise intrusion, reverberation times and reduction ratings for specific areas in the chancery nominated by DFAT.

2.25 Ecologically sustainable design (ESD)

- 2.25.1 The design for the new AHC will be developed through a committed approach to the use of ESD principles without detracting from security and other specific provisions. Innovative strategies and technologies will be considered but not at the expense of security, budget or quality through:
 - a) Building design incorporating fundamental passive design principles that achieve correct orientation as well as appropriate natural lighting and solar shading in conjunction with appropriate materials with thermal mass to suit the circumstances.
 - b) Energy saving features through using energy efficient fixtures and fittings, appropriate lighting control, utilisation of thermal storage increasing efficiencies for air heating & cooling systems including incorporation of natural ventilation and evening purging.

- c) Renewable energies through investigation of alternative energy production on site for operation of hot water systems, pool heating and if applicable on-site power generation.

- 2.25.2 The capacity to minimise energy usage and operating costs will be considered.

Strategic sub-metering of services will be provided and engineered with appropriate software developed, tested and demonstrated to provide all necessary summations, calculations and reports to provide meaningful information. Metering for billing tenant agencies should be provided as a separate 'smart metering' system. Opportunities for visible LCD metering displays to staff areas is to be considered, enabling staff to take ownership of reduced energy consumption objectives.

A BMS is to be considered. As the system is to be managed by LES appropriate skills will be required to operate the system.

- 2.25.3 Creating a healthy and enriching work environment is a design priority. Indoor environment quality will be improved through establishing appropriate ventilation rates delivering effective air change and fresh air intake. Carbon dioxide levels will be monitored and regulated. Natural daylight levels will be maximised balanced against the security, cost and sun shading requirements. Noise levels will be appropriate for function and the selection of finishes, materials and furniture and fittings will be based upon low toxicity and sustainability. Through the use of the design features such as atriums, indoor planting and water features a quality space for staff and visitors will be developed.

- 2.25.4 The Kenyan Government's requirement for an Environmental Impact Assessment (EIA) known as 'NEMA' is noted. The application is recognised as a significant commitment to ESD principles and supported by both the design consultants and the Australian Government. Although this development will not require an EIA there are several widely recognised 'green building' rating tools used worldwide.

These include the Australian Greenhouse Building Rating (AGBR) now known as '**NABERS Energy**' that develops a rating based upon energy consumption by comparable buildings with similar local precedents. Other more expansive rating tools that include '**Green Star**' are also used in Australia, New Zealand and South Africa, while '**LEED**' is predominantly used in Canada and the United States and '**BREEAM**' is used in the United Kingdom.

The design will endeavour to achieve the best possible environmental outcome whilst seeking to deliver to tenant agencies the required minimum energy consumption levels mandated in EEGO.

2.26 Provisions for people with disabilities

- 2.26.1 The new AHC design will comply with the BCA, DDA and relevant WH&S codes and standards in relation to disability access.

2.27 Heritage issues

- 2.27.1 The new AHC is located on a Greenfield site. The project is not subject to any heritage considerations or issues.

2.28 Child care provisions

- 2.28.1 It is not DFAT Policy to provide child care facilities at its overseas missions.

2.29 Fire protection

- 2.29.1 The philosophy behind the protective fire services is to enable a stand-alone facility, which is not totally reliant on municipal services and the local fire brigade. While it is understood that private firefighting services are available in Nairobi, due to severe congestion these services cannot be relied upon to respond in a timely manner. Currently any back-to-base monitoring of fire alarm systems is ineffective and consequently the fire services design strategy must allow for this. It is anticipated that water storage, emergency pumping and a fire ring main around the site will be provided in line with Australian practice.
- 2.29.2 Recent experience such as the fire at Jomo Kenyatta International Airport exposed the limitations of the fire brigade and their equipment. Any proposals related to fire fighting and fire appliance access will need to be discussed with the local authority once an outline proposal is prepared.

2.30 Security

- 2.30.1 A layered approach is taken in developing levels of security as follows:

Perimeter Fence and Grounds.	A non-climbable perimeter fence or wall that is capable of withstanding ramming by a vehicle and incorporating a reinforced security Guardhouse plus a separate mail handling facility on the perimeter with a dedicated air system separate from chancery.
Building Exterior. Controlled (Limited) Access Area.	An intruder-resistant building exterior; an internal primary line of defence consisting of a forced-attack resistant and anti-ballistic barrier, yet permitting and facilitating public access control and access/exit for people with legitimate business in the chancery;
Restricted Area.	A secondary intruder-resistant barrier used to exclude unauthorised entry (e.g. by locally engaged staff) from areas where sensitive material may be in day-to-day use;
Secure Area.	An outer barrier generally to a high security standard

This layered security approach, known as ‘cocooning’, is utilised in developing levels of protection when moving from outside the AHC site through the perimeter fence or wall to the chancery, through the chancery perimeter into the general public area, into the office areas (controlled access), and beyond to designated restricted and secure areas.

- 2.30.2 The aim of the perimeter security is to prevent unauthorised persons and/or vehicular traffic from accessing the grounds and to provide screening of all visitors and vehicles prior to entering the complex.
- 2.30.3 As well as relying upon the perimeter security gates for vehicle anti-ram protection, vulnerable areas may be further protected using combinations

of anti-ram knee walls, bollards and raised planter boxes, rising vehicle barriers, earth berms and landscaping. Any immediately adjacent off-site security installations are to be developed in consultation with the local planning authorities.

- 2.30.4 The site is to be fully enclosed with a non-climbable perimeter fence or wall. The perimeter of the site will be protected by a 3.00 metre high barrier of sufficient strength, design and construction to deter entry. The design of the barrier will be in accordance with DFAT security requirements and should afford anti-ram protection at areas where considered vulnerable.
- 2.30.5 The perimeter boundary will be fabricated steel palisade type or reinforced concrete construction as determined by DFAT threat levels and risks. The barrier is to be positioned on the AHC side of the perimeter boundary and developed in consideration of local planning authority requirements. The external treatment of the barrier is to offer a high degree of visual amenity without compromising the defined security performance requirements.
- 2.30.6 The main guardhouse will have the capacity to handle a large volume of traffic when required by providing smooth transition and access to the compound through a sally-port with inner and outer linked barriers.
- 2.30.7 Security lighting and CCTV to the interior and exterior of the perimeter wall is to be provided to deter and detect intruders.
- 2.30.8 Generally the facades and perimeter of the chancery are to be blast, ballistic and intruder resistant to standards briefed by DFAT security.

2.31 Work health and safety

- 2.31.1 Compliance with the Australian WH&S standards throughout the design will be followed.
- 2.31.2 WH&S and rehabilitation practices will be implemented and enforced during the construction works at the site.

