

NIGEL NIXON AND PARTNERS INC.



# Background

- Nigel Nixon and Partners– NNP is an international firm of port advisors who work on a wide variety of projects worldwide.
- **NNP have been established for over forty years** and have built on a reputation as leaders in the field of heavy-duty pavement design. Other expertise extends to market studies, economic analysis, due diligence, planning, design, costing, procurement and implementation.
- In 1994 the company was incorporated in the United States located at its headquarters in Dallas, with representation in U.K., France, Brazil, Caribbean, India and Singapore.
- We are fortunate to secure **repeat business** with many of our clients and have worked with many of them for most of the time we have been in business.



# Philosophy

- An Owner's mission values and their stakeholder requirements have been **understood and implemented** on numerous NNP projects.
- NNP as a global consultant focuses its vision on cost effectiveness and cost certain delivery at minimal risk to any Owner.
- Our philosophy and mission is to maximise an Owner's best possible return on their investment by focusing on minimizing Owner risk, establishing a best value project and striving at all times for a cost certain deliverable and optimal solution.
- It is through experience in procuring a truly commercially driven solution led by the project's business plan that NNP would be of great benefit to any potential Owner or Bank.
- Many Project Owners have valued the **commercial approach and philosophy** in project delivery that NNP implements.
- NNP looks to blend its teams wide experience to provide complementary skills to offer a **total integrated service**.





# Team Leaders

**Nigel Nixon**  
*Chairman*

**Kris Kapinos**  
*Chief Executive Officer*

**Admin & finance**

**Mark Smallridge**  
*President*

<b>Mark Smallridge</b> <i>Pavement Lead</i>	<b>Cedric Corbierre</b> <i>Port Planning and Equipment Lead</i>	<b>Keith Abraham</b> <i>Project Director &amp; Owner's Representative</i>	<b>Andrew Griffiths</b> <i>Research &amp; Feasibility Lead</i>	<b>Richard Jennings</b> <i>Operations &amp; Funding Specialist</i>	<b>Rodrigo Paiva</b>
<b>David Fanthorpe</b> <i>Paving and Materials</i>	<b>Theirry Thoubans</b> <i>Port Equipment Engineer</i>	<b>Martin Mannion</b> <i>Project Manager</i>	<b>Andrew Penfold</b>		
<b>Alessandra Simao</b> <i>Design Co-ordinator</i>		<b>Gordon Ginzal</b> <i>Project Manager</i>	<b>Peter Baker</b>		
<i>Civil, Mechanical, Electrical Designers</i>	<i>Port Equipment Designers</i>	<b>Jabir Benhadjtahieb</b> <i>Project Manager</i>			
<b>Pavements &amp; Civil Engineering</b>	<b>Port Planning</b>	<b>Project Implementation</b>	<b>Market Research</b>	<b>Port Acquisition</b>	<b>Port Economics</b>

# Key Capabilities |

## Economic analysis

- Commercial due diligence
- Feasibility studies
- Investment appraisal
- Traffic forecasting
- Market studies
- Funder representation
- Letter of reliance of authority

## Pavement Design & Appraisal

- Pavement rehabilitation
- Condition surveys
- Testing
- Computer analysis & evaluation
- Asset management & maintenance
- Expert witness

## Port Development & Investment

- Financing/investment
- Concession/ Lease agreements
- Finance/build/lease
- Equipment and construction procurement
- Site selection

# Key Capabilities

## Port Equipment

- Equipment planning
- Procurement
- Condition survey
- Maintenance survey
- Refurbishment
- Wire rope cables
- Structural analysis

## Port Operations

- Operations due diligence
- Terminal operating system
- Terminal planning
- Dynamic simulation
- Operational layout
- Equipment and HR analyses (OPEX/CAPEX)
- Business planning

## Port Infrastructure

- Infrastructure due diligence
- Concept planning
- Back land design
- Yard utilities design
- Yard buildings design
- Detailed design

## Port Procurement & Implementation

- Construction & project management
- Planning & building consents
- Construction monitoring
- Owner representation
- Cost consultancy

# Worldwide Experience |

United States of America  
 Port of San Francisco  
 Port of Oakland  
 Port of Tacoma  
 Port of Seattle  
 Port of Los Angeles  
 Port of Long Beach  
 Port of Corpus Christi  
 Port of Houston  
 Freeport  
 Port of Galveston  
 Port of Beaumont  
 Gulf Port  
 Port of New Orleans  
 St Louis River Term  
 Port of Mobile  
 Port of Tampa  
 Port of Miami  
 Port of Fort Lauderdale  
 Port Everglades  
 Jaxport, Jacksonville  
 Port of Savannah  
 SCPA, Charleston  
 Port of Virginia  
 Port of Paulsborough  
 Port of New York New Jersey  
 Greensborough, Albany  
 Massport, Boston  
 Dutch Harbor  
 North Cape, Alaska

Canada  
 Port of Montreal  
 Milton, Toronto  
 Port of St Johns  
 Port of Vancouver  
  
 Caribbean, Central and South America  
 New CT Tuxpan Mexico  
 Port of Acapulco Mexico  
 Port of Guaymas Mexico  
 Port of Lazaro Cardenas Mexico  
 Port Cuzamil Mexico  
 Port of Belize Belize  
 Porto Centrale Brazil  
 Port of Freeport Bahamas  
 Gordon Quay Jamaica  
 Port Lafito Haiti  
 Port Lisas Trinidad  
 Port of Moin Costa Rica  
 San Juan Puerto Rico  
  
 Europe  
 Port of Bristol UK  
 Port of Dover UK  
 Port of Felixstowe UK  
 Port of Harwich UK  
 Port of Hull UK  
 Port of Ipswich UK  
 ABP, Immingham UK  
 Port of London UK  
 Port of Liverpool UK

Port of Mostyn UK  
 Purfleet Thames Terminal UK  
 Port of Ramsgate UK  
 Tees and Hartlepool PA UK  
 Port of Southampton UK  
 Port of Sunderland UK  
 Thamesport UK  
 MPET, Antwerp Belgium  
 Port of Zeebrugge Belgium  
 Port of Limassol Cyprus  
 Port of Vaasa Finland  
 Port of Le Havre France  
 Port of Lyon France  
 Port of Marseille France  
 Port of Paris France  
 Port of La Rochelle France  
 Port of Rouen France  
 Port of St Malo France  
 Port of Saint Nazaire France  
 Port of Hamburg Germany  
 Port Dublin Ireland  
 Port of Cork Ireland  
 Riga Commercial Port Latvia  
 Port Rotterdam Holland  
 Port of Gdansk Poland  
 Port Constanta Romania  
 Port of St Petersburg Russia  
 Port Gothenburg Sweden  
 Algeciras PA Spain  
 Port Vera Ukraine

Africa  
 Port Said Egypt  
 San Pedro Ivory Coast  
 Abidjan Ivory Coast  
 Port of Mombasa Kenya  
 Namport Walvis Bay Namibia  
 Port Harcourt Nigeria  
 Namanve CT Uganda  
 Mauritius ICT Mauritius  
  
 Middle East  
 Bahrain Ports Authority Bahrain  
 Uhm Qasr Iraq  
 Port Mina Sulman Oman  
  
 Asia  
 Port of Bangkok Thailand  
 Port of Sattahip Thailand  
 Port of Sattahip Thailand  
 PSA Kepple Harbour Singapore  
 Keelung CT Taiwan  
 Port Xiamen China  
  
 Oceania  
 Port Botany Australia  
 Port of Brisbane Australia  
 Port of Freemantle Australia  
 Port of Tauranga New Zealand  
 Zealand

# | Project Map



1. We firmly believe in Design Build, too many consultants pay lip service to it, but it fits with our ethos of providing the owner with cost certain delivery.

5. We have a pragmatic and proactive approach to problem solving.

## Why NNP?

2. We have a breadth and depth of experience that few will equal, we have hugely experienced people, who have delivered projects globally.

4. Our focus is always on minimizing the Owner's risk profile in the most cost efficient way and maximizing the best financial outturn for the project.

3. We know how to write Owner's Requirements, the skill is to transfer risk from the Owner to the Contractor while maintaining the quality in the product .



6. We have a true understanding of best value, with cheapest not always best and value decisions have to involve the Owner and should never just be about cutting cost.

## Why NNP?

7. We pride ourselves on the ability to accurately cost plan, an essential skill when making decisions early in the process.

8. We are excellent team builders, identifying the right people for the job, developing an environment of mutual trust and respect amongst fellow professionals, valuing the contribution of each team member.

9. We encourage innovation and creativity from the team to think “outside the box” and not be constrained by normal rules or national boundaries.

10. Our experience of working for Owners and Contractors provides the ability to be fair in judgement of conflict, promoting a no blame, no excuses culture.

11. NNP were the authors of the original British Ports' Association's Heavy Duty Pavement Manual, and related personnel continue with the company.

15. NNP have worked for manufacturers of heavy lift equipment in determining the damaging effect of various wheel configurations and dynamic loading.

## Why NNP?

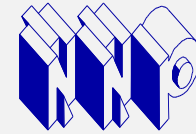
12. NNP's personnel were involved in PIANC's publication on Design and Maintenance of Container Terminal Pavements, and are working on the subsequent publication Design, Maintenance And Sustainability Of Container Terminal Pavements

14. NNP have undertaken investigation of many failed pavement to determine the cause or causes of the failures, and have a thorough understanding of what can go wrong and how to avoid such problems.

13. NNP have undertaken the analysis and specification of numerous port pavements around the world, using standard and innovative pavement materials.



