

KANO AIRPORCE BASE

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RESTRICTED

FOR SECURITY REASONS

\*Many facts have been distorted, where ever possible but this has in no way affected the design or research.

Many insertions have been made to make the Thesis as real as possible. But all these have gone a long way to establish my model airforce Base for Nigeria\*

The documents contained in this paper should not be communicated to the press or any unauthorised persons. But for any research or criticism, a written permission is to be obtained from the author.

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( ii )

DEDICATION

This piece of work is Dedicated

TO

MARYAM BUKAR SHETTIMA.

CHAPTER ONE

INTRODUCTION:

To fully understand the role and importance in relation to any military installations, one has to understand the structure and organisation of the Defence system of the area: In this case the defence is that of 'aerial' that is the Airforce. Since this paper is solely on the airforce I will not talk much about the sea or land defences (army & navy) unless where we have a direct link in relevance to my topic.

The topic in Kano airforce Base. Actually or professionally speaking we don't have a base in Kano because a base is like an institution which has a number of Units but since only one such unit exists, we shall refer to it by its name, which is Flight Training Group (FTG). For full details, I will start with the Organisation and roles of the Nigerian Airforce.

The chief aims of parliament in passing a statutory act, to be known as Airforce Act 1964 for the official establishment, administration and discipline of the NAF were:

- (a) To achieve a full complement to the defence system of Nigeria both in air and on land.
- (b) To ensure fast versatile mobility of the armed forces.
- (c) To ensure the territorial integrity of a united Nigeria.

Briefly, from 1964 through the civil war period and immediate post-war years to the present day the NAF has undergone marked structural changes as dictated by its basic functions such as tactical operations and training.

#### ROLES OF THE NAF

Defence priorities laid down by the Federal Government for the provision of men and equipment for the armed forces are as follows:

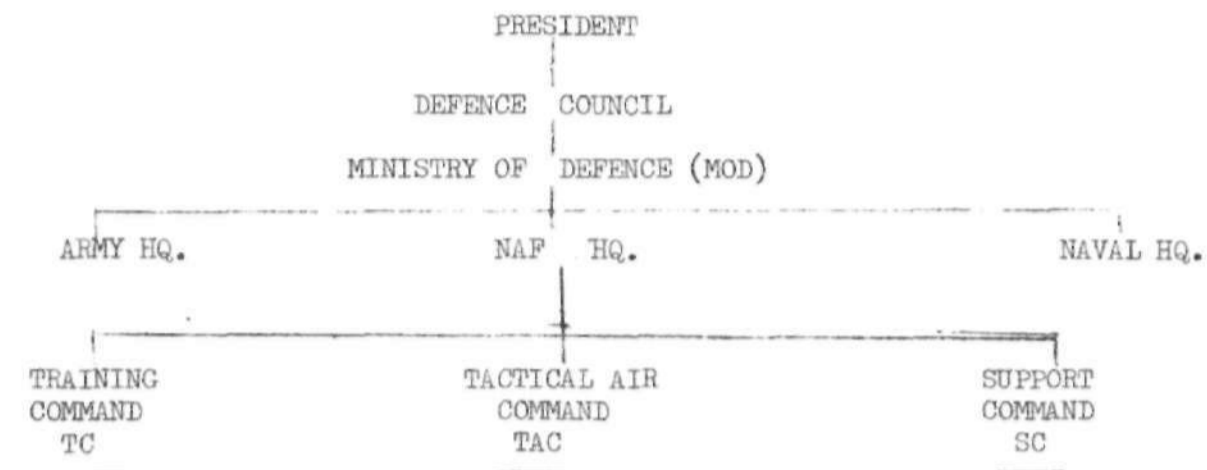
- (a) To defend the territorial integrity of Nigeria.
- (b) To deter any attack by any nation and should deterrence

fail to bring any war to a conclusion favourable to Nigeria.

- (c) To provide aid to civil power.
- (d) To aid the OAU, UNO and support any other arrangement or agreement which may be entered into from time to time by the Federal Government.