2.32 Authorities and local industry consultation

- 2.32.1 The new AHC will be designed and constructed in accordance with the provisions of the current BCA and all other relevant Australian Standards. All local Codes and Standards pertinent to the works will be considered during the design and documentation process with the more stringent requirements being applied.
- 2.32.2 The site is currently located in the Nairobi City Plan - Rosslyn Area and zoned as residential. A rezoning application called "A Material Change of User Application" will be required for use of the site for diplomatic purposes.
- 2.32.3 A single application for a Building Permit will be required to be lodged with Nairobi City Council for approval.

2.33 Local impact

- 2.33.1 The impact of the construction of the project on the local community is expected to be low. The project fits within the precedent of other Embassy buildings in the area and consultations with the local authorities has commenced.

- 2.33.2 The streetscapes and adjoining infrastructure will be greatly improved, particularly in assisting the slowing of traffic on Limuru Road owing to the new AHC project.

2.34 Project budget

- 2.34.1 The approved budget of the proposed works, excluding land costs, is AUD 57.6 million. This amount includes all project works as managed by OPO, specialist communications, IT and physical security items, and direct agency costs. Project works as managed by OPO includes construction and fitout works (including risk contingencies and escalation allowances), furniture, consultant and project management costs, legal fees and other miscellaneous costs and charges.
- 2.34.2 The estimate does not include Kenyan Government Import Duty as goods specifically imported for the AHC project should be rated at 0% duty. However Kenyan Government Value Added Tax (VAT) currently 16% has been included, although every endeavor will be made to recover VAT that may be payable using government to government reciprocal arrangements.

2.35 Project delivery system

- 2.35.1 Following a detailed analysis a traditional delivery method of design, full construction documentation, tendering and contracting to a Head Works Contractor (HWC) has been selected as appropriate for this project. This represents the best value for money for the Commonwealth and allows DFAT, as the building owner and manager, to retain control of all the project delivery stages.
- 2.35.2 Australian design consultants will prepare the contract documentation with input from local collaborating organisations for such aspects as assistance with local authorities, construction capability, permits and translations. Associations with local design consultants will also provide important construction industry input and guidance during the design and construction phases.
- 2.35.3 A single lump sum contract will be awarded to the successful HWC for the construction and integrated fit-out of the works. Tenders will be called from selection of well qualified general contractors that will be short-listed on the basis of a rigorous pre-qualification process. The pre-qualification process will be publically advertised in Australia and Kenya.
- 2.35.4 A separate tender process will be called for supply of loose furniture. Installation of this furniture will be coordinated by the on-site Project Manager following practical completion of the construction works.
- 2.35.5 A Project Management organization with international experience will administer the traditional lump sum construction contract that will be awarded to the successful HWC.

2.36 Construction program

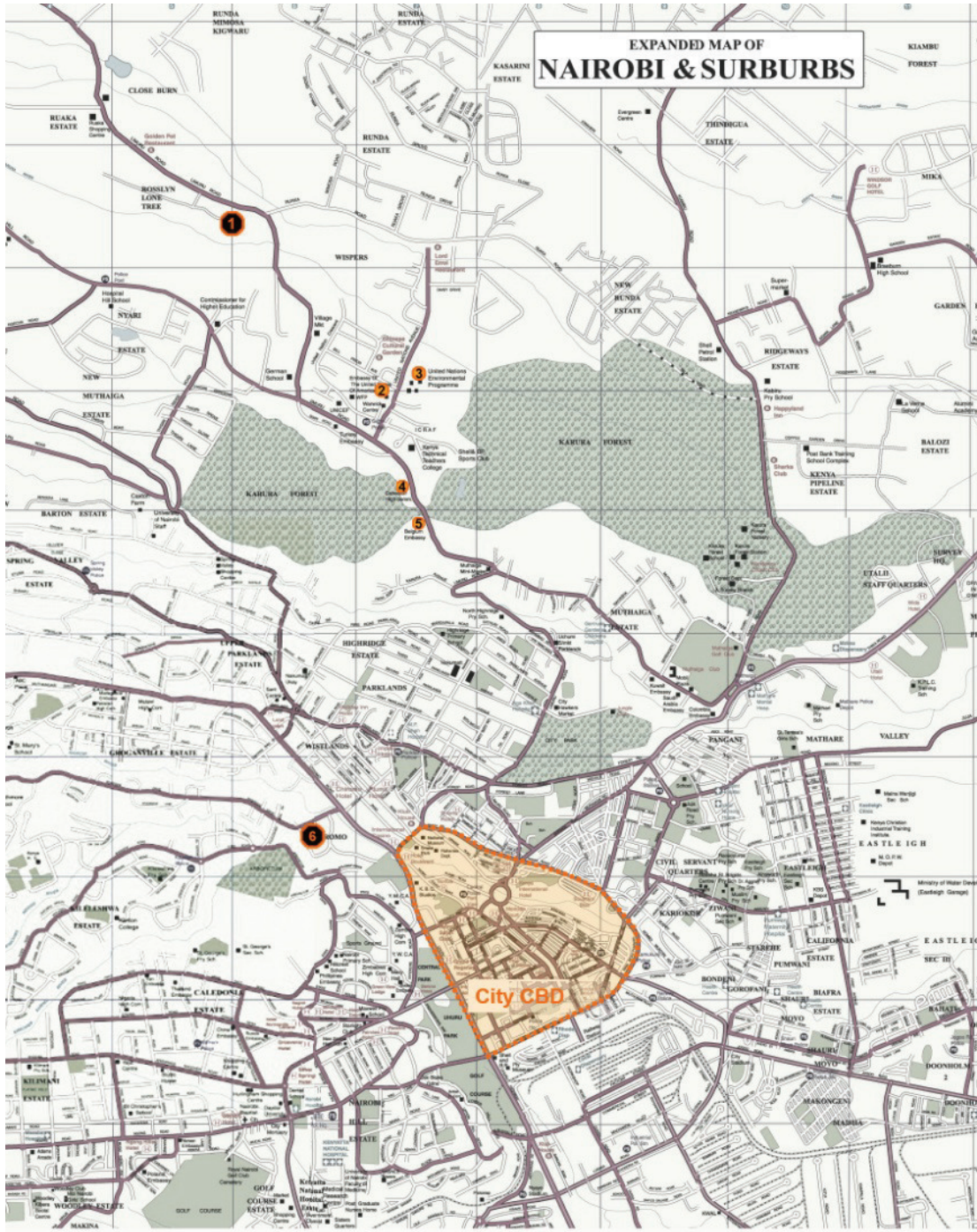
- 2.36.1 Following the PWC public hearing and subject to Parliamentary approval, the project program allows for the commencement of construction in the 1st Quarter of 2016 with Practical Completion estimated in the 2nd Quarter of 2018 followed by security and furniture installations with occupation of

the complex scheduled in mid 2018. Practical completion would be followed by a 12 months Defects Liability Period.