# Project Experience



# Experience | Strategic Partner

## Louisiana Gateway Terminal, Plaquemines

- NNP were engaged as strategic advisors to LA23 Development Company (LA23) for the implementation of the container terminal that forms part of the Louisiana Gateway development in the Plaquemines Parish, South of the City of New Orleans. NNP undertook an independent commercial study to validate the viability of the project and developed a masterplan for the phased implementation and full build out of a container facility that will ultimately provide eight berths for ocean container vessels and river container barges, and a container terminal of approximately 200 acres. NNP also provided technical support for some of the project's specifics that required early consideration such as the supply of LPG to fuel some of the proposed vessels.
- NNP led investigations and studies to support the process of obtaining the US Corps of Engineers permits for the initial phase.
- In order to achieve the completion phase one in the best possible time, NNP instigated an RFQ / RFP process to select the best possible contractor partner, a key to the overall project delivery. A Progressive Design Build approach was used to select the successful contractor to be part of the implementation team at the earliest possible time, driving the development design, managing the project risk and ensuring a buildable design to provide a cost certain design build proposal.



# Experience | Paving Design

- Berths 5 and 6 at the Barbours Cut Terminal of the Port of Houston are operated by APM Terminals. The pavements at this facility have been constructed in a number of different phases over the past thirty years. The pavements consist of jointed reinforced concrete over lime treated clay subgrade. Over this period the severity of loading from container handling operations has increased and the pavements were exhibiting several signs of distress. Some areas required the use of steel plates and periodic repairs to remain serviceable. Several sections of the pavement had failed prematurely, within a few years of construction. In 2009 Nigel Nixon and Partners, Inc. were appointed as a sub-consultant to Lockwood Andrews and Newnam, Inc. to undertake an investigation into the pavement condition and to develop remedial measures to reinstate the pavements to a serviceable condition.
- For this Maintenance Improvement Project NNP provided teams to undertake a condition survey of the pavements while the terminal remained in operation. This was supplemented by borings and non-destructive testing to assess the residual pavement strength. NNP analyzed traffic loadings, environmental and geotechnical data, and prepared designs, details and specifications for the repairs in the grounded and wheeled yards, and for the circulation roads within the terminal. This three year project also involves regular site visits during construction to agree the remedial areas with the contractor as the pavement continues to degrade. Construction has been undertaken on a rolling program with the contractor only being able to work on limited areas in the terminal. Work is due to be complete by the end of 2011.

## Berths 5 & 6 Pavement Rehabilitation- Barbours cut, Port of Houston, Texas, USA



# Experience | Paving Design

- In 2007 the Alabama State Ports Authority and APM Terminals formed a joint venture to construct a new 80 acre container terminal in Mobile. This Capital Improvement Project involved the development of a new terminal with two 1,000ft. berths. The backlands area for the new terminal would be constructed over reclaimed fill of variable quality. The original pavement system considered for the project was full depth asphalt concrete. However, the requirement for the future introduction of RTGs would mean that runway beams would need to be constructed in the pavement to avoid rutting under the channelized wheel loads. APM Terminals hired Han Padron Associates (now Halcrow), to undertake the design work for the terminal buildings and backlands for the terminal. Han Padron Associates subcontracted Nigel Nixon and Partners to assist and advise on all paving issues.
- In addition to assisting with the design of the asphalt concrete pavement, NNP developed preliminary pavement sections for a roller compacted concrete alternative capable of use by RTGs. It involved the design of the pavements for the grounded yard, the empty or wheeled yard and the circulation roadways. NNP analysed traffic loadings, environmental and geotechnical data, and prepared preliminary designs, details and specifications for each pavement option. The successful contractor was required to prepare a final design of the roller compacted concrete pavement for review. NNP reviewed the contractor's proposals that were based upon mix designs produced from locally available materials. Site visits were also undertaken to monitor the pavement construction work. The first phase of construction was completed in 2009.

## Mobile Container Terminal, Alabama State Ports, Alabama, USA



# Experience | Paving Design

- To ensure that the Port of Walvis Bay will play a role as a container transshipment hub on the southwest coast of Africa as well as a gateway to land-locked countries, the Namibian Ports Authority (Namport) has launched a new deep water container terminal project at the south end of the port. The terminal will be constructed on reclaimed land connected to the port by a causeway with road and rail links. Following feasibility studies and preliminary design, in 2013, the port sought tenders from a number of international design and build contractors.
- Nigel Nixon and Partners, Inc.'s services included assisting the Port Authority in the selection of a design and build contractor with specific emphasis on the pavements in the terminal access roads, truck gate, maintenance facility and rail yard. We reviewed the design proposals from the three shortlisted contractors and prepared a report on inconsistencies and viability of the alternative approaches. We also participated in the preferred contractor interviews.
- Work on the project is currently ongoing and Nigel Nixon and Partners are reviewing the contractor's design proposals for the filling and pavement work. Pavement systems include asphalt, concrete pavers and reinforced concrete pavement and RTG runways. Settlement of the terminal and related problems are of particular concern owing to the diatomaceous character of some of the underlying and dredge materials.

## Walvis Bay Container Terminal Development Project, Walvis Bay, The Republic of Namibia



# Experience | Paving Design

- City of St. Louis Municipal River Terminal is a 27-acre general purpose cargo facility, on the Mississippi River. Containers and other cargo are moved between barges and trucks or rail using a mobile crane. In 2008, flooding of the river causes significant damage to the South Dock, and a subsequent study by the local Development Corporation found that the dock was at the end of its structural life, and that the wharf could fail in the near future. With the aid of an EDA grant, the City is reconstructing the wharf and providing a new aggregate surface for the mobile crane operations. The project is being undertaken on a design and build basis by St Louis Bridge Construction, with ABS Consulting and Halcrow as the engineers.
- Nigel Nixon and Partners prepared the crane pad design for Halcrow. We developed the subgrade properties with the geotechnical consultant and analyzed the loading conditions under the crane tracks to design a geogrid reinforced aggregate crane pad. NNP considered designs for both geogrid and geocell options, with the former being the most cost effective. NNP also prepared the specification for the crane pad construction and reviewed the properties of potential aggregate materials.

## South Dock Crane Pad, St. Louis Municipal River Terminal, Missouri, USA





# Experience | Paving Design

- Freightliner redeveloped their intermodal terminal at the Port of Southampton in the United Kingdom in 2004. The terminal used shuttle carriers and reach stackers for container handling operations between the adjacent marine terminal and for loading the containers onto or off of rail cars. The pavement design took maximum advantage of the residual strength of the existing pavements when they were on the same alignment by using them as the base for the new pavements. New pavement was constructed where the two did not coincide. Pavement problems started to develop in a few areas soon after the works had been completed. Following a number of localized surface repairs that did not hold up, Freightliner commenced legal proceedings against the contractor and design consultant. In 2010 Nigel Nixon and Partners, Inc. were appointed to investigate the issues and to provide expert witness services on behalf of the consultant.
- NNP's scope of services included a thorough review of the pavement design and construction records and visiting the facility to undertake an inspection of the pavements and to observe the operations of the shuttle carriers and reach stackers. The scope also included reviewing the results of previous investigations on the failed pavement and underlying subgrade materials to determine the causes of the pavement distress. NNP also undertook an analysis of the loading conditions and carried out a design check of the pavement section. Such designs focused on the likely container handling equipment's dynamic loading at the location of pavement issues. NNP prepared an expert report concluding that the problems were related to construction issues rather than design matters. NNP subsequently participated in mediation proceedings where the case settled.

## Freightliner Terminal Investigation, Port of Southampton, United Kingdom



# Experience | Paving Design

- Xiamen Haicang Xinhaida Container Terminals Co Ltd. is developing a new container terminal at the Port of Xiamen in Fujian Province in China, which they will subsequently operate. The terminal is to be operated by electrically powered RTGs operating on reinforced concrete runways in a concrete paver surfaced pavement. The subgrade consists of various fill materials that have been treated with several different techniques to minimize settlement. CMA CGM Group is a major shareholder in this company. The project was designed by the Chinese Design institute. They appointed Nigel Nixon and Partners, Inc. to review the design and construction work for the terminal, and advise on any appropriate work that needed to be performed such that the terminal would meet their requirements.
- For this Capital Improvement Project NNP reviewed the design and appropriate input parameters for compliance with our client's requirements. We established a testing plan for the varying subgrade conditions to verify that the pavement would remain serviceable through the operator's tenure, and advised on remedial measures to deal with residual consolidation potential that could adversely affect the facility. NNP visited the project in 2010 during the construction works and reviewed the quality of the construction and compliance with the design documents. For non-compliant issues we proposed additional testing and remedial measures. Work is ongoing and the project will be completed this year.

## Xinhaida Container Terminal, Port of Xiamen, People's Republic of China



# Experience | Paving Design

- Jaxport have developed a new intermodal container transfer facility Port of Jacksonville Fl in USA The terminal is to be operated on RCC surfaced pavement. The subgrade consists of various fill materials that have been treated with several different techniques to minimize settlement. The successful design and build contractor, Dana Kenyon, appointed Nigel Nixon and Partners, Inc. to review the design and construction work for the terminal, and advise on any appropriate work that needed to be performed such that the terminal would meet their requirements.
- For this Capital Improvement Project NNP reviewed the design and appropriate input parameters for compliance with the client's requirements. We established a testing plan for the varying subgrade conditions and the RCC mix design to verify that the pavement would remain serviceable through the operator's tenure, and advised on remedial measures to deal with residual consolidation potential that could adversely affect the facility. NNP visited the project in 2015 during the construction works and reviewed the quality of the construction and compliance with the design documents. For non-compliant issues we proposed additional testing and remedial measures.

## Jaxport's New Intermodal Container Transfer Facility, Dames Point, Jacksonville, Florida, USA



# Experience | Paving Design

- Namport are developing a new deep water container terminal at Walvis Bay, Namibia. The terminal is to be operated on Concrete Paver surfaces pavement. The subgrade comprises dredged fill materials that have been treated with several different techniques to minimize settlement. The Port Authority appointed Nigel Nixon and Partners, Inc. to help judicate on the design and build bids, review the design and construction work for the terminal, and advise on any appropriate work that needed to be performed such that the terminal would meet their requirements.
- For this Capital Project NNP reviewed the design and appropriate input parameters for compliance with the client's requirements. We established a testing plan for the varying subgrade conditions and the CBM mix design to verify that the pavement would remain serviceable through the operator's tenure, and advised on remedial design measures to deal with residual differential settlement potential that could adversely affect the facility. NNP visited the project in 2016 during the construction works and reviewed the quality of the construction and compliance with the design documents. For non-compliant issues we proposed additional testing and remedial measures. NNP Inc ran a design Workshop with the Contractor's design team.