Chain Of Command

The routine chain of command through which the president as Commander-In-Chief of the armed forces exercises command as follows:



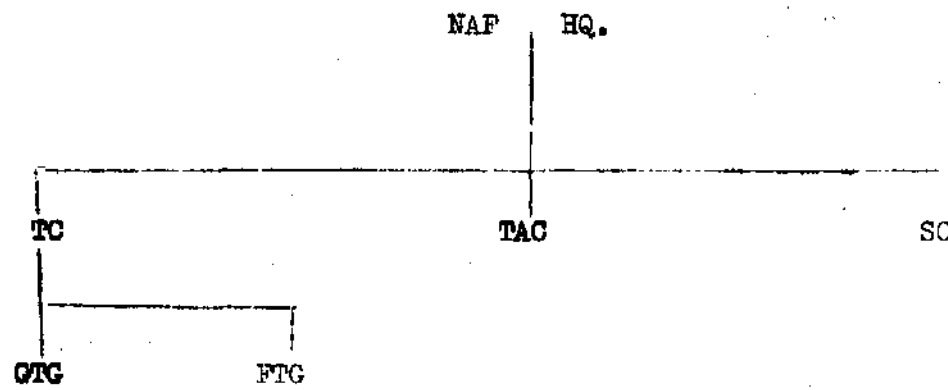
Thus the overall command is exercised by the Commander-In-Chief (c-in-c). While planning and coordination are undertaken by the staff of Defence Council and Ministry of Defence, execution of the airforce tasks is carried out by the CAS through his AOCs who are directly responsible to him for all operations carried out by their commands. The AOCs exercise command over their own organic groups and so on.



### Organisation of NAF Formations

There are 3 major commands:-

Training Command (TC), Tactical Air Command (TAC) and Support Command (SC) each commanded by an AOC.



- (a) NAF - TC - is established for the purposes of planning and coordinating the admin and operational command of all training activities in the NAF.
- (b) NAF - TAC - Established for the purposes of centralisation of command with the view to providing joint operational doctrine for the use of tactical forces.
- (c) NAF - SC - Responsible for the implementation of all support functions performed by the logistics, Air traffic, comms, provost, pay and medical services. This is to ensure better co-ordination and maintenance of equal standards of the support services rendered throughout the NAF.

### Early Development

In establishing an offensive and defensive machinery as the air force, in which expert technical know-how and sophisticated technical equipment are part of the assistance of more advanced foreign countries to train and manage the institution at the embryonic stage cannot be ruled out. With this view, the first batch of 10 pilot cadets were recruited in June 1962 to undergo flying training with the Ethiopian Air Force. In February 1963, the next batch of 22 flight cadets were recruited to undergo flying training 16 with the Royal Canadian Airforce and 6 with the Indian Airforce with the

promulgation of the physical establishment of the Nigerian Airforce in the Nigerian parliament in 1963, It was decided that the balance of advantage laid with the offer of technical assistance received from the Government of the Federal Republic of Germany. The German Air force was thereby assigned to take over the NAF Training Programmes locally and abroad. The first Batch of 80 Nigerians were sent to West Germany in August 1963 and a team of German Airforce personnel arrived in Nigeria to train Nigerians locally and establish a Base at Kaduna. The initial moves of the German Airforce assistance Group (GAFAG) resulted in the formation of the Nigerian Airforce Headquarter (NAF HQ.) in the Ministry of Defence, Lagos and the NAF Tactical and Training Wing (NAFT T W) in Kaduna: comprising of a Ground Training School, Primary Flying School and one Squadron light Transport and Liaison Squadron with its engineering complements. The NAF TT W began training Nigerians on Military tactics and drill, aircraft maintenance and conversion training of Canadian and Indian trained Nigerian pilots on Piaggio 149D and Dornier 27, primary trainer and light liaison transport aircraft respectively.

Unfortunately for the NAF, the laudable objectives and consequent scientific plans that were made by the GAFAG were prematurely put to test barely three years after the promulgation of the establishment of the NAF. In August 1967 the young and inexperienced airforce was faced with the near impossible task in fulfilling her planned roles: with the very limited resources at her disposal, the NAF

In the Civil war years (1967 - 1970) the service was equipped for the first time, with ground attack fighters and medium transport aircraft. The NAF ground attackers destroyed several enemy aircraft, dropped several tons of bombs and fired millions of rounds of ammunition at ground targets.