2.37 Associated sketch design drawings

2.37.1 The following drawings have been prepared to illustrate and define the proposal:

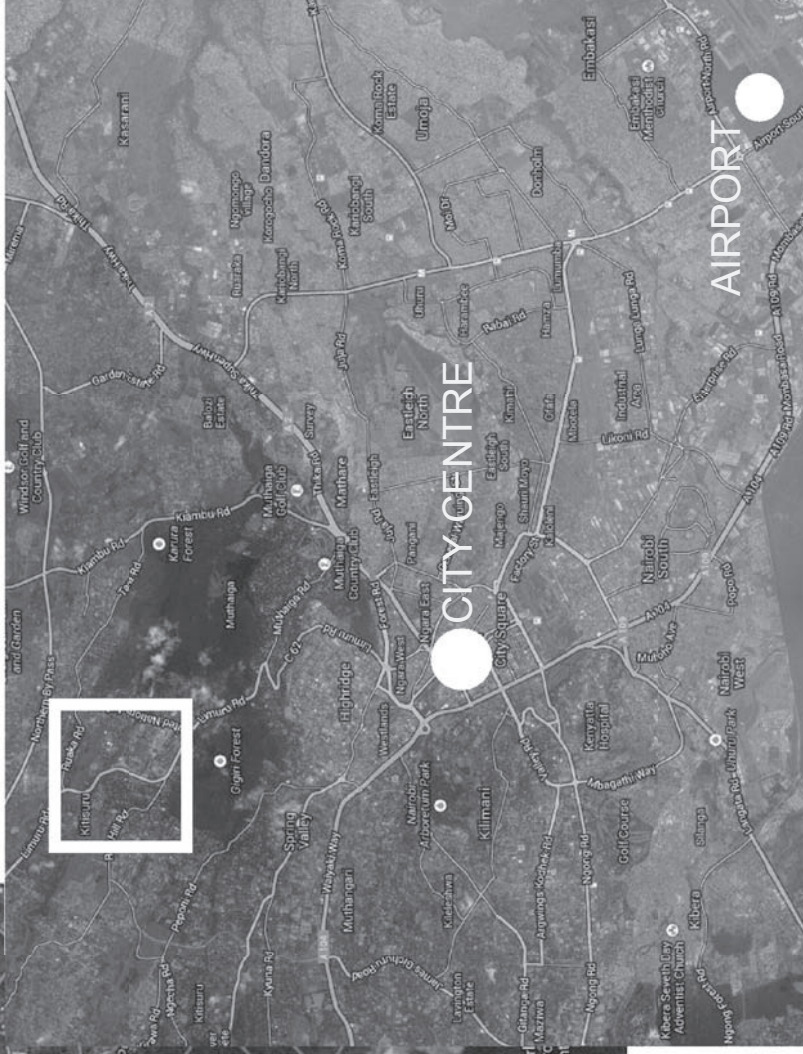
- a) SK-101 – Location Plan;
- b) SK-102 – Site Master Plan;
- c) SK-103 – Level 1 Floor Plan;
- d) SK-104 – Level 2 Floor Plan;
- e) SK-105 – Level 3 Floor Plan;
- f) SK-106 - North Elevation;
- g) SK-107 - East Elevation;
- h) SK-108 - South Elevation;
- i) SK-109 - West Elevation;
- j) SK-110 - North East Perspective;
- k) SK-111 - North West Perspective;
- l) SK-112 - South East Perspective;
- m) SK-113 - South West Perspective



- 1 New Australian High Commission
- 2 US Embassy
- 3 UN
- 4 Canadian High Commission
- 5 Belgium Embassy
- 6 Existing Australian High Commission