## Namport's New Deep Water Container Terminal, Walvis Bay, Namibia

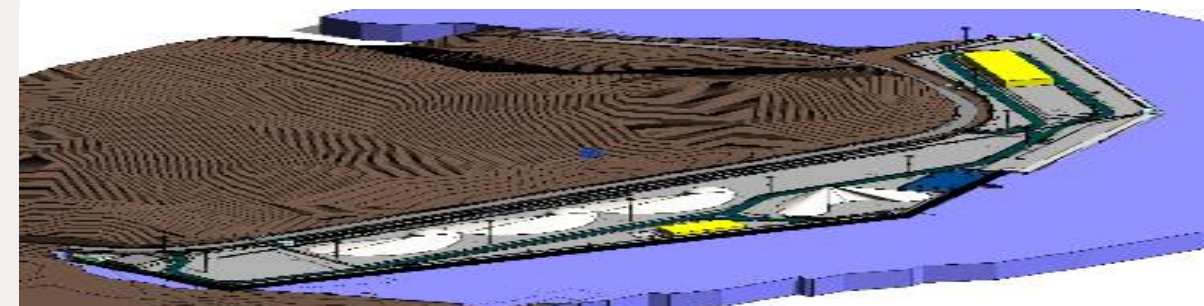
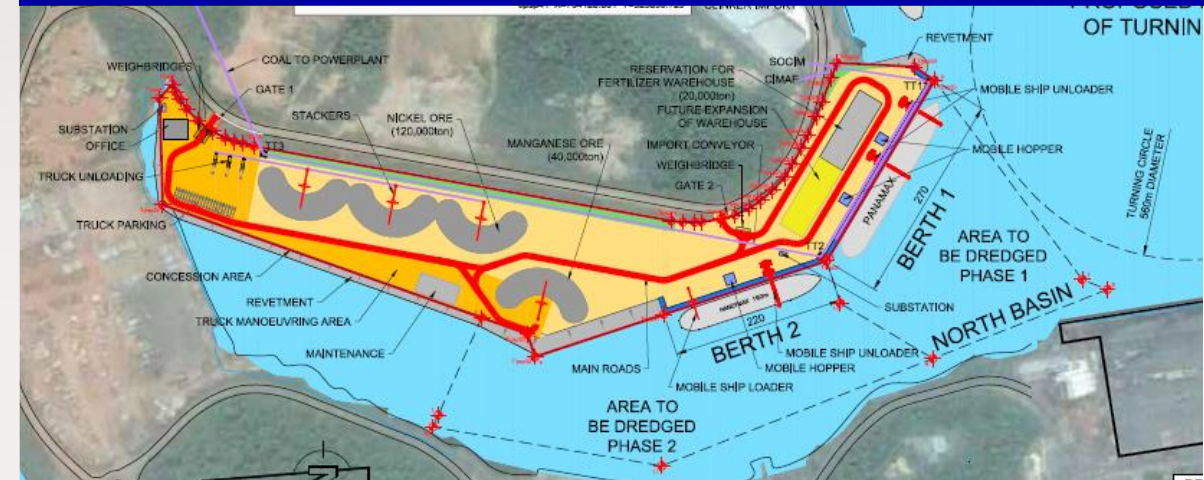
PORT OF WALVIS BAY NEW CONTAINER TERMINAL ON RECLAIMED LAND PROJECT  
PROJECT STATUS AS AT 9 MARCH 2016



# Experience | Paving Design

- NGE a French Civil Works contractor was participating in the as bidder in the Design & Build of a Dry Bulk Cargo Terminal in San Pedro Ivory Coast
- NGE requested NNP to develop the Concept Design for the all the surface platform from paving design, MEP works design including surface rainwater drainage, wastewater network design, lighting, electrical MV & LV network design, CCTV.
- NNP developed preliminary pavement sections for a roller compacted concrete alternative capable of use. It involved the design of the pavements for the grounded yard, the empty or wheeled yard and the circulation roadways. NNP analyzed traffic loadings, environmental and geotechnical data, and prepared preliminary designs, details and specifications for each pavement option.
- Services included also LOD350 BIM Model of the infrastructure allowing NGE easy quantity take-off of the materials, excavation & reclaiming volumes.

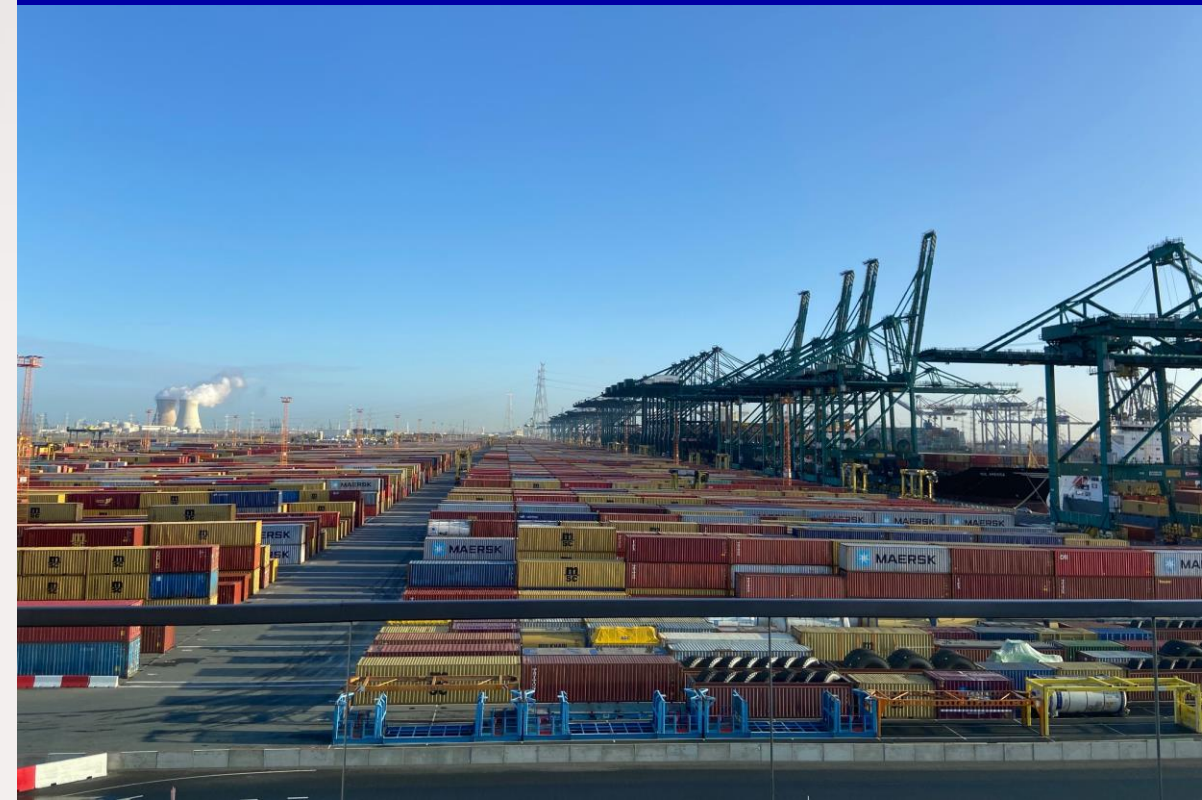
## San Pedro Dry Bulk Cargo Terminal - Conceptual Design San Pedro - Ivory Coast



# Experience | Paving Design

- Full forensic investigations into the cause of the premature failure of the terminal in the largest container terminal in Europe.
- NNP also prepared specifications, costings, calculations drawings and design methodology for the recommended repairs. Also provided support during the procurement of those repairs and ensuing supervision.

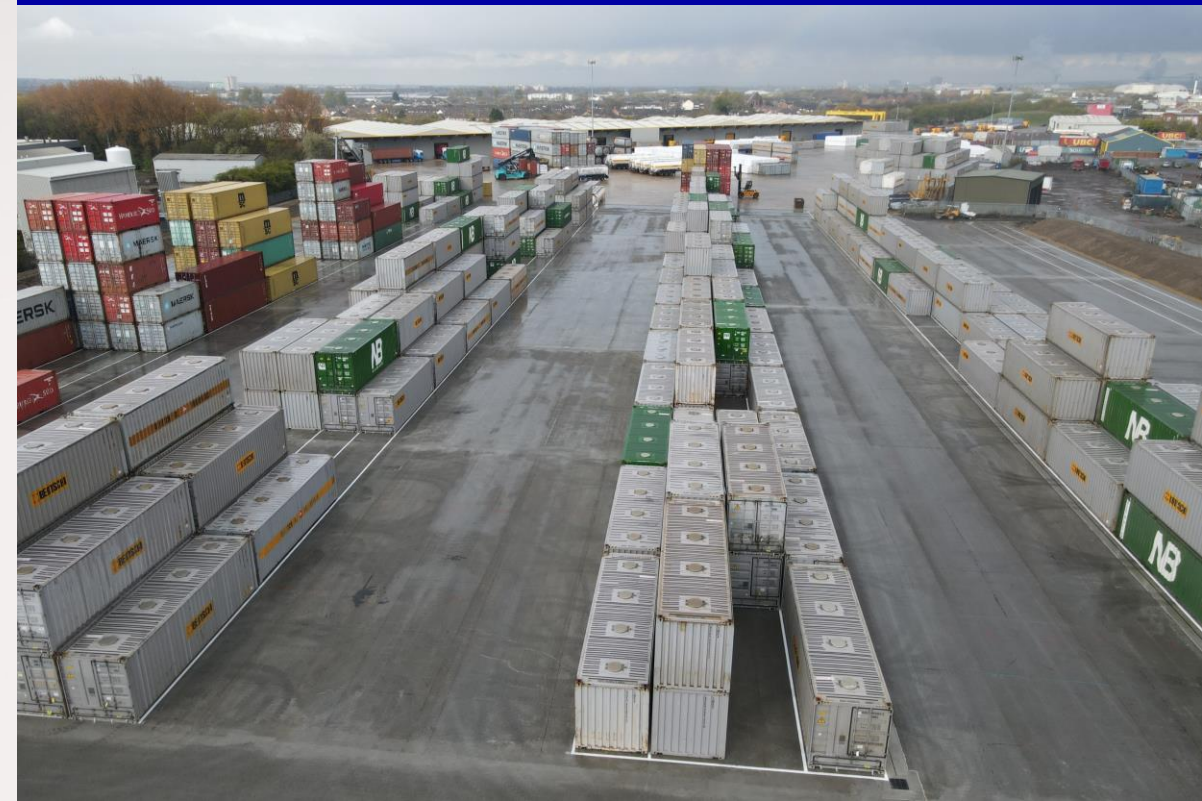
## MSC PSA European Terminal Antwerp - Belgium



