Port Harcourt Site at Aker Base

Nigeria Shipbuilding & Maritime Solutions

Ship Design
Ship Building
Ship Maintenance & Repair
Equipment Supply
Import & Export

ShipMultiVision Nig. Ltd.
Shipyard development

Creating an up market modern Commercial Shipyard for new builds, repair & maintenance.

Ideally a new Shipyard to be developed as Four(4) distinct areas.

A) Approx. three(3) Hectares to be developed for entrance, offices, storage, workshops and accommodation
B) Approx. three(3) Hectares to be used ship repair & maintenance
C) Approx. three(3) Hectares to be used small boat construction such as Patrol Boats, Pilot Boats, Ferries to 50M
D) Workboats, Barges and ships 50m and above Shipbuilding area in the region of 6 Hectares to be developed on a progressive basis to build up to 60,000DWT to be developed in two(2) stages to build from 50m to 125m

A total in the region of 15 Hectares or 37 Acres to be developed in Seven(7) Stages with Stage 8 being expansion of site.

Note:- Deepwater access is required or is available in areas under discussion.

Development to be step by step subject to orders and near immediate ability to carryout repair and maintenance possible with temporary area in area near entrance where dredge pipe comes ashore or move site line to include same.

ShipMultiVision Nig. Ltd. is being formed to head the shipyard development and to promote business in Nigeria for Nigeria and the West Coast of Africa.

Summary of Shipyard Development Plans:

A:- Entrance, Security, Parking, Management, Guest Accommodation and 25m x 50M Construction Hall and Offices. Site Area BI
B:- Dredging of 200m channel (Future Graving dock) and Water Basin.
C:-Reclamation of land in the following order:- B" – C2 – A2
D:- New builds to 50 meters in Aluminum, Steel or composite in separated areas.
E:- Slipways to allow Launching and repair and maintenance
F:- Area suitable for large scale shipbuilding and repair. 6 Hectares on the water front A2.
G:- Inland 2 Hectares for accommodation and training A2
H:- Utilize pre-cut kits and part builds to speed up production at start-up.