The NAF neither failed the ground forces nor the Nation: and indeed, all

doubts concerning the necessity of an air arm were totally removed.

Since then, the NAF has been under considerable re-organisation and modernisation: Sophistication both in equipments and training. Though almost all trainings are done abroad: the Government decided to form and establish training Bases here in the Country. So far about  $\frac{3}{5}$  of all trainings in NAF are done at home, only specialised courses are done abroad:

#### JUSTIFICATION

Nigerian Airforce represents a model of an absolute airforce in the air warfare of today. They have one of the best strategic duty to perform in the defence of the most popular, most influential and most vocal of the black countries in Africa. Today Military might is solely expressed by the might in the air, i.e. able to both attack and also deter the attacking forces be they in the air or on land.

Millions of Naira are spent every year in the purchase of modern equipments and training of personel. Pilots and ground equipments operators are trained abroad amongst the world's most advanced airforce in US, USSR, Britain and West Germany. Highly sophisticated airplanes are being bought into the country. But for Nigeria to have the desired pride and own strategic tactics in training, she will have to train her own personel. This will also be cheaper and easier.

Though over 80% of all NAF pilots are still trained abroad, some 20% are trained here but still go abroad for strategic or specialise courses. This is mainly due to lack of training facilities. We have the instructors both expatriates and indigenes. We have the aircrafts and the money to build permanent training Bases. but lack of operational planning is stoping this Bases from coming on.

After the formation of the Training Command, the <sup>F</sup>light <sup>T</sup>raining Group in Kano was formed and charged with the Basic and advance flight training of Nigerian airforce pilots. It was temporary based at the older Kano international airport terminal about 500 metres South of the existing airport terminal. They (airforce and commercial) use the same ground and air controls, same runways. This actually poses alot of training programme since they have follow the same flight pattern with commercial airlines.

In 1976 there was a mid air collision between one of the airforce trainers and a Nigerian airways commercial airplane causing the death of all on Board. The incident painted the need to remove all the airforces from commercial Airports. The Nigerian Airports Authority (NAA) undertook the survey and construction of new airports (modern) and the old ones left for the airforces. Kaduna airport will move to a new site. So is Port Harcourt and Makurdi. Kano was about to be moved, but with the urgent need to expand the runway to accommodate larger airplanes, Kano airport got one of the most modern and well equipped runway. This obviously blocked the chance for their moving out. So it was decided the airforce Base should move out, to at least the site selected for the new airport, which is my ~~chosen~~ site for the Base.

The site is about 20 km from Kano city itself up north about 2 km off the Kano - Katsina highway. Situated on a gently sloping site, most of which is flat ground.

#### Existing Facility

Though the existing facility is nothing to write home about, but it's worthy of mention:

- (a) Three (3) large aprons - one for parking of the training airplanes, one in front of the hangers for faulty airplanes and the other for visiting airplanes.

- (b) Old building (Terminal) - used as the engineering wing, stores, and Group Headquarters.
- (c) Two hangers - one for MIGs and the other for Delphins L29.
- (d) Caravans - used for briefing rooms and crew rooms. As well as classes.
- (e) A single Building used for Basic flying wing Headquarter.

Otherwise all other facilities are mobile i.e. in broken down vehicles.

No staff or instructors housing, no students hostels. All are living inside Kano City in rented houses.

Why KANO?

Kano has the advantage of geographical position; and also variation in climate which are not found in any other large cities in Nigeria. Kano stands at the point of airway exit in the North, and almost centrally located between Sokoto and Maiduguri. This position gives Kano Base flexibility in the defence of the northern Border. And since the airplanes based here are all weather interceptors climate of Kano gives flying sortie all year round. And also enables the training against all these variety of climatic conditions.

Also its proximity to Kaduna, the training command Headquarters.