# Experience | Paving Design

- NNP were responsible for the design of a new RCC pavement. The project comprised the development of 11,000 m<sup>2</sup> concrete yard extension for the storage of containers. The site was located adjacent to the existing Bertschi yard on a brown field site which had previously been used for storage of materials and empty containers.
- The scheme included the design of a Roller Compacted Concrete yard and a lime and cement stabilised grade surface. The use of RCC and ground stabilisation removed a significant volume of material import and export and reduced vehicle movements during construction. Existing concrete foundations and sections of hardstanding were crushed to provide material for the pavement foundation. The yard was designed to tight tolerances to allow the safe stacking of containers while providing adequate surface water drainage. The drainage network included heavy duty slot drains to maximise upstream storage and was designed to attenuate the surface water from the new yard requiring the design of 900m<sup>3</sup> balancing pond and a pumping station to the existing outfall.
- Despite the challenges of a sloping site with variable ground conditions and existing concrete foundations, levels to the existing yard had to match. The use of RCC removed the need for reinforcement, reduced joints and allowed early access for the user as well as having significant environmental advantages.

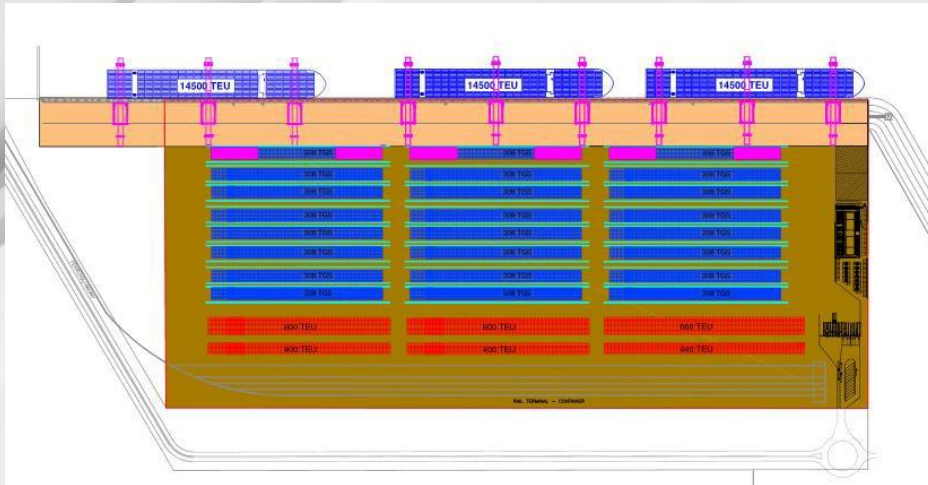
## Bertschi Teeside, UK New Inland Container Terminal



# Experience | Paving Design

- Terminal Link is investigating the opportunity of developing a new container terminal in Brazil. The project would be a container terminal with 1400 m quay length and 76 ha of yard area.
- Terminal Link have appointed Nigel Nixon and Partners, Inc. to act as their designer for a Preliminary Functional Analysis (Berth, Yard, Gates, Equipment) and a Preliminary Conceptual Design (Pavement, Fencing, gates, Buildings, Electricity, CCTV, Hydraulic, IT system, Terminal Equipment, CAPEX> 300 MUSD)

## Terminal Link- CMA CGM, Container Terminal, Brazil

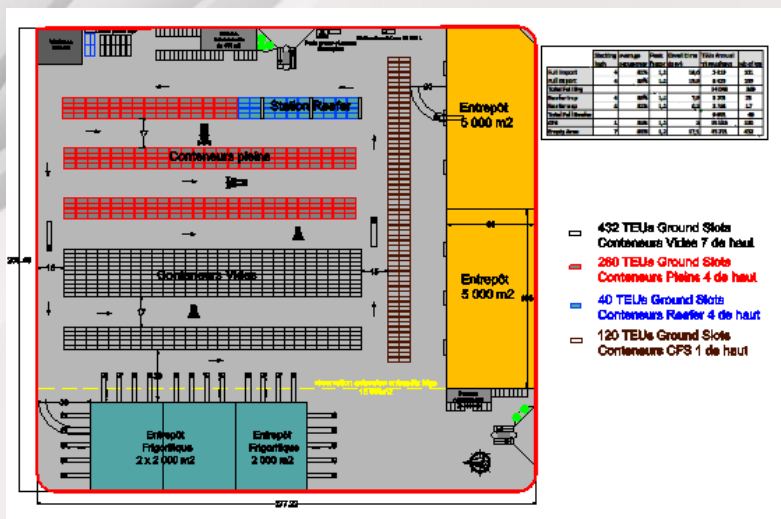




# Experience | Paving Design

## CC Inland Service- CMA CGM, Dry Port, Africa

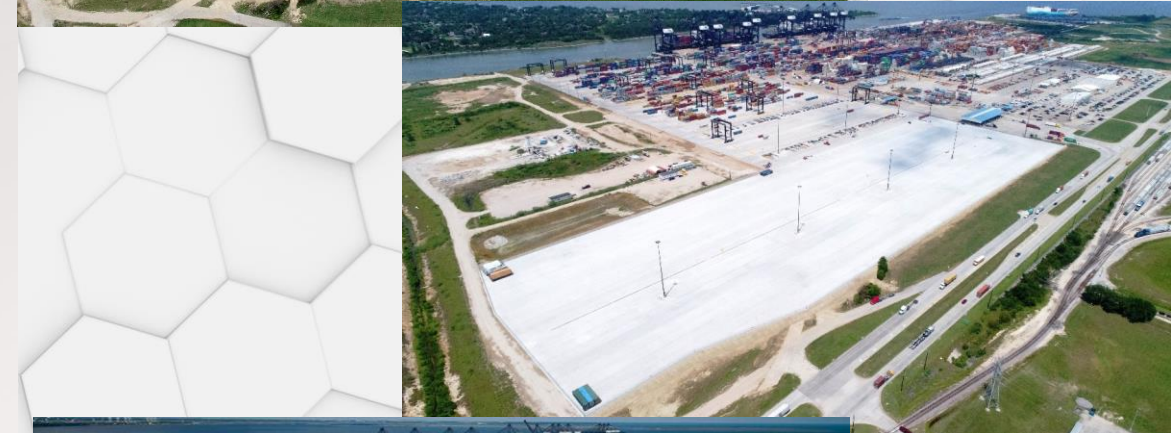
- CCIS is looking the opportunity of developing a logistic zone and a container terminal in Africa: yard area : 6,5 ha, Reefer Warehouses: 3x 2 000 m<sup>2</sup>, Warehouse: 2 x 5 000 m<sup>2</sup>
- CCIS have appointed Nigel Nixon and Partners, Inc. to act as their designer for a Preliminary Functional Analysis (Berth, Yard, Gates, Equipment) and a Preliminary Conceptual Design (Pavement, Fencing, gates, Buildings, Electricity, CCTV, Hydraulic, IT system, Terminal Equipment, CAPEX> 15 MUSD)



# Experience | Owner's Rep

## Terminal Link Texas - Bayport, Houston

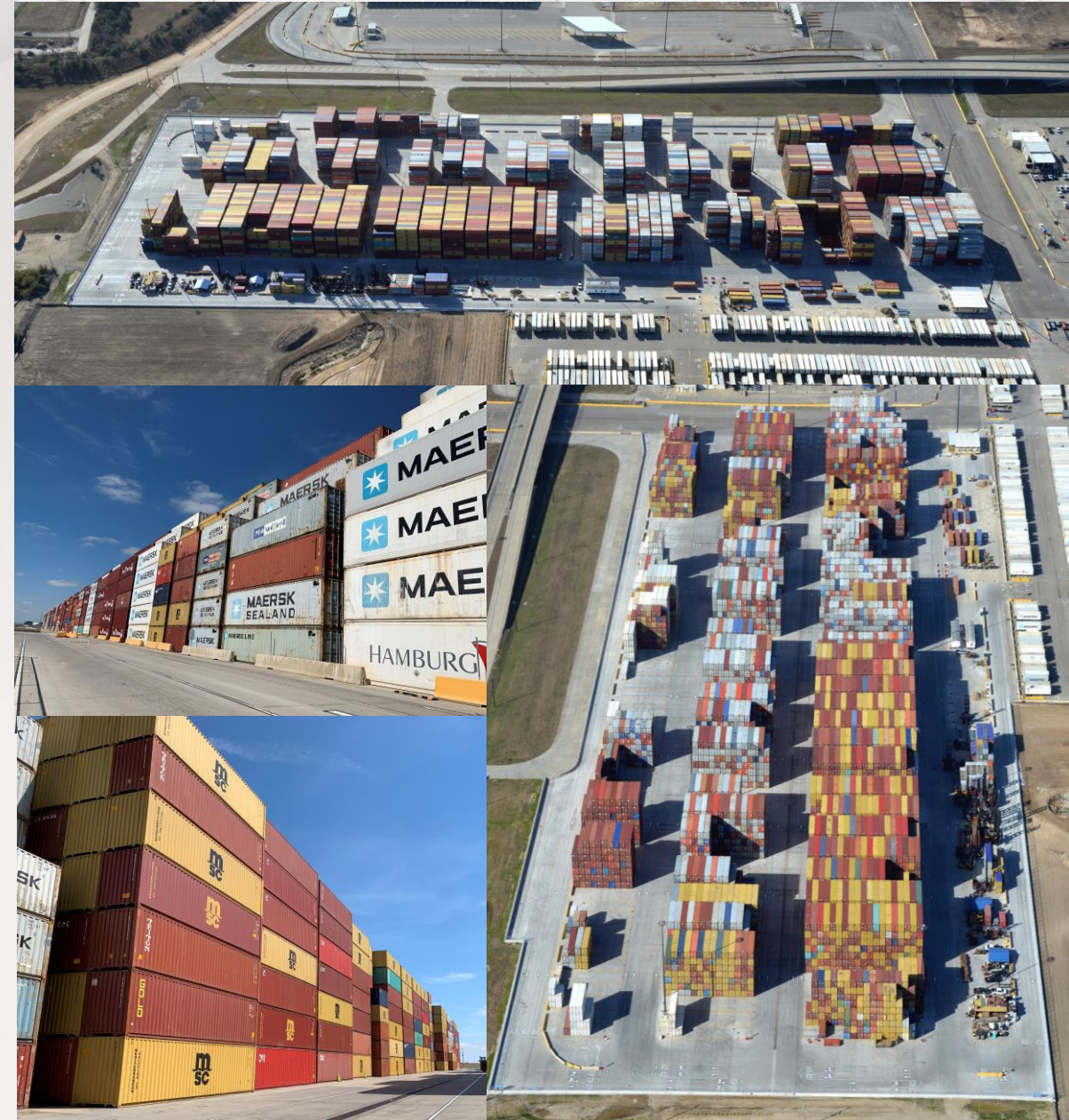
- Construction completed in July 2018, a 25 acre empty container yard linked to the Bayport container terminal.
- The first Design Build project undertaken on Port Houston property, this \$19 million contract was bid to a limited list of pre-selected contractors with a minimal Owner's Requirement.
- The contractor was encouraged to bring innovation within his proposal and to deliver cost certainty.