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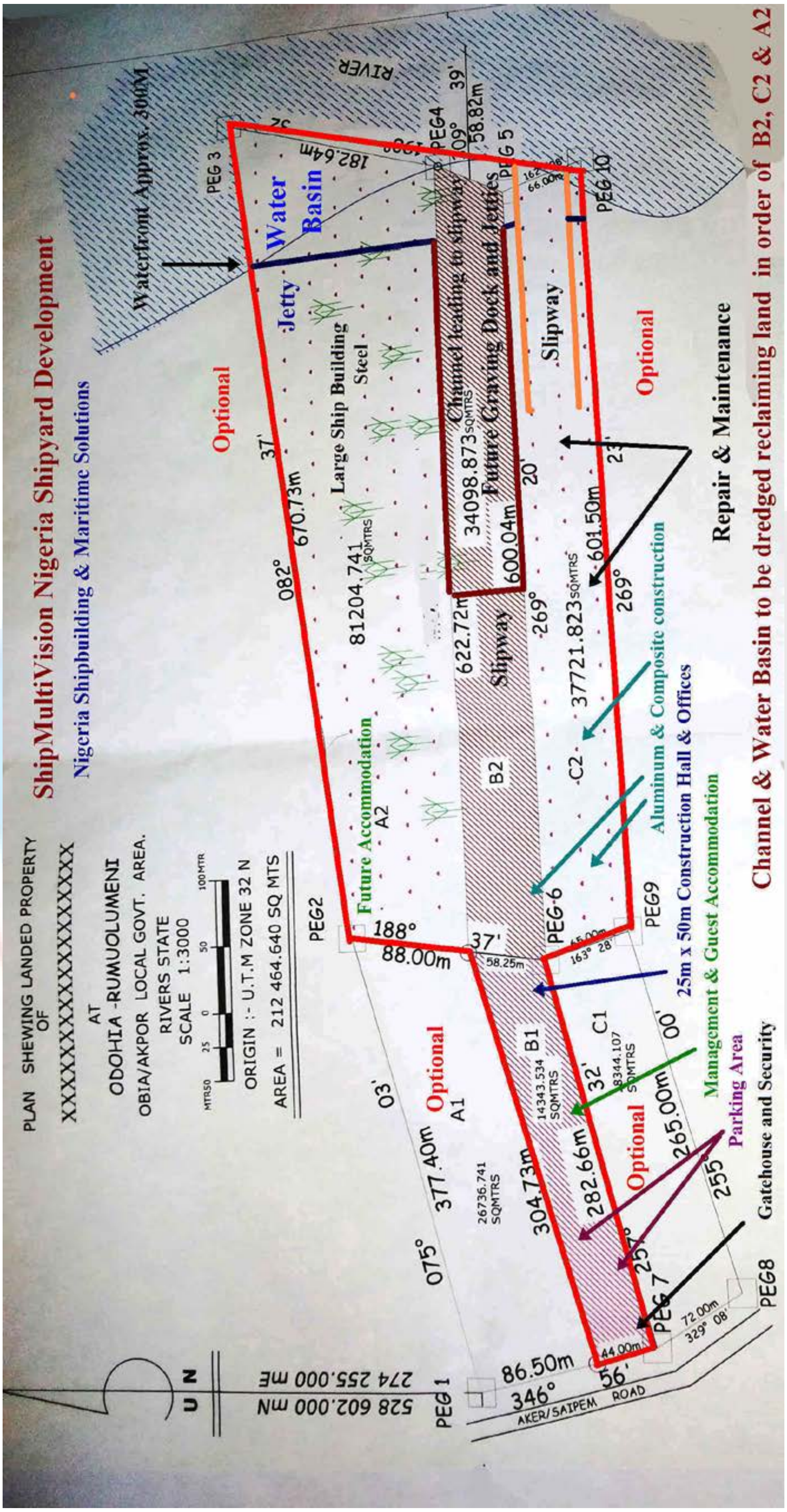
www.green-tug.com , www.patrolboats-africa.com , www.aluminumnow.com


PLAN SHEWING LANDED PROPERTY OF
XXXXXXXXXXXXXXXXXX
AT
ODOHIA -RUMUOLUMENI
OBIA/AKPOR LOCAL GOVT. AREA.
RIVERS STATE
SCALE 1:3000
ORIGIN :- U.T.M ZONE 32 N
AREA = 212 464.640 SQ MTS
ShipMultiVision Nigeria Shipyard Development
Nigeria Shipbuilding & Maritime Solutions
Waterfront Approx. 300M
RIVER
Water Basin
Jetty
Optional
Large Ship Building Steel
Channel leading to slipway
Future Graving Dock and Jetties
Slipway
Future Accommodation
Aluminum & Composite construction
25m x 50m Construction Hall & Offices
Management & Guest Accommodation
Parking Area
Gatehouse and Security
Repair & Maintenance
Channel & Water Basin to be dredged reclaiming land in order of B2, C2 & A2
274 255.000 mE
528 602.000 mN
AKER/SAIPEM ROAD

Business Method:

- A ship repair and building company formed with majority Nigerian Ownership.
- Purchase of suitable land area with waterfront of 300M total area 15 hectares with room for expansion.
    - Preparation of solid ground – B1 – as entrance and start buildings for accommodation, offices and construction hall.
    - Dredging as required and land reclamation.
    - First stage development to allow aluminum construction to 35m in enclose build area. Ship Repair and Maintenance with small steel builds in open area
    - Development to be step by step subject to orders.
    - Patrol Boat construction area to be maintained as fully secured area with security of the shipyard in general provided by profession personnel.
    - The development over a five year period to include:-
        - Shipyard development
        - Training Program for Nigerian Staff
        - Shipyard staff will be a minimum of 70% Nigerian Nationals once training has been completed and the skills are available as required.