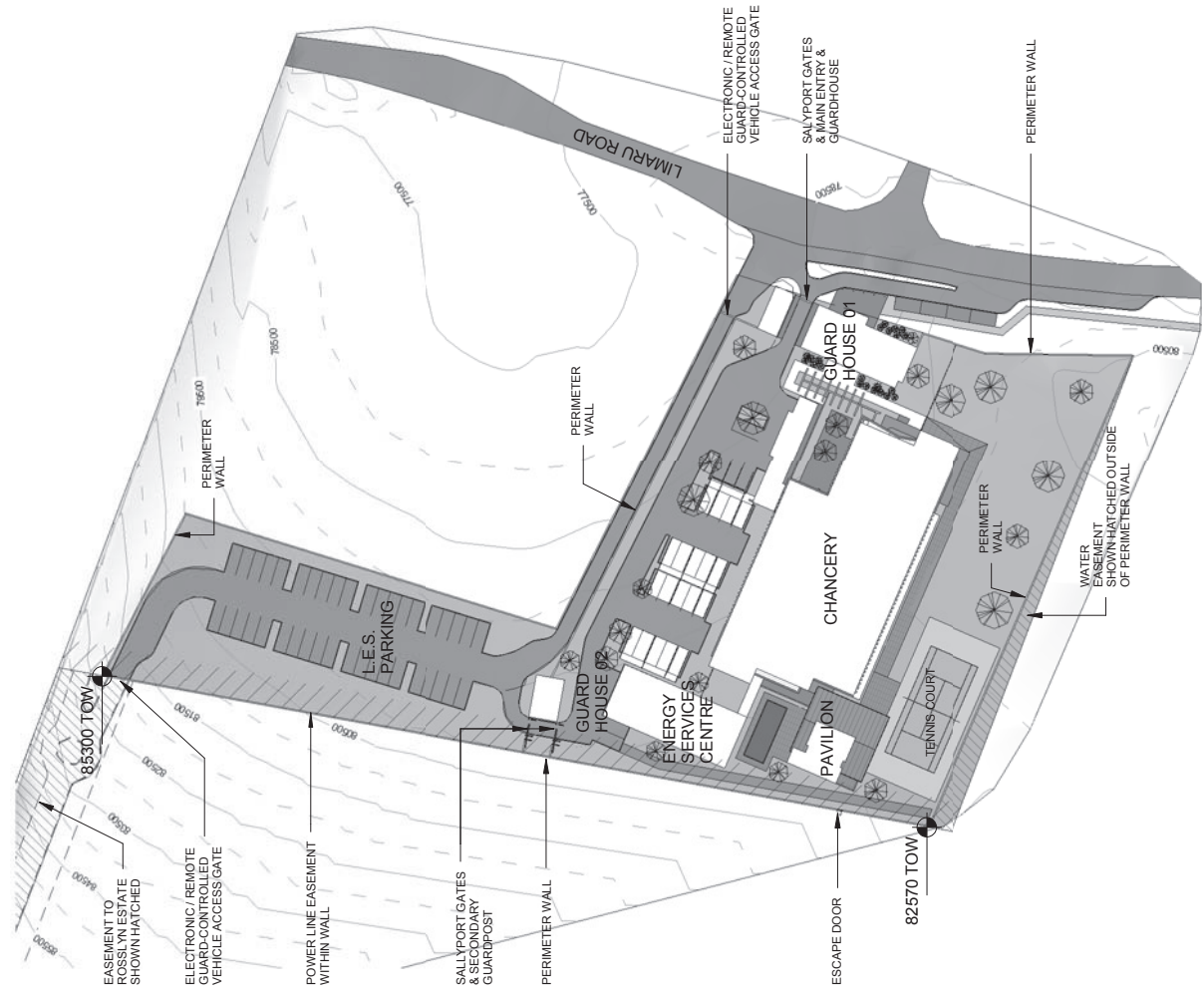


Map Extracted from www.t.ressie.de



AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

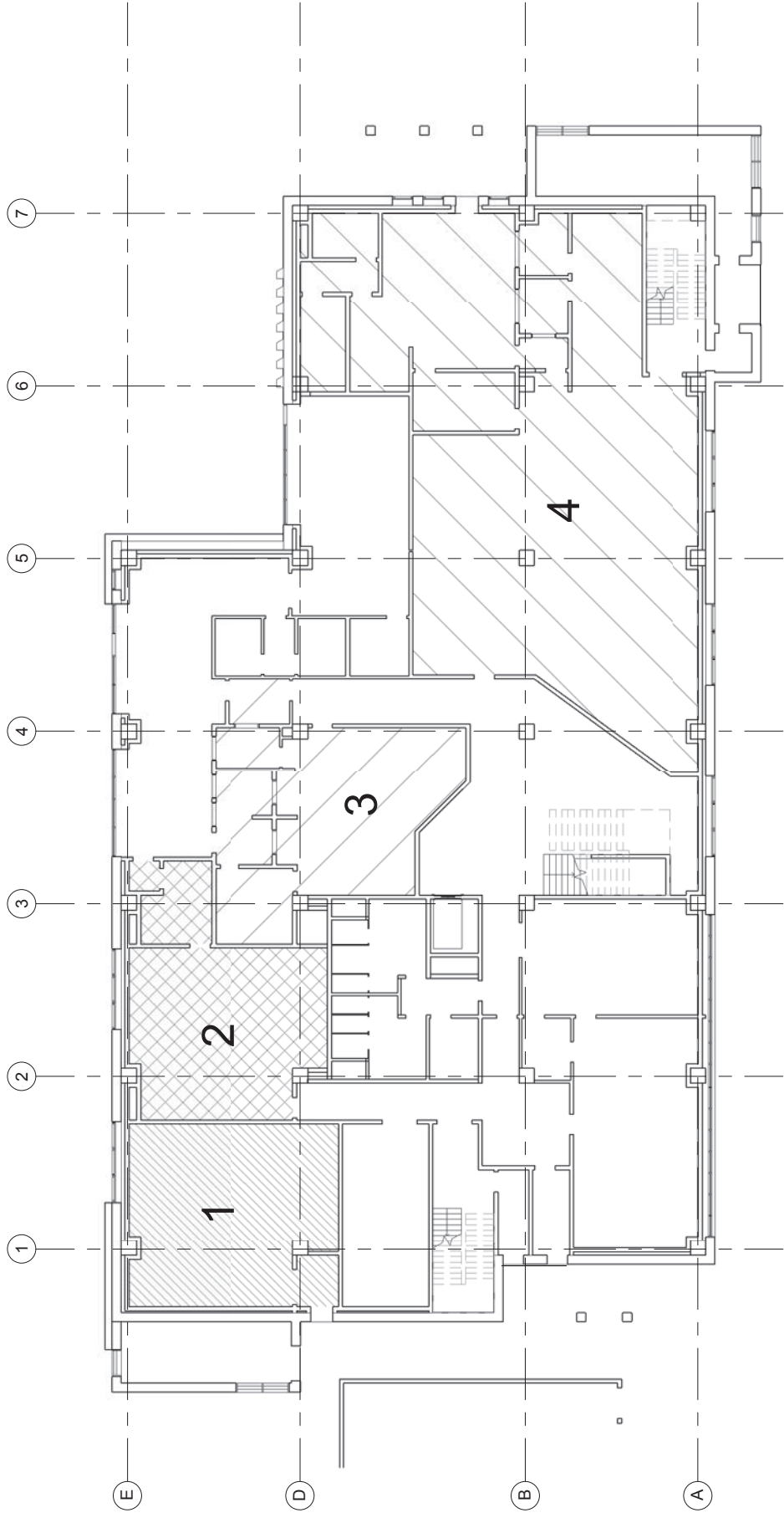
LOCATION
SK 101



**SITE PLAN
SK 102**

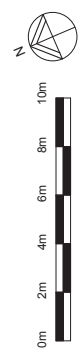
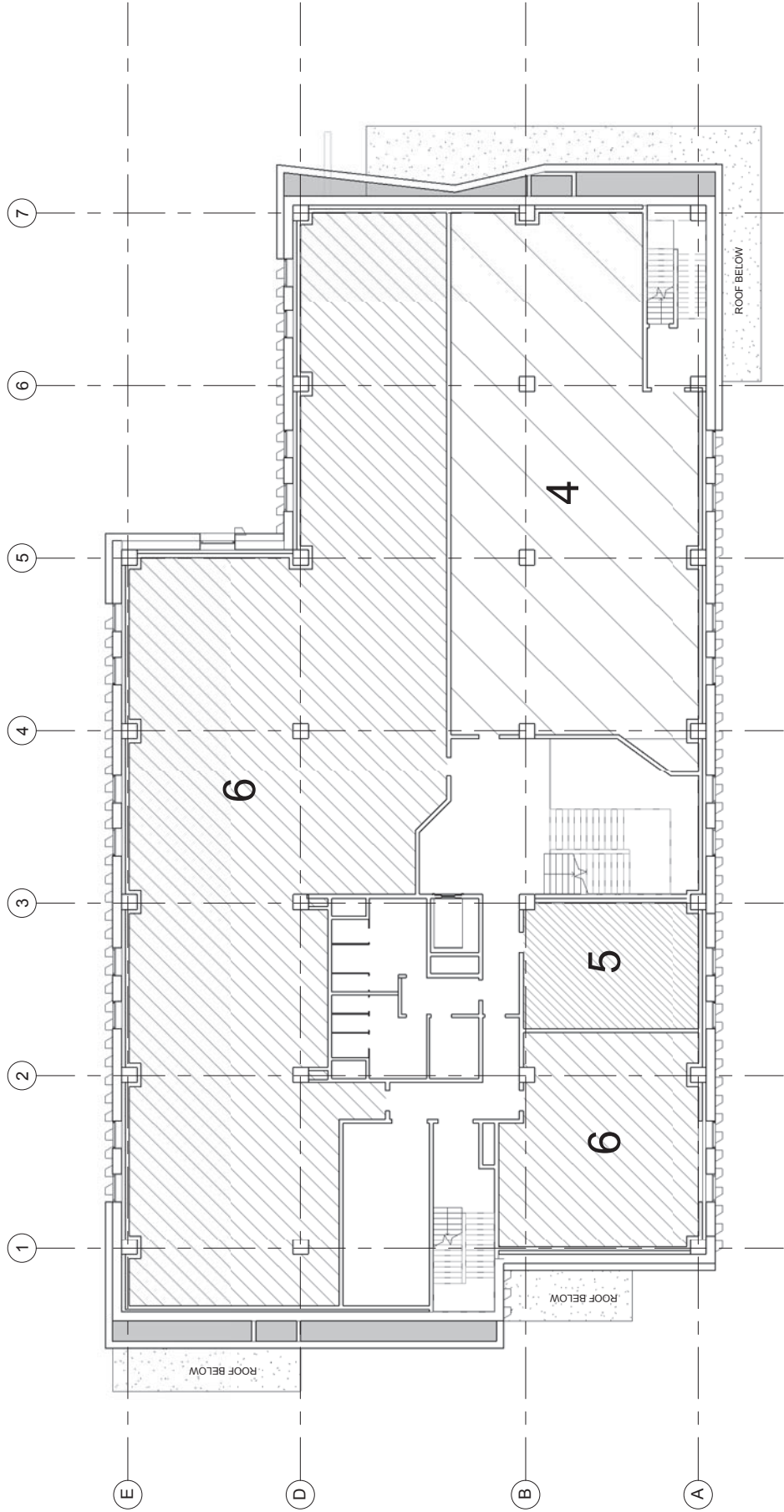
AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA





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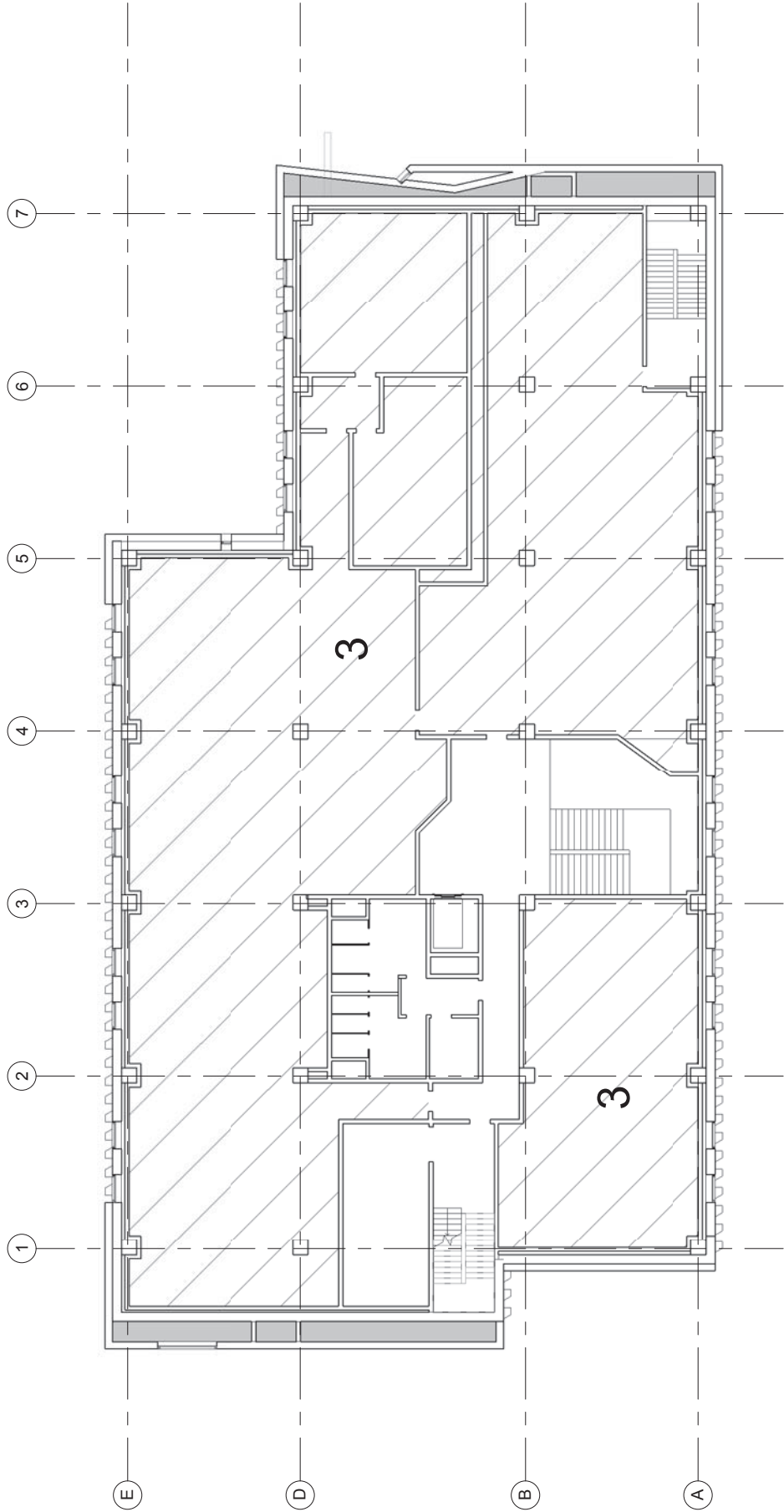
LEVEL 1 FLOOR PLAN
SK 103



AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

LEVEL 2 FLOOR PLAN
SK 104





AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

LEVEL 3 FLOOR PLAN
SK 105





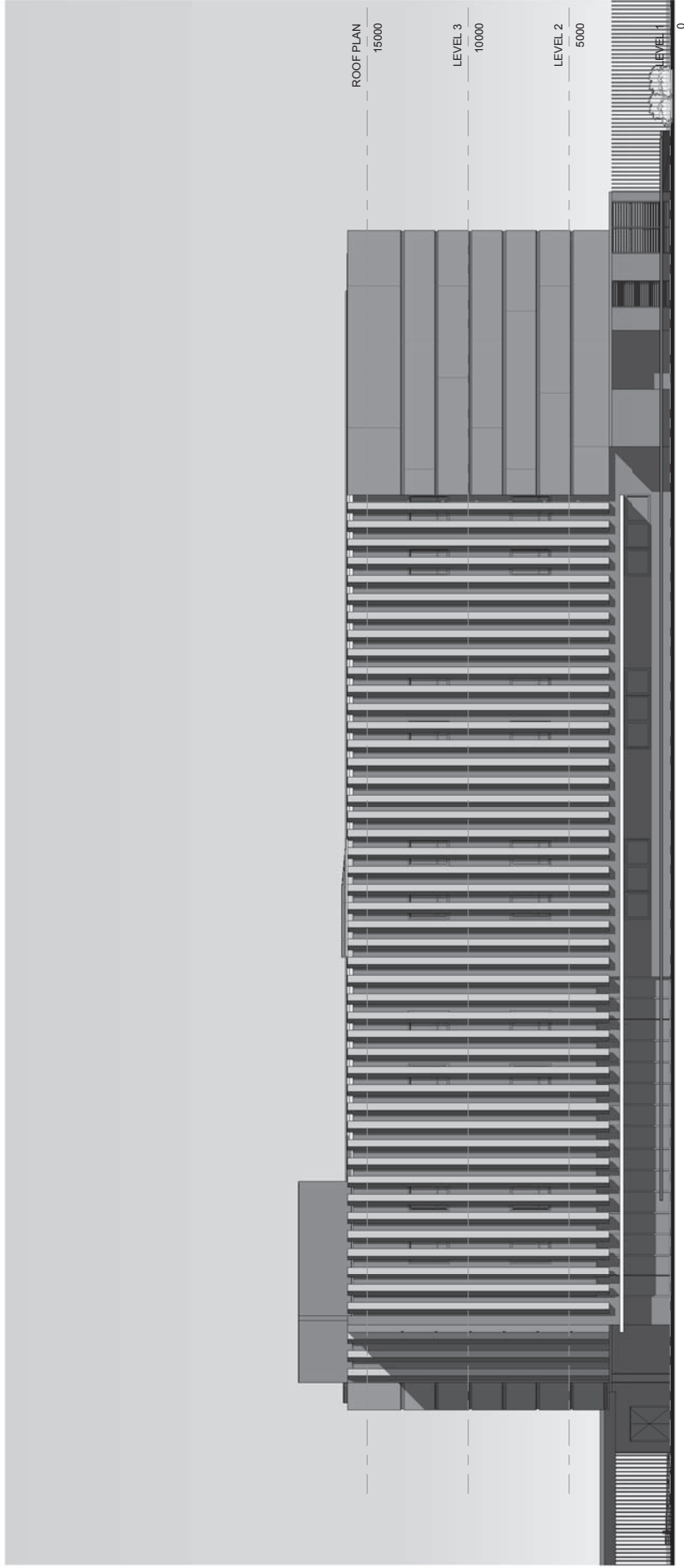
AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

NORTH ELEVATION
SK 106



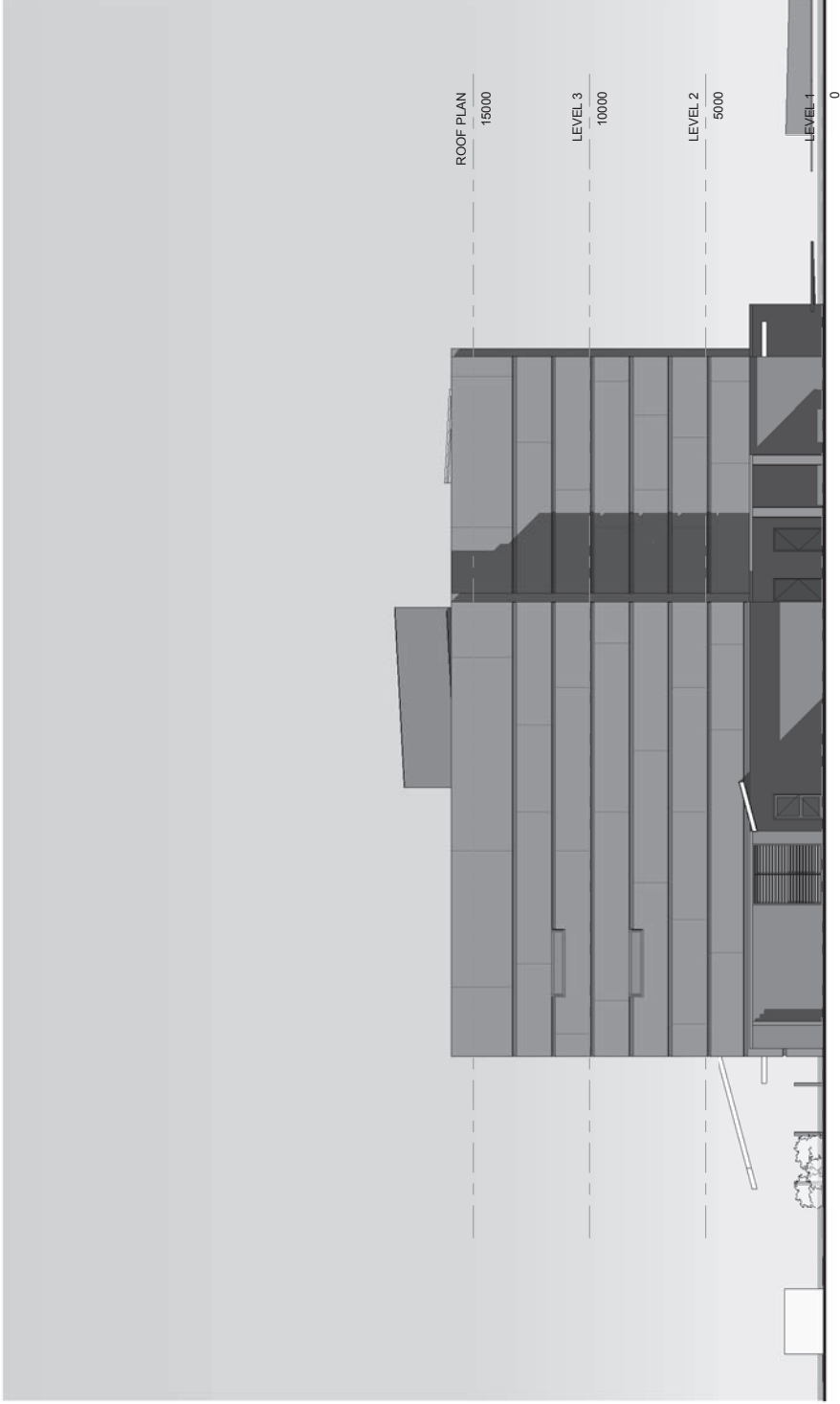
AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