Types Of Aircrafts in NAF

- |                         |                          |
|-------------------------|--------------------------|
| (a) Delfin L29          | - Training               |
| (b) MIG 21              | - Training/Combat        |
| (c) Alpha Jet           | - Training/Combat        |
| (d) C 130               | - Transport              |
| (e) Donier Sky Servant  | - Transport/Liaison      |
| (f) F 27                | - Transport/Liaison      |
| (g) F 28 (Presidential) | - Executive transport    |
| (h) Helicopters         | - Training/Rescue/Combat |

CHAPTER TWO

FLIGHT TRAINING

2. TRAINING IN NAF

This is regarded as the most important part of military career.

The NAF Training is solely under the Training Command (TC). The headquarters of which is situated in Kaduna.

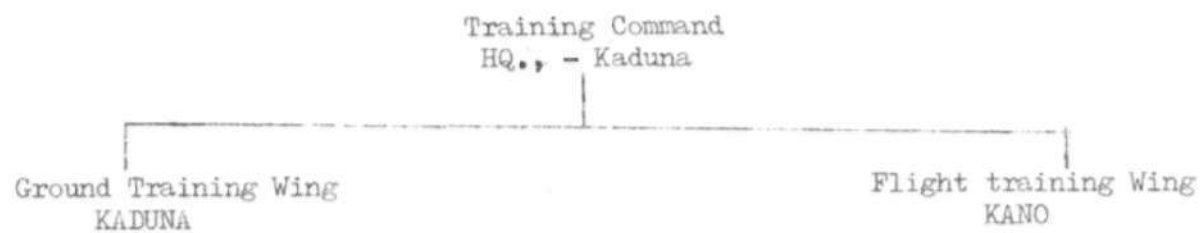
Training in the NAF is divided into two (2) Ground training and flight training.

(a) Ground Training

This is all the training in the NAF except flying. That is all activities which are done on the ground. They include:- Mechanical Engineering, Electrical Engineers, Armament Engineers, Navigators Air traffic Controllers, Provost, and Ground duty officers, all these are in support of the aircraft.

(b) Flying Training.

They are just concerned with training in relation to flight. This start from ground school to flight combat.



The training command TC in Kaduna is divided into 2 wings each under the command of a Group Commander.

(a) Ground Training Group: with Headquarters in Kaduna.

(b) Flight Training Group: with Headquarters in Kano

FLIGHT TRAINING PROGRAMME

As a group under the Training Command, the flight training is divided into 4 phases each done on a particular aircraft.

"Candidates who successfully complete the entry requirement will be selected and undergo a six months (6) officers cadet training and at the end of which the successful ones start flying.

- (a) As a pilot cadet, the Bull dog Aircraft primary trainer is the ac used. This forms the primary flight training (PFT), It is done at Kaduna GTG at the PFTW (Primary Flight Training Wing).
- (b) Then comes the Basic Flying Training (BFT) on a Basic jet trainer, The Delfin L29. This lasts up to 9 months. At the end of this training, the flight cadet earns his wings, i.e. a qualified under rated pilot, after this the pilots are rated to:-
  - (a) Fighter pilot
  - (b) Transport pilot
  - (c) Helicopter pilots
- (c) Fighter pilots now undergo the advance flight training (AFT) lasting about 6 months on a high performance aircraft. It was formally on MIG 15/17 but now phased out, for the German Alpha Jet.
- (d) At the end of the (AFT) they now undergo the Operational Conversion Course OC at OCU. On the main operational ac. which is the MIG 21, Here they now fly as weapons. Learning all the air of air combat and ground attacks role. This lasts about 3 months. From here they are sent to the Squadrons for operational missions.

#### Case Study of Flight Training In The Airforce

Here I am using only two Countries which I have had the opportunity of visiting at least one of their flight training Bases. I am using Great Britain and U.S.A. since all our training were or are still done there.