General Plan:

- Slipway(s) to be made operational to allow repair and maintenance work to commencement to provide cash flow and training.
- Buildings and equipment to be made available to allow small boat construction to commence with 90days of access to site.
- Land and Building development to be carried out on a need basis subject to build requirements.
- Development of specialized trades to service the shipbuilding and repair projects.
- A plan of development to be drawn up for approval.
- To offer new builds and repairs to many types of vessels including Patrol Boats, Pilot Boats, Barges, tankers, off shore vessels, cargo vessels & ferries etc. plus Offshore Oil Rigs and component construction
- Patrol Boat construction area to be separate from main shipyard for security of design.
- Separate CNC area to supply shipyard and other possible clients.
- Development of satellite manufacturing companies to supply components/materials to the shipyard

Intentions:

1) **<u>Stated requirements:-</u>** The intent is to provide a shipyard with the eventual capability of producing vessels as the market demands, up to 60,000 DWT and this is to be achieved through incremental phases involving site development, investment, need and Nigerian personnel training in both ship construction, planning and management.

   To achieve this tonnage a total land mass in the region of 150,000(15 Hectares+ has been acquired with expansion possible to 200,000m(20 hectares) or more with good “deep” water access and an eventual work force of +/- 2,000 workers.

   The most important and critical part of this development will be the Nigerian training as Nigeria does not have a past history of shipbuilding or repair.

To achieve this training in an efficient way it will be necessary to use nationals from a more developed shipbuilding culture such as Turkey, the UK or India. Turkey, for example, has come out of the recent financial crisis with a capacity to build 1,400,000 + DWT per year and a substantial rating as the world's 5th rated builder based on tonnage as well as a manufacturer of both high quality class approved marine equipment as well as steel and steel products. Based on this a cross exchange of technologies is an ideal way to resolve the Nigerian shipyard training efficiently.

2) **Implementation:-** The efficiency of vessel construction is based on several factors, speed of construction, land size to carry on several aspects of the same and multiple projects simultaneously, the machinery necessary for production in the form of cranes, sheet bending, welding and forming equipment as well as a launching / hauling capability and above all an experienced, trained and capable workforce in the way of actual constructers, planning engineers, engineers, project managers, naval architects and management

The working solution is to combine both Nigerians and our ex-pat management, surveyors and foreman using primarily a Nigerian work force to speed construction and educate the Nigerian work force at the same time, the phases would be:-

2a) Builds to 50m on Aluminum, Steel or Composite in separate areas
This Stage will utilize pre-cut kits to speed up production

2b) In the case of larger and more complex designs(over 50m) it is considered prudent for the first unit of each design would be built in our UK Shipyard or aligned Turkish shipyards(over 50m) as this achieves several things at the same time, 1) speed of construction so the client receives the vessel in a timely manner built by a recognized and experienced builder 2) Trouble shooting and resolution, this is much easier and faster by an experienced builder with good faculties and supply. Unfortunately vessels are seldom built totally to the drawings as things that may have appeared possible in 2D (two dimensions on a drawing board / CAD) are not always possible at full scale. Some areas of construction may not meet class rules and will require changes. Some machinery / equipment may not be available on the world market to satisfy the proposed delivery date and structural changes may be required to suite the equipment available and these all requires experience to resolve quickly and not slow or stop production.

While being vessels are built certain Nigerians will be brought to the shipyard concerned for training and Class approval in welding, construction protocols, etc. while the construction is in progress. Training may also be arranged in Nigeria utilising a leading Egyptian company.