EAST ELEVATION
SK 107



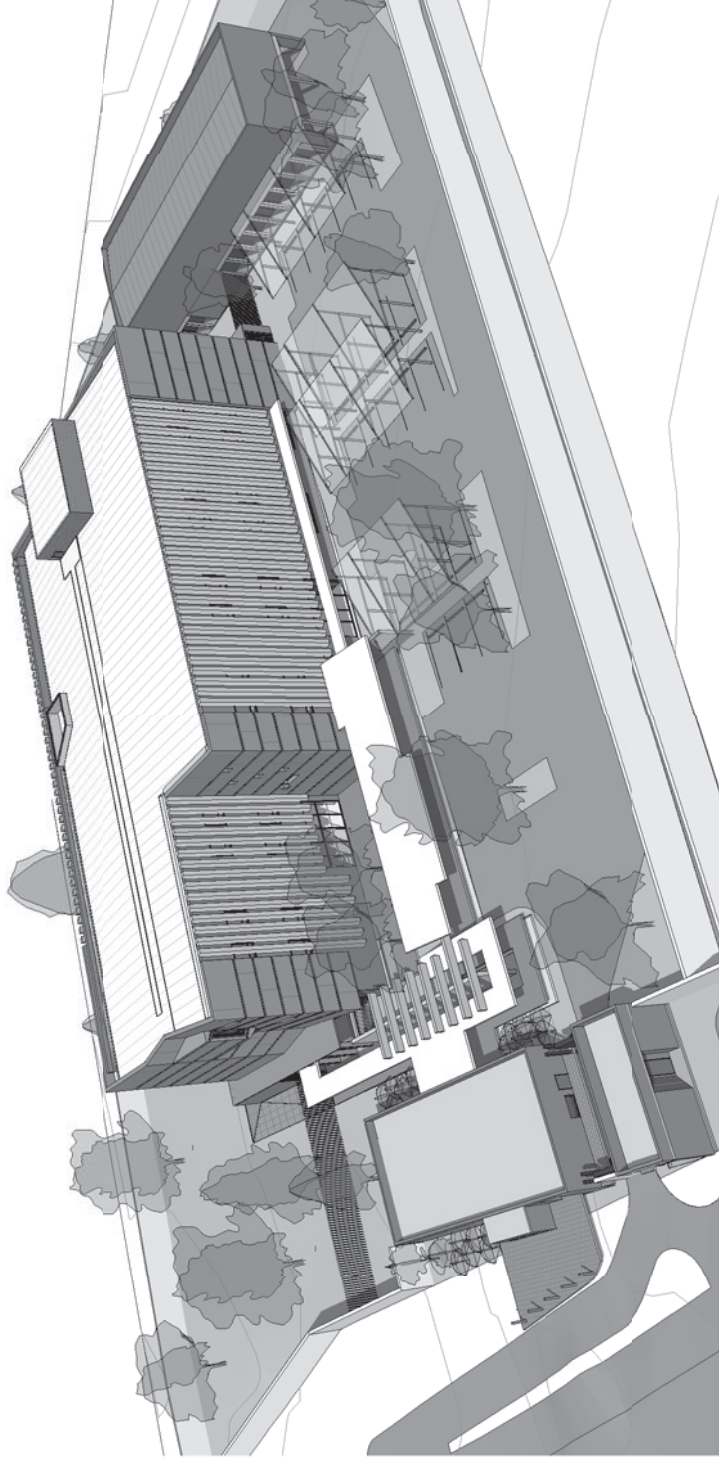
AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

SOUTH ELEVATION
SK 108



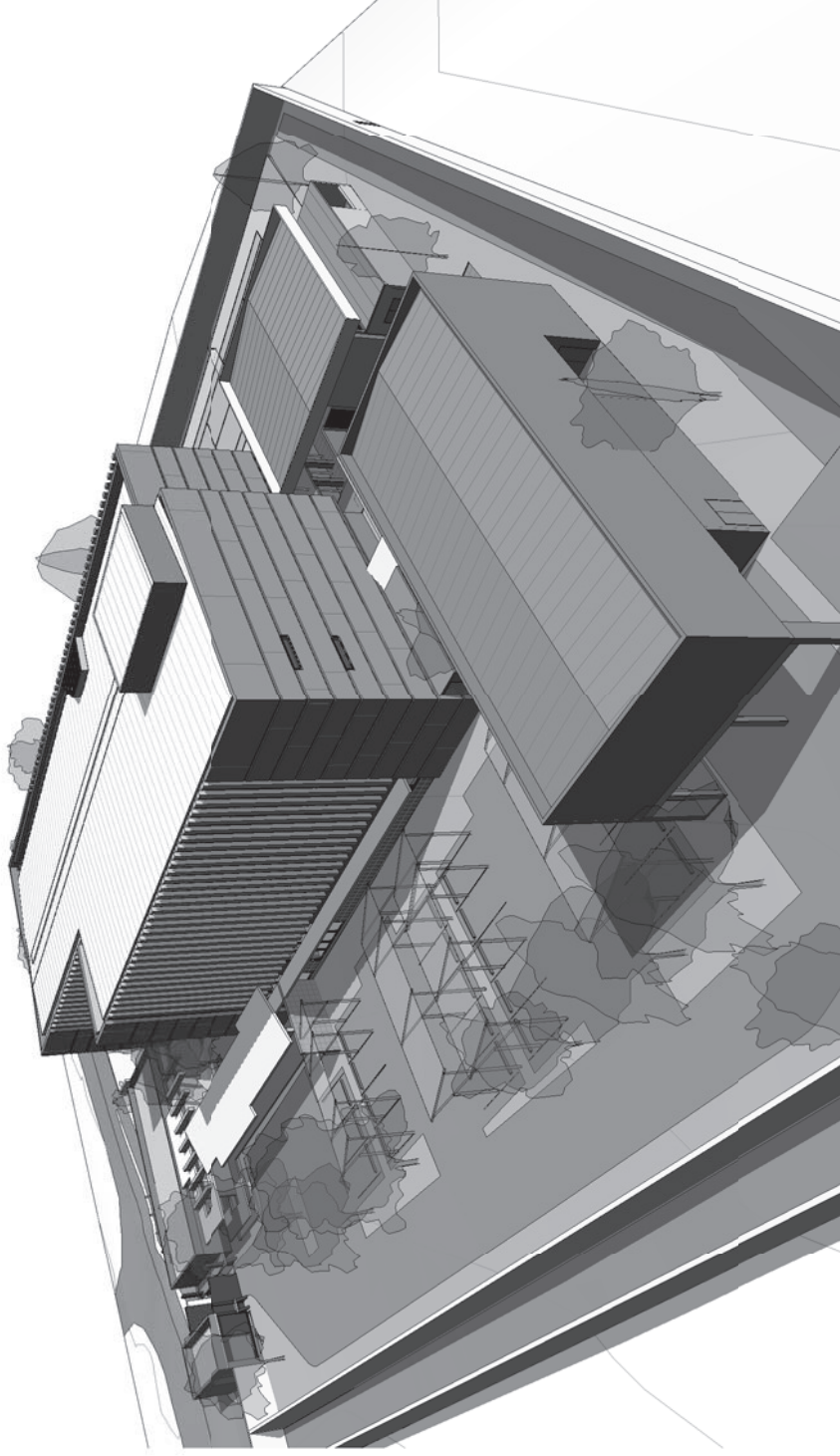
AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