(a) Great Britain (ROYAL AIR FORCE) - RAF-

The training side of RAF support command is responsible for all flight training in the service and also administers 16 University Air Squadrons. Each of the UAS has some Five SA Bulldog T.1s with 2 FTs at Church Fenton using the type for primary grading; a total of 130 Bulldogs were bought by the RAF. At Swinderby is a flying selection sqn with 11 Chipmunk T10s. The central flying school at Leeming operates jet provost T3/T5s as does 3FTs at Dishforth, IFTS at Linton-on-Ouse for Basic tuition and adopted the designation 19 (Basic) FTS. Also at Church Fenton is 7 FTS with JPs. Advanced training is performed at 4FTS Valley on BA Hawk T.1s a total of 193 Hawks has been purchased by the RAF. Navigation training is performed by 6 FTS at Finningley on most of the 19 HS Dominies in service and at the same base is the Multi-Engine training Squadron equiped with 11 SA Jetstreams. Helicopter training is flown at CFS Shawbury on 20 Gazelle HT 3s.

UNITED STATES OF AMERICA (UNITED STATE AIRFORCE) - USAF -

Air training command with Headquarters at Randolph AFB, Texas, operates a total of 1,491 airplanes comprising 680 T37s 693 T38s, 102 T41s and 13 T43s. The Navigator Training Wing at Malther AFB California operates as a joint USAF/USN/USMC/ Coast Guard Unit with the T43s. At the USAF Academy colorado springs, two DHC UV 18B twin others, delivered in 1977 provide flat form for cadet parachute training. The airforce reserve (AFR) is a large unmobilised training and support element with headquarters at Robins AFB, Ga and it flies many of the roles of the active AF. The flying units are steadily converting to more modern equipment such as A10s and F-4s to be followed in the future with F16s. Reserve elements are divided into three

airforces ( 4th 10th 14th AF ) within the US, flying 11 C 130 squadrons, two C7 squadrons, four C-123K squadrons, three KC 135 squadrons, one F4C squadron, Four A37B squadrons, one AC 130 unit, Four ARRS squadrons with HH-1H, HH-3E and HC - 130 ac, one CH-3E unit and a weather squadron with WC - 130s.

CHAPTER THREE

SITE AND SITE LOCATION CRITERIA

Site and Site Location:

The site selection here is based on the suitability of the site as an airport since this is the governing function of the design.

In selecting a suitable site for a new airport, it is necessary to satisfy certain criteria to serve as guide in determining the proper location and size of the airport.

The type of aircraft to be used and the traffic to be anticipated.

The following factors influence the siting of a new airport:

- Type of development in surrounding area.
- Weather conditions.
- Ground transport.
- Land availability.
- Surrounding obstruction.
- Construction economy
- Availability of facilities.

Since an airforce Base's main function is like an airport but without passengers; I will refer to it as an - airport -

(a) Type of development in surrounding Area.

Airport should be zoned as an industrial area. Though noise associated with this place makes it necessary for the social and economic effects to be tolerated without no doubt it is not an acceptable phenomenon on the life of those who live nearby therefore it becomes a sort of necessary disturbance and a source of discomfort hence the industrial zoning.

Perceived noise levels must be mapped out in order to determine areas suitable for non compatible development. Its location where noise can be a nuisance like Schools and residential is objectionable though but becomes a sort of requirement in this particular design - Airforce Base - luckily or incidentally both the school and residential inhabitants happen to be

people associated in one way or the other with the aircraft and so becomes part of their to accept the nuisance of noise.

However, this is not true with residents who do not fall within this group and as a result a site at an acceptable distance from any settlement is chosen.

(b) Weather Conditions:

This is a natural phenomenon which is unavoidable for a particular area once an airport has to be sited there. The presence of bad weather occasionally could impair the operations of an aircraft but here it is used intentionally to acquaint the students with a condition they will inevitably encounter. The weather situation of Kano will be discussed later. (Under site conditions).

(c) Ground Transport:

An airport should have a good communication linkage in the form of good highways or railways in this case a modern highway passes about  $1\frac{1}{2}$  km away from the site linking Kano city with Katsina.

(d) Land Availability:

There should be ample land to accommodate the necessary facilities and accompanying services and allow for future expansion. This area is very large enough to handle even an International airport.

(e) Surrounding Obstructions:

The aerial approach and departure to the airport up to its ultimate stage should be free of all obstruction or could clear of it, to facilitate aircraft operations and to minimise accident risk. The site selected has fulfilled the International Civil Aviation Organisation((ICAO) requirements for unobstructed zone.