2c) Once the initial vessels are built all changes in production and specification will be incorporated into the production drawings, build schedule, machinery and equipment list will be revised and a "kit" for each vessel will be produced including all required CNC (Computer Numeric Control) cut steel and aluminium parts and sections to build each vessel at the Nigerian shipyard.
Offshore associates will supply construction leaders, department heads, planning engineers to work alongside their Nigerian counterparts so as to advise and train them

in modern shipbuilding practices and assist in Nigerian development and production techniques

2d) As the Nigerian workforce becomes more trained, experienced and capable in the many facets of ship and vessel construction elements of the foreign involvement would be withdrawn as soon as possible and over time this would lead to a total Nigerian operation as the national abilities developed. At the same time we can provide specialists in many fields who could be on call to resolve unusual or specialized problems in new construction and repair

3) Development:- By implementing the processes in section two(2) it will be possible to start Nigeria's ship building program with a capable world class modern shipyard capable of producing tug boats, tankers, LNG carriers, barges, ferry's, patrol boats, pilot boats, etc. in various materials such as steel, aluminium and composites as well as utilizing various propulsion and drive systems.

4) Power Requirements:-
A Power generation Plant(LNG) will be required to insure productivity at the yard. The actual requirement to be ascertained and construction of said to allowed upgrades required.

5) Nigerian involvement:- The idea is to develop a yard that serves the Nigerian need for vessels of all types and has a Nigerian identity through investment by private and governmental systems, labor and management. Even though in the beginning there will be foreign presence for the purpose of training and technology transfer, as the Nigerian workforce gains experience and training Nigerians will assume all responsibilities. It would also be advantages if the site was developed as a "Free Trade Zone" so that as the yard becomes more capable, ship export would become simpler and effective to other offshore clients as well as making the supply import / export required to build the shipyard and vessels simpler.

6) Offshore Involvement with Joint Venture Partners:-
Offshore involvement will be to access the requirements and plan the yard space accordingly during the various phases and development, secure orders and generate contracts

Instigate the original construction in Turkey, UK or India, generate the changes for Nigerian production as well as supply the kits and Offshore labour/expertize to assist Nigeria in its vessel construction, vessel launch dock trials, sea trials, compliance and class issues, and handover to the client.

As well AluminumNow will provide designs, Naval Architects and project management, monitor development, , quality control, Nigerian, Turkish & British workforces as well as training and technology transfer programs.

This will be backed up thru our associated shipyards

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Summary

The benefit of the above project is as listed but not limited to:-

- Community Development
- Job creation and reduction of unemployment
- Shipbuilding for West Africa through Nigeria
- Increased in per capital income
- Increased Capital Retention within Nigeria
- General economic development

Marketing Strategy

The project is considered self-marketing with the recent **CABOTAGE** law in Nigeria. It therefore means that the first consideration will be for new ship builds vessel to be carried out in Nigeria once the shipyard has the capacity to build the specified vessel. Ship owners will also be willing to have their vessels docked in Nigeria rather than take it out of the country for more cost. An independent study revealed that the opinion of some oil major operators in Nigeria who confirmed this fact.

There are diverse facilities involved in ship repairs and dry docking. The workshops needed to execute all the services in the industry are diverse too. It is not possible that anyone facility would have all the workshops and machinery it need for its services.

Therefore, there is need for synergy amongst the various workshops and facilities. Mutual co-operation is essential in the achievement of set goals and objectives.

A Modern ship repair and building yard is a must for Nigeria

It has been reported that Nigeria is losing an average of N26bn annually to foreign dry-docking companies.

The fact that 90 per cent of goods globally are transported by sea through ships plus the large offshore business and security concerns makes shipbuilding and repairs facilities a life-long business that is capable of generating and excellent return for Nigeria.

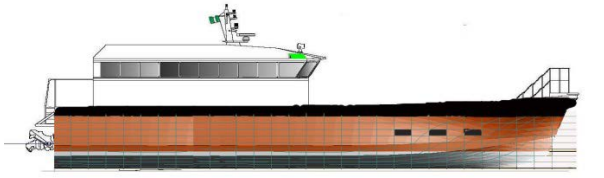
It has been reported that there are about 4,000 vessels operating in the nation‘s waters, and that Nigeria has only 14 ship repair yards, out of which only four are functional, even the four functioning does not have the capacity to lift a vessel over 6000 tones. An independent study indicated that others are confronting a myriad of problems, including obsolete facilities, poor maintenance and inadequate manpower, resulting, it is understood, in 80 per cent of the vessels operating in the country going abroad to other countries for minor and major dock repair works.