WEST ELEVATION
SK 109



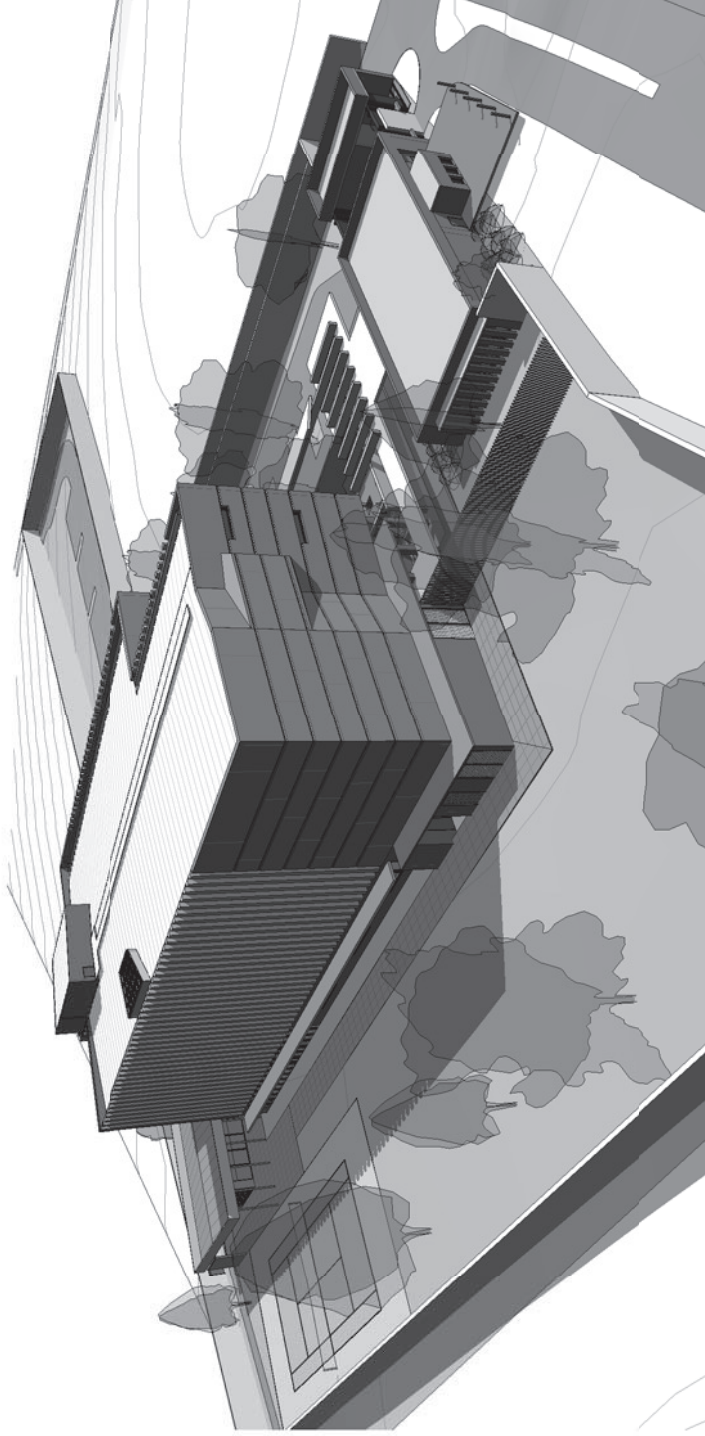
AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

NORTH EAST PERSPECTIVE
SK 110



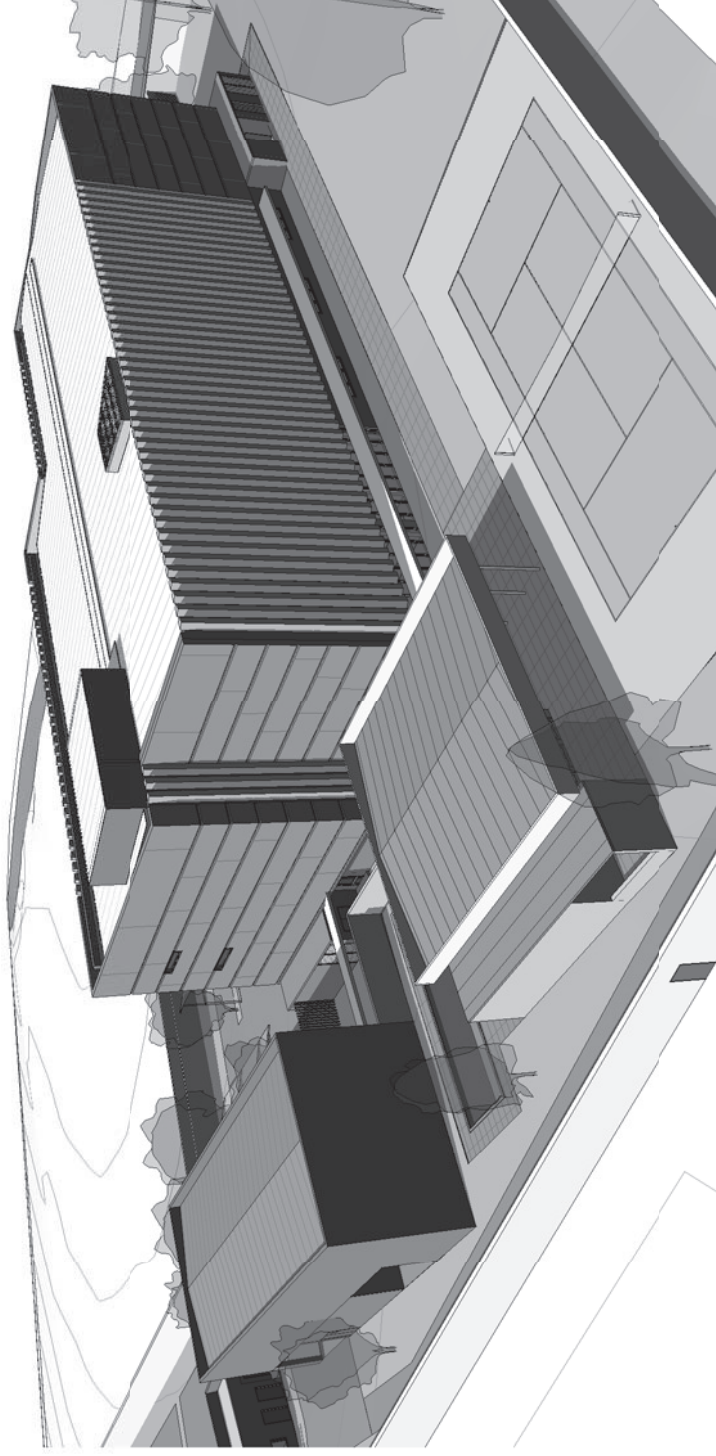
AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

NORTH WEST PERSPECTIVE
SK 111



AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

SOUTH EAST PERSPECTIVE
SK 112



AUSTRALIAN HIGH COMMISSION - NAIROBI, KENYA

SOUTH WEST PERSPECTIVE
SK 113