(f) Economy of Construction:

Dry flat lands are the most economical to develop than submerge and rolling Terrain. The selected site is flat, dry and well drained, to the streams on the southern parts of site.

The Site

It's a flat land about 20 kilometres north of Kano City. It is located at  $08^{\circ}25^1$  East and  $12^{\circ}05^1$  north a kilometre off the Katsina-Kano highway. The site was meant for the proposed new Kano international airport. The general area is about 15 square kilometres, but for the purpose of the airbase only about 6 sq. kilometres was taken.

The land is fairly flat sloping gently towards the south east. There is no prominent high ground in the area but there is small stream running south wards. The typical savannah grass land, with trees scattered all over without a major concentration except around the valley formed by the stream: since the soil around here is not very fertile, no farms exist. No permanent settlements at all, except Fulani units who migrate seasonally with their cattle.

The site is situated at an altitude of 484 metres above sea level, with a reference temperature of  $91^{\circ}\text{F}$  max and max mean annual rainfall of about 865mm max in August. There are two prevailing winds, the rain bearing Southwestern lies and dusty cold hammatan Northeastern lies with max velocities ranging from 10 - 21 knots. The soil is sandy laterite with the loose top soil being washed away by rains.

Because of the nature and position of the site, there is virtually no man activities on the land. Apart from occasional bush fires, the vegetation is carefully preserved.

Since this area has been already surveyed and okayed by two airport consultants to be used as an airport, it will adequately serve as an airbase, it is reserveness from main activity both from man and climate, makes it an ideal place for a security based installation.

In the survey, two sites were chosen. One for the airport and the other about 3 km away for the housing of airport personnel (customs, NAA and Hotels). I decided to use both sites, the airport site for my airbase and the residential site for my officers Quarters. I do not want to include the staff-on-base.

CHAPTER FOUR

THE THESIS  
(SCOPE AND DESIGN)



Introduction:

Nigerian airforce flight training group as it's based in Kano is the main focus of the research. This involves the intensive study of their activities and roles. So far I am using the existing roles and organisation; to provide an airforce Base at the proposed site.

The base is broadly divided into two main parts. The operational and non operational i.e. the working and accommodation areas. Architecturally this division is too vast and complicated so I decided to divide the base into 6 parts, i.e.

- (a) Airdrome
- (b) Engineering Wing
- (c) Training Wings
- (d) Group Headquarters
- (e) Students Messing
- (f) Barracks.

This grouping though presents a unit on its own but are all responsible to the group Headquarters, which houses the Group Commander.

(a) Airdrome:

This is the nerve centre of the flight and comprises of the airstation and the flight line. (air interface) Runway, Taxiway and the aprons. While the station comprises of the control both visual and radar control crew rooms, briefing rooms and fire and rescue services. The station officer is also here. An additional facility is the combat simulator, which is used for synthetic combat flights.

(b) Engineering Wing:

Since these aircrafts need constant servicing and maintenance there is the need to provide them with Engineers and engineering facilities.

There include all hangers and supporting services. The head and staff officers being at the group Headquarters.

(c) Training Wings:

This is the main training areas or simply the training school, where all the literature and theories of flight and combat are taught before actually proceeding to the actual aircrafts. Sometimes this is referred to as ground school.

It consists of classes, lecture theatres, administration and simulator areas.

(d) Group Headquarters:

The command centre and administrative cell. Here we have the commander and his Staff Officers, A Branch, G- Branch, Officers conference rooms and all the admin staff of the group and representatives.

(e) Students Messing:

The students hostels and mess areas. Since the students are normally accommodated on base. And during operations used as an accommodation for pilots and engineers.

(f) Barracks:

This is the accommodation parts for both officers and men. It houses them with their families. This forms the real non-operational part of the base. It includes officers mess, officers club, airmen's mess and club, shopping centre market and medical centre (MRS).

Design:

The design is to be composed of many sections. Selected buildings are to be designed, while the rest of the buildings are schematically but systematically planned on the site.