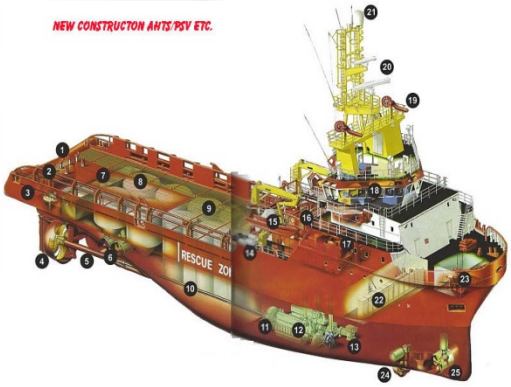
The International Maritime Organization‘s (IMO) rule stipulates that ships are to go on mandatory dry-docking (repairs) every three years. The implementation of the rule within Nigeria would boost the national economy.

With a reported 1,700 plus Nigerian vessels being dry-docked overseas, it is considered that the country is losing about $519.6m (N78bn) every three years to foreign dry-docking companies with the attendant job losses and lack of capital retention within the country.

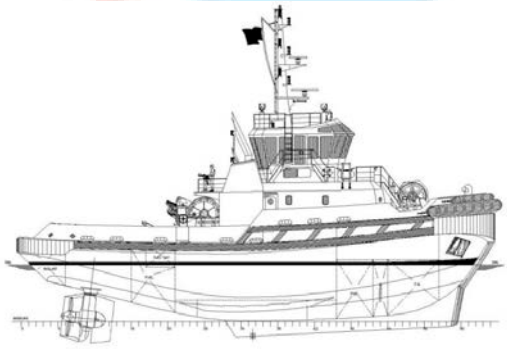
An independent study revealed that many ship owner's, take their ships to Ghana, Cameroon and Angola for repairs because the lack of facilities in Nigeria and the few functioning shipyards are reported to always having long waiting periods.

It is of importance to note that the Cabotage Act does not necessarily exclude investors from investing in the Nigerian coastal shipping business, but that the law is meant to enhance indigenous participation and partnerships between Nigerians and foreigners who have advanced technology and know-how in the shipping building and repair business.





This is our Aim!



Stage 1 (Area B1)
Entrance, Security, Parking, Management/Guest Accommodation, Offices and 25m x 50M Construction Hall to allow Boats/Hovercraft/Ferries to be started in covered area large enough to allow support activities and material storage up to 35m.

Stage 2
Dredging of 200m channel (Future Graving dock) and Water Basin.
Reclamation of land in the following order:- B2 – C2 – A2

Stage 3 Areas B2 & C2

- Prepare facilities including small slipway to allow commencement of ship repair and maintenance and the ability to start steel construction of work boats, tugs barges etc. near water front.
- This would consist of two(2) slipways to Lift & launching by airbags.
- The slipways would be constructed first to allow the start of allow lift and launch of vessels for repair and maintenance utilizing new or temprary facilities to provide support while Stage 3 was fully developed.
- Separate Areas for Aluminum & Composite construction inland.

The Stage 4 Area A 2

- Prepare facilities including, water basin, jetties and Graving Dock to handle larger vessels(or Multiple vessels) to allow a maintenance and repair to continue to provide training and cash flow.
- Development of offices, accommodation, storage and specialized workshops

The Stage 5 Area A 2

- To allow builds to 10,000DWT and have all buildings close to build site..

This would allow builds to 80M including Patrol Boats, Pilot Boats, offshore vessels, tugs, AHTSs, PSVs. MPVs etc. depending on orders received.