# Experience | Owner's Rep

## Houston Terminal LLC - Bayport, Houston

- Construction completed in December 2020, a 26 acre empty container yard linked to the Bayport container terminal.
- The procurement route was Design Build, using the knowledge and experience gained on the West yard for Terminal Link, the overall project value is \$23 million including infrastructure work undertaken for the Port of Houston.



# Experience | Owner's Rep

## C&C Houston Bayport

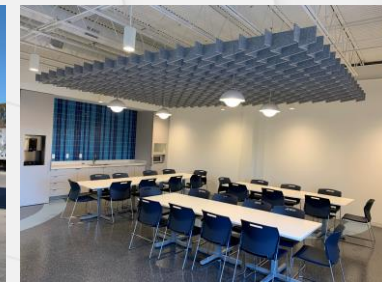
- Completed late 2022, on time and within budget, a 21.5 acre empty container and chassis yard off dock from the Bayport container terminal.
- The procurement route for this project was Design Build, however given the shorter lease duration, the design life of the facility is reduced and thus promotes reduced capital costs.



# Experience | Owner's Rep

Hoyer, Pasadena, Texas

- During 2023, Hoyer undertook improvements to their existing 14.7 acre facility. Works comprised new concrete pavement, wash rack installation, pump house construction and upgrade to the fabric and the internal office space of the existing two-storey building.
- The project was let in packages to specialist contractors. NNP provided Owner's Representative services to Hoyer.



# Experience | Owner's Rep

## Transshipment Facility- Airbus, UK

- Design Management, Project Management and Owner's Representation for Airbus SAS of a berth, storage area and maintenance facility to transfer wings for the A380 Airbus from a barge to a ro-ro vessel via a modified linkspan bridge.
- Works included new wharf structures, in-water piled grillage structure, dolphins and fendering. Project Value £2,100,000.



# Experience | Due Diligence

- Nigel Nixon and Partners Inc have undertaken feasibility studies, design work, peer reviews and/or site observation services, condition surveys, due diligence and lease exit advice on the following selected port projects on the West Coast of North America:
- Deltaport Container Terminal, SSA - Port of Vancouver, BC Canada
- Terminal 5, APL Terminal - Port of Seattle, WA USA
- Berths 30, 31 and 32 Trapac/MOL - Port of Oakland, CA USA
- Berths 22, 23 and 24 Ports America [Old Maersk Terminal]- Port of Oakland, CA USA
- Berths 50 - 55 Port of Oakland, CA USA
- Berths 231-234, ITS Terminal - Port of Long Beach, CA USA
- Pier G APMT Terminal - Port of Long Beach, CA USA
- Pier J - K Line Port of Long Beach, CA USA
- Hanjin Intermodal Yard - Port of Long Beach, CA USA
- Pier 300 APL - Port of Los Angeles
- Evergreen Terminal - Port of Los Angeles
- Pier 400 APMT - Port of Los Angeles, CA USA
- Matson Terminal - Port of Los Angeles, CA USA
- Berth 110 China Shipping - Port of Los Angeles, CA USA



# Experience | Due Diligence

Elsewhere in the world NNP have undertaken Due Diligence at:

- Red Sea Gateway Terminal (RSGT), Jeddah Islamic Port, Saudi Arabia.
- Port of Newcastle, NSW, Australia.
- Moorebank Inter-Modal Terminal (IMT), Australia
- Port Botany, Third Terminal, NSW – Australia
- Maher Terminal, New York.
- King Fahd Industrial Port, Saudi Arabia
- Port of Tanjung Pelepas
- Port of Melbourne, Victoria.
- Port of New York & New Jersey.
- Flinders Port Adelaide Container Terminal, Australia





# Experience | Due Diligence

- Kemarie Groyne Development, Pakistan
- PICT, Pakistan - Due Diligence Study
- LCTPC - Lazaro Cardenas Container Terminal, Mexico - Phase 1 and Phase 2
- KMT - Westport Klang, Malaysia
- Jakarta International Container Terminal (JICT) Indonesia
- Kwangyang International Terminals (KIT), Indonesia - Due Diligence and Project
- Hutchison Busan Container Terminal, Busan, Korea - Due Diligence
- Hutchison Gamman Container Terminal Gamman, Korea - Due Diligence and Project Management
- Laem Chabang Eastern Seaport, Thailand Container Terminals - Due Diligence and Project Management



# Experience | Due Diligence

- Chittagong New Container Terminal (NCT), Bangladesh - Due Diligence Study
- Port of Colombo, Sri Lanka- Due Diligence Study
- Tanzania International Container Terminal - Due Diligence and Project Management
- Port of Banana, DR Congo - Due Diligence Study & Pre - Feasibility Study
- Djibouti Port, Djibouti - Due Diligence Study of Dry Bulk and General Cargo Handling Facilities
- Port of Tema, Ghana - Due Diligence
- Port of Takoradi, Ghana - Due Diligence
- Port of Mombasa Kenya - Due Diligence Study

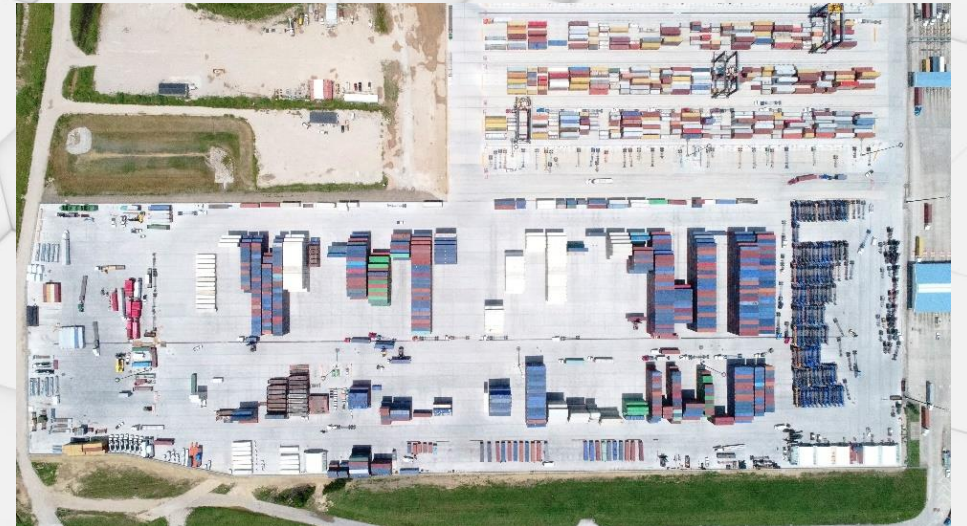
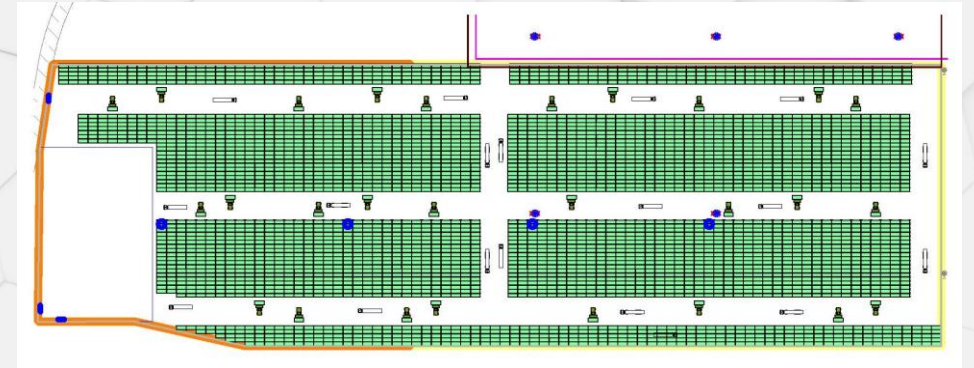


# Experience | Planning

## Terminal Link Texas - Bayport, Houston

### Planning

- CMA / China Merchant / Ports America
- Development of an empty container terminal
- 25 acres inc 2 acres CFS
- \$19m
- NNP Provided Planning, Paving Design, Cost Consultancy and Owner's Representative services