Though it is only Airdrome and Engineering Wing that is designed, the rest of the Units are planned on the site to effect the functional relationship.

The units are:-

- (a) Training Wings.
- (b) Group Headquarters.
- (c) Students messing.

To understand the detailed design of the Airstation/flight line and Engineering wings, two things will have to be considered, which are:-

- (a) that the area is meant for flight cadets, flight instructors and engineers.
- (b) that there are two types of aircrafts accommodated here, which goes further to say that complete separation between them is considered necessary.

Design of such an area will first start from the air to ground runway to the Barracks.

The Runway:

Initially the base is to be equipped by a single runway running from North east to South west or more technically 07 - 25 (70° - 250° Soldiers way of Bearing) from the north. And is to 2.6km long that enabling it to land all the existing military aircrafts of the world. And also all medium sized passenger aircrafts up to B. 727 model (which is the next presidential aircraft in Nigeria, and will be piloted by airforce personnel).

The design of a runway involves a lot of research and data collection. But in my case it is simplified due to the fact that I am using existing research, i.e.

(i) Kano has one permanent wind direction all through the year, it only changes i.e. left to right.

(ii) The new runway at Kano International airport.

With these two points, I decided to have my runway parallel to the existing Kano Airport's new runway, (with centre to centre separation of 16 km). The ICAO min separation is 150 metres.

With this no further problem in design is needed. On the numbering of the runways which now gives Kano international runway 07-25 Left and the Base 07 - 25 Right. Which is the ICAO system of numbering two parallel runways. Construction follows the normal one which was done at the international Runway.

The only problem now is that of citing two airports within a particular place. I intend to solve the problem like this:- Since Kano will soon have radar covering, (infact all the cities in the Country) this radar control will cover both the airports; and control any plane in the air within Kano airspace. And direct them to their next destination, or airfields. All this means is that the control Towers at each airport will only control aircrafts on their respective airfields and connect them (audio) with the radar controllers as soon as they lift from the ground. (Off course clearance will have to be given from radar controllers before permission to lift up is given by the traffic controllers at the respective control tower). Here again we have achieved the functions of two airports under one control, as is done all over the World (e.g. Dulles international airport Washington D.C. and Edwards Airforce Base Washington D.C.).

Provided next on the ground is a parallel Taxiway (30m wide) connected to the runway at 5 points one on each edge and one at the centre (straight to apron) and one each half way between the centre and the edge; all are for rapid movement and quick turn-around.

#### APRONS

Altogether there are three (3) aprons, one in front of each hangers and one in front of the airstation. The MIG 21 hangers which are situated on the left hand side of the airstation, has its apron of 6,000m<sup>2</sup> while that of L29 is 9,000m<sup>2</sup>. The other apron provided in front of the airstation is 2,500m<sup>2</sup> which is for visiting or armed aircraft.

#### MIG 21 HANGERS:

Since there are twelve (12) of such aircraft the hangers provided are for such number of aircraft. I have decided to enclose these aircrafts in squadron grouping i.e. (4) fours: Thereby having 3 (three) separate hangers each containing 4 MIG 21 aircrafts. And in each I have partitioned the block into two: having two aircrafts in each space.

Adjoining each block is a workers facilities, with cloak rooms, common rooms, and small maintenance workshops.

#### AIRSTATION:

The main control centre of the airdrome. It is divided into two and connected by a corridor <sup>of</sup> public conveniences. The first half is the one which faces the visiting aircraft's apron, and consists of briefing rooms on each end (MIG 21 on left and L29 right). Centrally is the control, a computer control on the ground and the visual control on top (control Tower). On each side are vehicle parks for 2 fire engines one ambulance and one search and rescue vehicle. On the left is a small clinic, with medical officer and attendants and on the right is the airpolice and fire officer's office.

The other half, consist of: from left, the computerised combat simulator and its control room, then the information and weather office, following immediately is the large entrance hall from the car parks. Then the General Office and station officer's office. Lastly is the crew room, where all the crew relax before and after each flight (training or mission).