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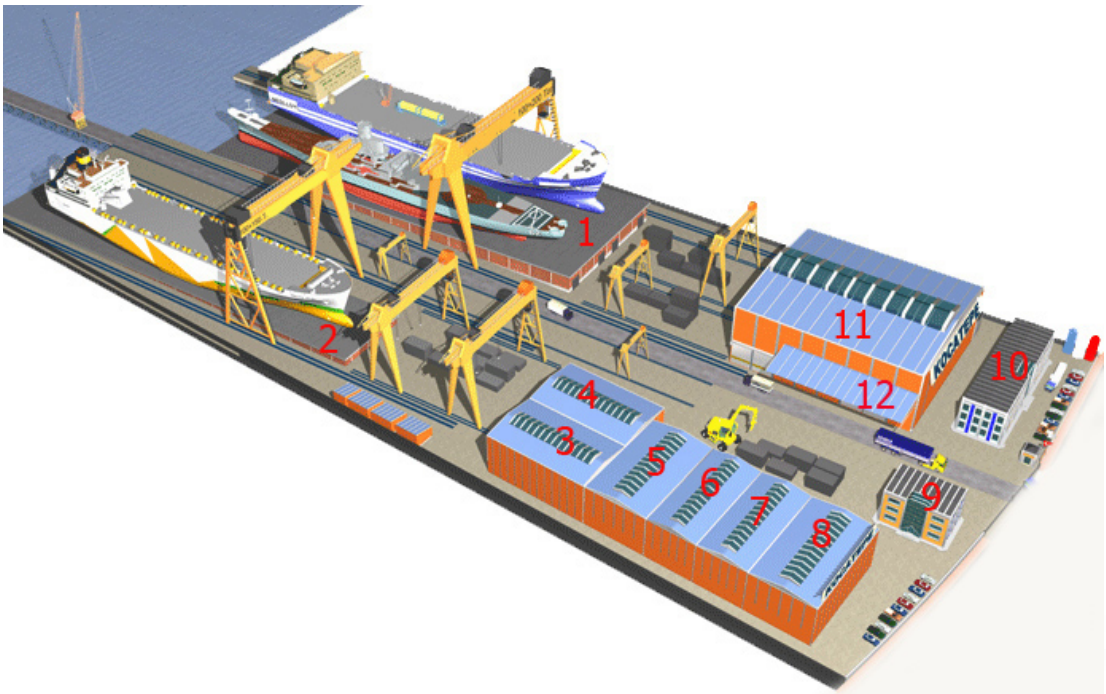
Stage 6 Subject to available area in A2



- #1 Slip Way - 50m X 160m. This is suitable to build max. 25.000 DWT. The method of launching the vessel is marine airbags. Two(2) 150 tones Gantry Crane to be considered.
- #2 Slip Way - 30m X 140m In addition to construct the capacity of 50+80 tones Gantry Crane.
- #3 Paınt Hall Making a plan for assembled blocks are ballasted and painted 700 sqm hall.(h:15m)The aim to build this hall designed to achieve successful ballasting and coating application in different times of the year. At the same time painting applications don't damage the environment in the normal weather conditions.
- #4 Outfitting Workshop
- #5 Electrical Workshop
- #6 Closed Stock Yard including the ship's equipment in a secure area of 700 m2 for the storage of with a height of 10 m.
- #7 Pipeworks Workshop
- # 8Sheet Metal Forming - In this section, the machinery, Hydraulic Press (600 tons and 250 tons), Eccentric and Pres'tir Profile Bending Machine, plus two(2) X 5 Ton Capacity 2 ceiling crane
- #9 Administrative Building Administrative building to have four(4) floors and cover total area of 300 sqm. There are offices which are called management, planning, financial, accounting and engineering.
- #10 Social Buildıng - Social building to have three(3) floors and covers 500 sqm. To be constructed of steel materials. A part of the first floor to be dressing rooms and another part of this floor to be information desk, infirmary etc. Second floor to be Mess hall etc. There are to be offices or accommodation on the third floor.
- #11 Block Assembly Hall Regular blocks and cruised blocks to be assembled on a panel line in a hall covering 2650 sqm. (h=25m), Overhead crane 60+20 tons-Welding machines(FCAW,SAW,SMAW), Grinding machines plus Plasma steel cutting facility. This hall designed for an annual steel processing capacity of 15.000 tons. Equipment to include an overhead crane 20+10 tons , Capacity of 10 tones magnetic lifting device It is possible to consider building five(5) workshops on the right side of this hall. These workshops to be 8m X 6m 6 X 6mH, to be designated for required purpose. Mezzanine with raised offices as required.
- #12 Forming Warehouse - planned storage area is located on the left side of the Block Assembly Hall.