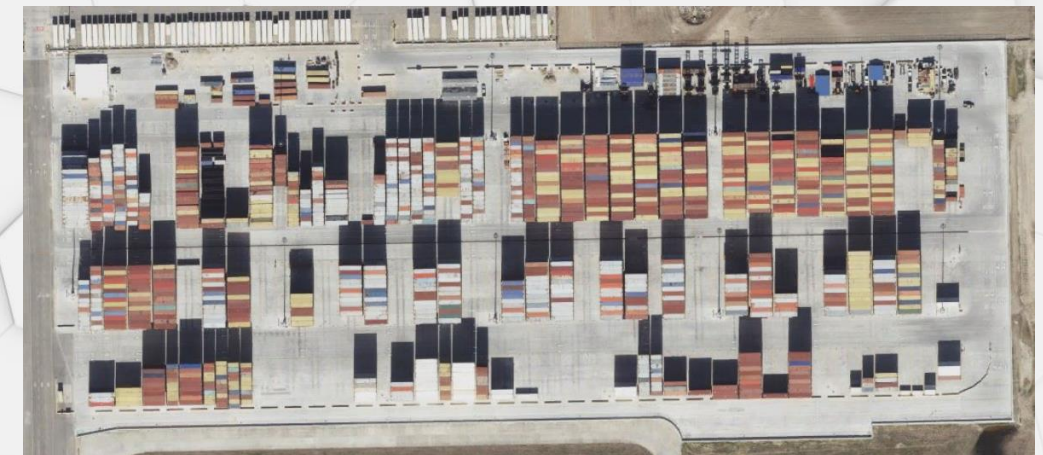
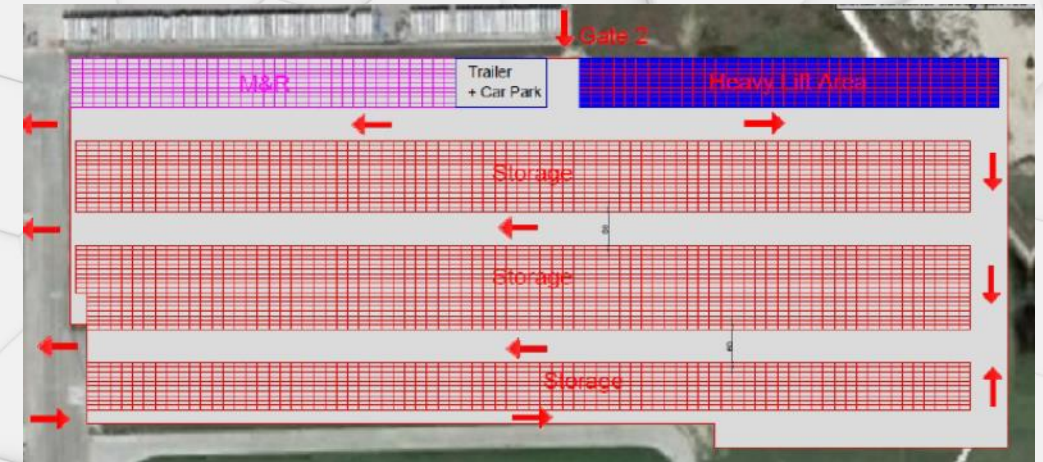


# Experience | Planning

## Houston Terminal LLC - Bayport, Houston

### Planning

- Terminal Investment Ltd / Ceres
- Development of an empty container terminal
- 26 acres inc 2 acres CFS
- \$23m
- NNP Provided Planning, Paving Design, Cost Consultancy and Owner's Representative services

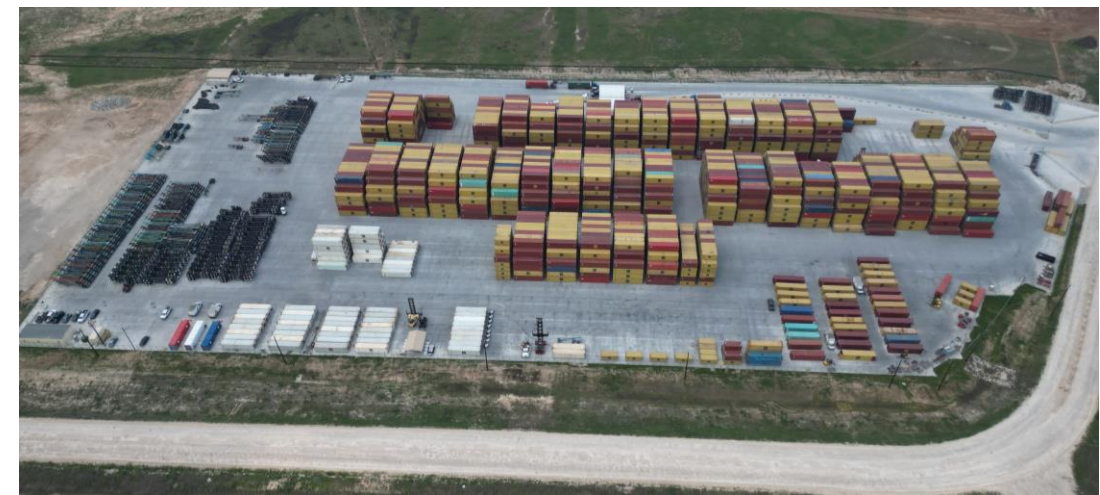
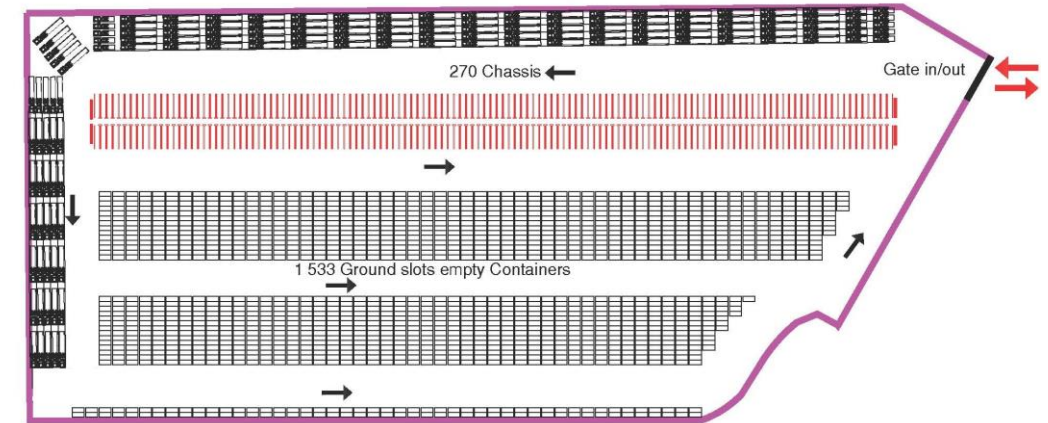


# Experience | Planning

## C&C Houston Bayport

### Planning

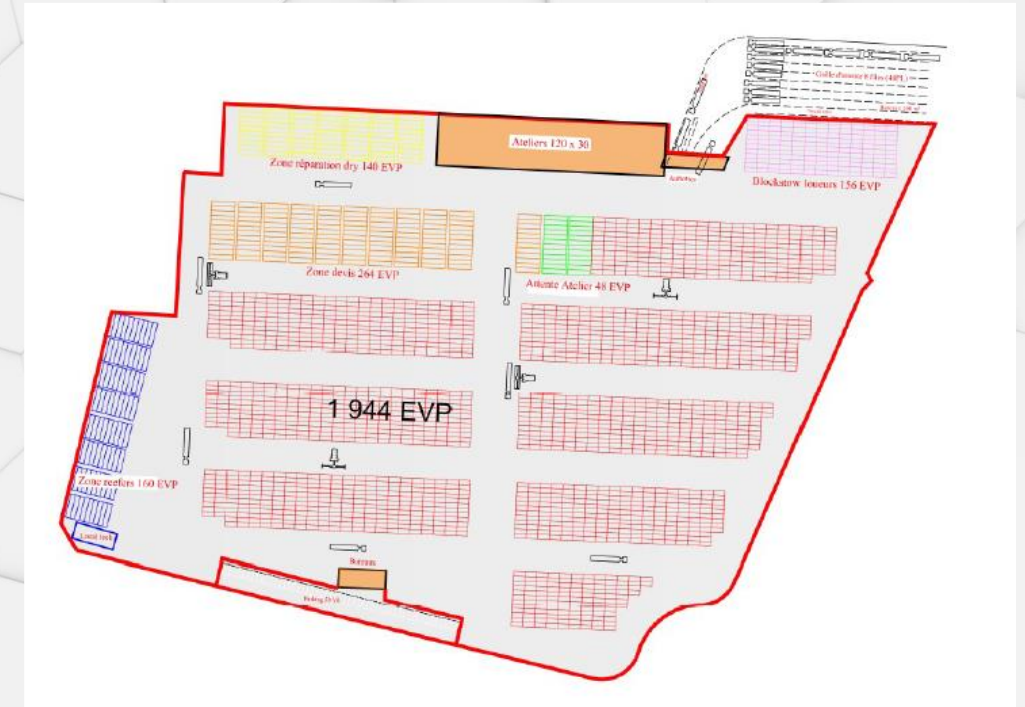
- Medlog / Integrated Industries Inc
- Development of an empty container terminal
- 21.5 acres
- \$14m
- NNP Provided Planning, Paving Design, Cost Consultancy and Owner's Representative services