#### L 29 HANGERS

Same twelve (12) aircrafts to be grouped in fours (4) i.e. having 3 groups of blocks: each block is partitioned into 4 so that each aircraft is enclosed within one space. Same as the MIG 21, attached is the worker's facilities and its exactly the same with the MIG 21 facility.

#### ENGINE OVERHAUL SHOP

On one side of the road behind each set of hangers is a large workshop, where the engine overhaul normally takes place. So an aircraft engine is disengaged from the fuselage and carried on the engine transport to and from the hangers to the overhaul shop. And when completed, it is transported back to the hangers for coupling.

CHAPTER FIVE

- SUGGESTION AND CONCLUSION -

SUGGESTION:

Today, Airforce forms the backbone of any offensive or defensive war machine. For Nigeria to continue being the mouthpiece of Africa, and still be heard all over the World, we need such warmachine. The procurement of airplanes and weapons alone cannot be sufficient. Training and the adequate media for this training will go along way to improving the skill of our young and brilliant fighter pilots.

Permanent and temporary bases both airforce and army aviation should be erected all over the country. A base of this kind (proposed KANO AFB) which is a specialised one is meant to both provide training and also strike capability. Our greatest assets are the airplanes, so we have to keep them in perfect condition and well looked after. An airforce without airplanes is like a fighting horseman with bow and no arrows.

Improving our existing airforce bases is also a necessity. Providing healthy and comfortable living Quarters for the personnel. This will not only boost the morale of the fighting men but will encourage other citizens to join the force.

The purchase of further new jets should be on the choise (majority) of those who fly them and not those who command the flies. Many pilots during my research complained of going to train in America with more comfortable jets, and coming home to use a more rugged Russian planes. All of which are not even airconditioned. This is very unsuitable for our weather; and also makes flight training very difficult in the afternoon hot sun.

A lot of spares should be negotiated for when ever a new contract is signed, to avoid the dumping of airplanes due to spares. All these go along way to producing an efficient force, but the most, is the provision of airbase; adequate enough for the purpose of which it is intended.



## C O N C L U S I O N:

During the World War II, Battle of Britain was fought and won in the Air. America fought almost all of Vietnam war from the air. The 1967 and 1973 Arab - Israeli war, was dominated by air battles. Iran and Iraqi battle of 1980 - 81, each country depended on their respective airforces. The humiliated attack of Iraq's Osirak Nuclear project outside Baghdad by Israeli Airforce (1981) is another form, where by strong and efficient airforce can be used to uphold a nations' supremacy even if it involves international piracy. All the so-called superpowers are super because even conventionally they depend on air; be they planes or missiles.

All the above examples, go to show that airforce might is the almighty. With a strong airforce one can do and undo. Tactically speaking "He who is strong in the air is strong everywhere". Strength of an airforce has little bearings to the size. This has been proved by Israeli airforce. But to achieve this strength, a lot will have to go on training. The training will have to be done on the ground, i.e. the base.

SIR WINSTON CHURCHILL once described the British Royal Airforce as, "The few who owed to so many". So many other great leaders and Generals have one way or the other commended their or various airforces as the greatest arm in warfare. The importance of airforce is not only in strikes or in detterance or attacks but also in real battle, where they are needed to either give battle field interdiction or to soften the ground for the ground forces to charge in.

All through this paper care has been taken to show that for Nigeria to obtain a place in the future might of the World, she has to start by improving and equipping the Nigerian Airforce to meet the present trend of airpower (superiority). With craze of 'Nuclear Weapons' the airforce is the most important unit here.

Since the 'Nuclear Weapon' will have to be delivered aeriaily. Though missiles can be used, but before that technology is adopted, airplanes will have to deliver them. Example is the Atomic bomb of Hiroshima and Nagasaki Japan 1945.

This thesis was meant to see how much the architect can do to improve the standard of the Nigerian airforce. And it has been shown that the architect's contribution is immense and this contribution will have to come first and fast before anyother thing.

As an airforce pilot will, "SKIES THEIR LIMIT, IS MY STARTING POINT".

LONG LIVE the Nigerian Airforce and LONG LIVE the Federal Republic of Nigeria.