Note:- Final design and building usage subject to planning details

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Stage 7 – A2
Development of in land section of A" approximately 2 hectares with general admin offices, accommodation, specialized workshops(possibly rented to sub-contractors and storage areas/buildings.

Stage 8 Expansion

This section to be laid out subject to actual land available. To allow builds to 60,000DWT

This section would be totally separate in operation from Stages 4 & 5.
However cutting facility maybe be shared.

Expect the following requirements to apply subject to future planning and requirements.

- Total Desired Area : 65.000 m2 to 70,000 m2
- Total Covered Areas : 14.000 m2
- Dry Dock : 225 m X 49 m
- Slipway : 140 m X 20 m
- Dry Dock and Slipway Gantry Cranes : SWL 2 x 200 mt SWL 2 x 100 mt
- Workshop-01 and Ceiling Cranes : 90m x 18m x 23m (h) * SWL 2 x 20 mt * SWL 1 x 10 mt
- Workshop-02 and Ceiling Cranes :170m x 28,5m x 29m (h) * SWL 2 x 40 mt * SWL 2 x 40 mt * SWL 1 x 15 mt * SWL 1 x 15 mt * Piers and Quays : 180m x 12m. 180m x 12m.
- JIB Cranes for Outfitting : SWL 1 x 25 mt SWL 1 x 25 mt
- Blasting and Painting Workshop : 40m x 36m.
- Steel Plate Stocking Area : 10.000 m2
- CNC Steel Cutting Machine : 28m x 6m
- Steel Prefabrication and Bending/Shaping Workshop : 4000 m2
- Pipeworks Workshop : 600 m2+100 m2 +50m2
- Outfitting Workshop : 600 m2
- Ventilation Works Workshop : 200 m2
- Panelling and Furnishing Workshop : 250 m2
- Electrical Works Workshops : 250 m2
- Machining Workshop : 300 m2
- Steel Production Capacity (annual) : 22.000 mt
- Maximum size of Vessel which can be built : 220mt / 60.000 DWT
- Maximum size of Vessel which can be built indoors : 100 m

*Dry Dock could also be covered if necessary.

Robotics Option very practical and to be considered.

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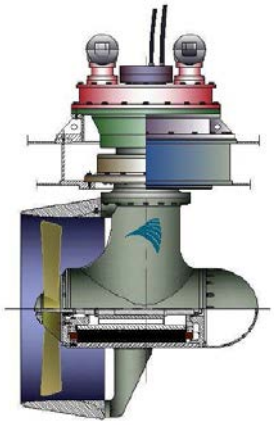
Addendum

It should be noted that the following builds are being discussed at this time in addition to any requirements the Nigerian Navy maybe required:-

- Two(2) Patrol Vessels
- Five(5) FSIVs
- Six(6) LNG powered tugs
- Six(6) 30m Patrol Boats
- Two(2) 10,000DWT Cement Carriers
- Ferries
- Tugs
- Houseboats



Design, Sales, Installation, Service and Maintenance for West Africa are offered for the following:-

- SeaFury Surface Drives
- Hamilton Waterjets
- Doosan Engines
- Hovercraft and Hoverflight Designs
- Patrol boat, Crew Boat, Offshore Vessels, Work Boats designs
- Ferry Designs from Sea Speed Australia & Kurt Hughes
- Medium Speed Ferry, Cargo and SLV from Sea Transport of Australia.
- Auxiliary Generators(LNG)
- Engtek-Manoeuvra Systems(Including electric drives systems)

New Designs for 32m & 40m Patrol Boat