# Experience | Planning

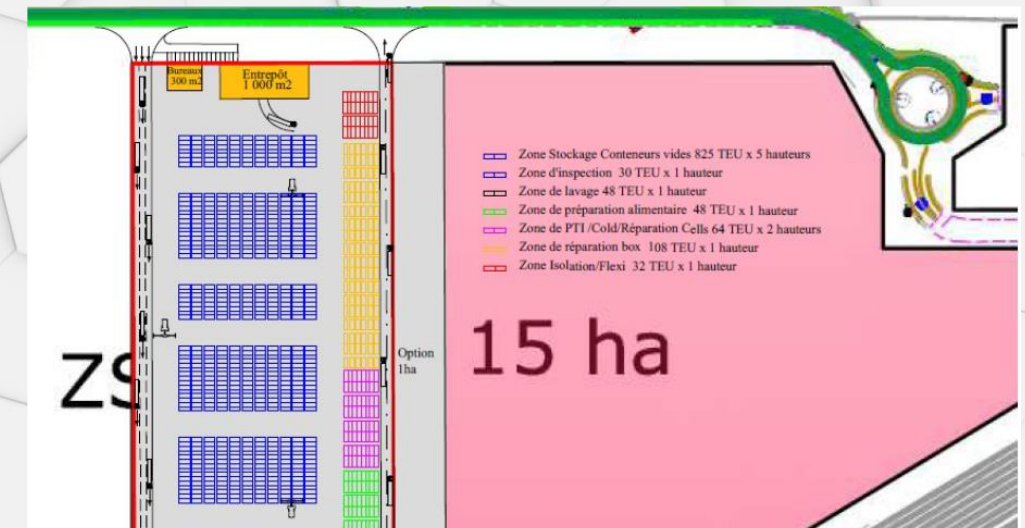
## Le Havre - France

- Development of a logistic zone and inland container terminal
- 10 hectares
- 20m Euro



## Fos - France

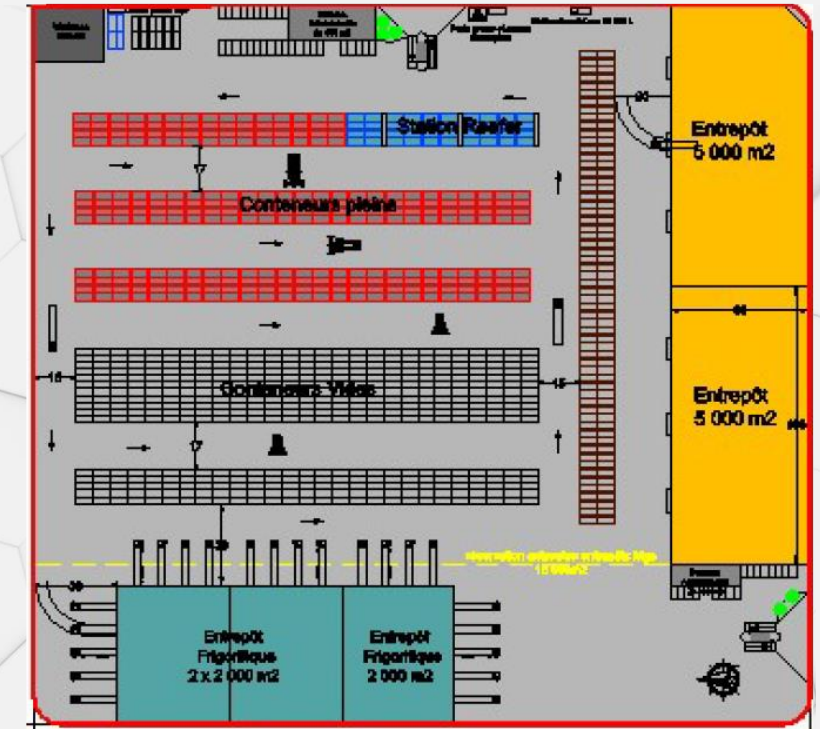
- Development of a logistic zone and inland container terminal
- 5 hectares
- 10m Euro



# Experience | Planning

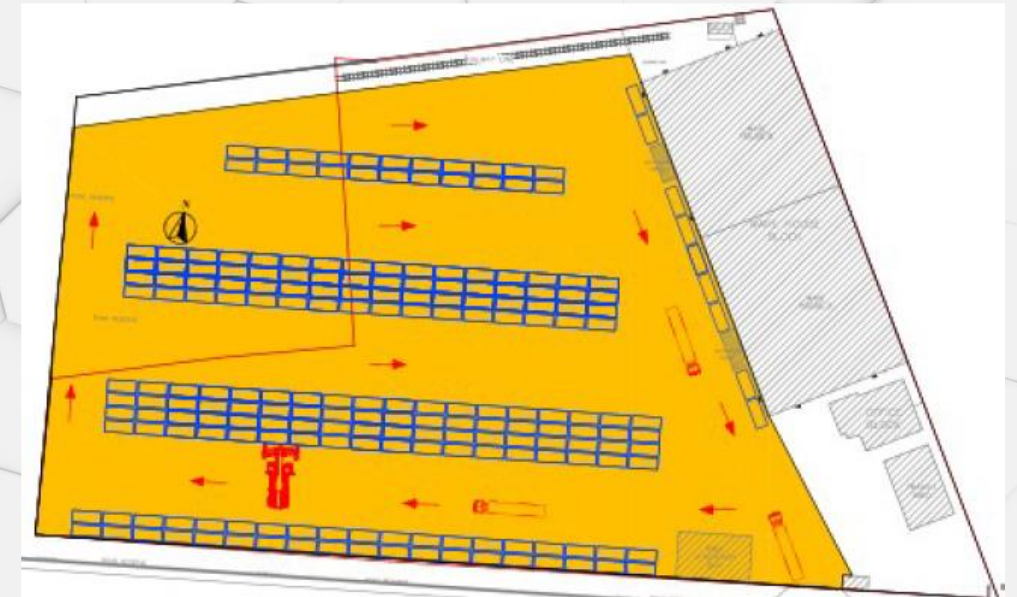
## Abidjan – Ivory Coast

- Development of a logistic zone and inland container terminal
- 6.5 hectares
- 16,000 m<sup>2</sup> of warehouses
- 15m Euro



## Kampala – Uganda

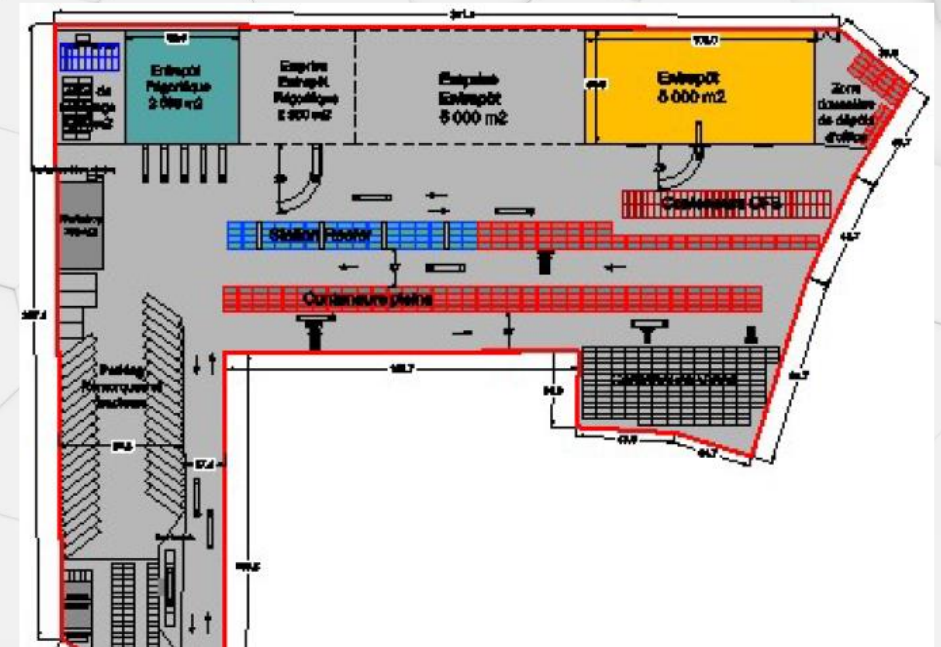
- Development of an inland container terminal
- 2 hectares
- 2,000 m<sup>2</sup> of warehouses
- 6m Euro



# Experience | Planning

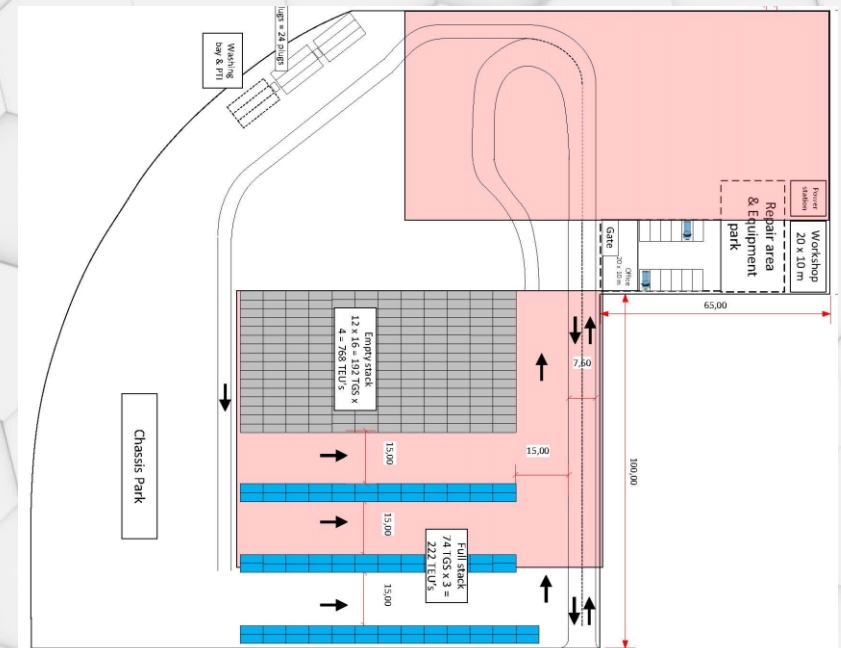
## Dakar - Senegal

- Development of a logistic zone and inland container terminal
- 6.5 hectares
- 15,000 m<sup>2</sup> of warehouses
- 15m Euro



## Chicago - United States of America

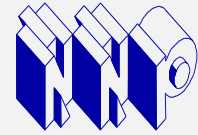
- Development of an inland container terminal and truck storage
- 7.5 acres
- \$1.5m







# Capability & Capacity



# Capability | Capacity

## NNP CAPABILITY STATEMENT

- 1) As authors of the internationally renowned BPA Heavy Duty Port Paving Design methods, as well as instigators of the structural design for element paving, two and three dimensional geogrids, NNP is recognized as an international expert in heavy duty paving design for both Dry and Wet Ports
- 2) NNP's experienced pavement designers and experts provide advice on all generic paving solutions having designed, supervised and monitored millions of m<sup>2</sup> of heavy duty paving worldwide for dry and wet port owners, contractors, shipping lines, tenants, rail road companies, logistic providers and equipment suppliers.
- 3) Working with local geotechnical engineers NNP generally establishes full testing regimes embracing both destructive and non-destructive testing. Rather than the traditional role of geotechnical engineers advising on soil strength parameters, NNP prefers to process the collated data and develop themselves the strength properties of the materials underlying the pavement box for pavement design purposes.
- 4) NNP has their own port planners to interrogate the operations over the pavements in order to assess and compute the loadings for pavement design purposes. This specialist role augments well with the operators as value is added to the entire Capex and Opex calculations, where modifications to the operations in order to save infrastructure costs where appropriate adds owner value.
- 5) NNP also costs designs with their own cost consultants, working in tandem with the designers ensuring that each design option offered is separately priced to enable a commercial pavement selection process.
- 6) NNP uses their own and other recognized design methods to develop their pavement designs for each generic pavement solution, using differing base and sub base layers and utilizing local materials wherever possible and strengthening with material treatment and or reinforcement where appropriate.
- 7) NNP considers and selects either rigid or flexible pavements, depending on settlement characteristics or the defined pavement serviceability criteria.
- 8) NNP ensures clients are advised on performance expectations, life cycle assessment and are advised on the full cost of the recommended maintenance regimes.
- 9) Owing to NNP's experience and authorship of pavement design methods they are fully capable of determining correct pavement selection and designs, which are neither over nor under designed.
- 10) NNP has experience in all generic pavements including but not limited to RCC, Reinforced Un-Reinforced Concrete, Asphalt Concrete, Pavers, Resin Reinforced Asphalt, two and three dimensional geogrids, fabrics where appropriate and either lime or cement material treatment.
- 11) NNP has particular expertise in rehabilitating existing pavements over bad ground and undertaking condition surveys. Their knowledge and experience in assessing residual pavement strengths utilizing destructive and non-destructive testing ensures that any strengthening and overlayment or renewals are kept to a minimum. This is especially relevant when clients are considering densification, use and or equipment change within an existing site.
- 12) NNP can provide a full design and supervisory service, concept designs only, preliminary designs for a design and build Owner's Requirements and advising on Contractor's proposals

for requirement compliance. Also NNP provides review work and red lining of plans and documents.

- 13) NNP also provide high level strategic paving advice on any paving issues, failures or when differing uses are expected
- 14) NNP also offers project management, owner representation and cost advisory services.
- 15) NNP offers feasibility studies embracing preliminary port designs, planning, equipment selection, and other infrastructure other than paving.
- 16) NNP also assembles 'best in class' teams for Port Due Diligence work for either M&A or Concession opportunities, the teaming depending on location and nature of the investment.

## SUMMARY

### NNP's Core Skills

- Pavement Design – Analysis and specification of heavy duty pavements for wet and dry ports using traditional and innovative paving materials.
- Pavement Assessment – Condition surveys and destructive and non-invasive testing to assess serviceability life and residual strength.
- Pavement Rehabilitation – Design and specification of strengthening and re-profiling measures to increase service life and load capacity.
- Peer Reviews – Vetting of pavement proposals by other design consultants for sufficiency or value engineering purposes.
- Failure Analysis – Investigation of pavement failures and identification of contributing factors with proposal of remedial measures.
- Expert Witness – Preparation of expert testimony and appearance in mediation, arbitration and court proceedings related to pavement failures.
- Operational Analysis, Planning, Costings, Asset Maintenance, Supervision
- Project Management, Owners Representation, Due Diligence, Concessions, Feasibility studies

### Why NNP?

- Over 30 years of specializing in pavement related work.
- Designed many million m<sup>2</sup> of heavy duty port pavements.
- Authors of heavy duty pavement design methods and related publications.
- Projects in over twenty different countries.

# Capability | Capacity



## Capacity Certificate

I undersigned, Chris Fetters, hereby certify that Nigel Nixon and Partners Inc. achieved on behalf of:

### LA 23 Development Company

the following assignments:

- Name of the project: Louisiana's Gateway Terminal
- Scope of Work:
  - Strategic Development Advice
  - Commercial Appraisal Study and Assisting Financial Modelling
  - Concept Master Planning and Operational Planning
  - Throughput and Capacity Analysis
  - Managing Concept Design and Permit Applications
  - Vetting Potential Vendors
  - Labor and Union Negotiations
  - Procurement of Design Builder to Deliver Phase 1a of the Project
  - Procurement of Port Equipment
  - Union with BCOs, Rail, Industrial, Logistic and Potential Terminal Operators.
- Construction: New 66-acre container terminal and 2,750ft wharf
- Construction Cost: \$500M (Phase 1a)

This assignment was fulfilled with professionalism, expertise and due care, meeting all LA23's expectations.

This certificate was issued with all advantages thereto pertaining.

In Baton Rouge, Date April 30, 2022.

Chris Fetters  
  
 LA23 Development Company



## Capacity Certificate

I undersigned, Robert Marshall, hereby certify that Nigel Nixon and Partners Inc. achieved on behalf of:

### Houston Terminal LLC

the following assignments:

- Name of the project: East Empty Container Yard, Bayport, Houston
- Scope of Work:
  - Feasibility Operational Planning and Cost Consultancy
  - Preparation of Owner's Requirements Design, Specification and Contract Documentation.
  - Owner's Representative role throughout the Project.
  - Pavement Design and Design Coordination
- Construction: New 26-acre empty container terminal
- Construction Cost: \$23.8M

This assignment was fulfilled with professionalism, expertise, and due care, meeting all Houston Terminal's expectations.

This certificate was issued with all advantages thereto pertaining.

In Houston, Date March 16, 2021.

Robert Marshall  
  
 Houston Terminal LLC  
 General Manager



## Capacity Certificate

I undersigned, Greg Linbeck, hereby certify that Nigel Nixon and Partners Inc. achieved on behalf of:

### Terminal Link Texas

the following assignments:

- Name of the project: West Empty Container Yard, Bayport, Houston
- Scope of Work:
  - Feasibility Operational Planning and Cost Consultancy
  - Preparation of Owner's Requirements Design, Specification and Contract Documentation.
  - Owner's Representative Throughout the Project.
  - Pavement Design
- Construction: New 25-acre empty container terminal
- Construction Cost: \$19M

This assignment was fulfilled with professionalism, expertise and due care, meeting all Terminal Link Texas's expectations.

This certificate was issued with all advantages thereto pertaining.

In Houston, Date March 22, 2021.

Greg Linbeck  
  
 Terminal Link Texas General Manager



## Capacity Certificate

I undersigned, Leonard Imperial, hereby certify that Nigel Nixon and Partners Inc. achieved on behalf of:

### C&C Houston Bayport

the following assignments:

- Name of the project: Empty Container & Chassis Yard, Bayport, Houston
- Scope of Work:
  - Feasibility Operational Planning and Cost Consultancy
  - Preparation of Owner's Requirements Design, Specification and Contract Documentation.
  - Owner's Representative Throughout the Project.
  - Pavement Design
- Construction: New 21.5-acre empty container terminal
- Construction Cost: \$14M

This assignment was fulfilled with professionalism, expertise and due care, meeting all C&C Houston Bayport's expectations.

This certificate was issued with all advantages thereto pertaining.

In Houston, Date November 8, 2022.

Leonard Imperial  
  
 Director - Intermodal Network Operations MSC (USA) Inc

# Capability | Capacity



## Capacity Certificate

I undersigned, Harold Kunst, hereby certify that Nigel Nixon and Partners Inc. achieved on behalf of:

### MSC PSA EUROPEAN TERMINAL

#### FORENSIC INVESTIGATIONS INTO EXISTING TERMINAL PAVING – DETERMINING CAUSE OF FAILURE AND DESIGN OF THE PAVEMENT REPAIRS

the following assignments:

Pavement renewal project : MSC PSA EUROPEAN TERMINAL – ANTWERP BELGIUM

Scope of Work:

Undertaking forensic investigations of the terminal platforms, determining cause of distress, preparation of new Pavement design for the new terminal repairs, Specification and Contract Documentation. Supporting MPET throughout the procurement process and providing construction advice.

Construction: Renovation front quay container terminal

Construction Cost: \$25M

This assignment was fulfilled with professionalism, expertise and due care, meeting all MPET's expectations.

This certificate was issued with all advantages thereto pertaining.

In Antwerp, 2 november, 2022.

Signed

CEO MPET – Harold Kunst



## Capacity Certificate

I undersigned, Dipl Eng DUMITRU Cojocea, hereby certify that Nigel Nixon and Partners Inc. achieved on behalf of:

### PORR CONSTRUCT S.R.L.

#### DEVELOPMENT OF CONSTANTA CONTAINER TERMINAL - ROMANIA

the following assignments:

Name of the project: DEVELOPMENT OF CONSTANTA CONTAINER TERMINAL - ROMANIA

Scope of Work:

Preparation of Pavement design for the new terminal expansion for DPW, Specification and Contract Documentation.

Construction: "Modernization and development of the capacity of the port of Constanta - development of the port infrastructure in development area A, MOLA II-5 Constanta South Port by expanding the port platform facilitating multimodal transport"

Construction Cost: € 47.00 M

This assignment was fulfilled with professionalism, expertise and due care, meeting all Porr's expectations.

This certificate was issued with all advantages thereto pertaining.

In Bucharest, Date 28 October 2022

Project Manager – Dipl Eng. DUMITRU Cojocea



## Capacity Certificate

I undersigned, Bill Pappas PE, Vice President, hereby certify that Nigel Nixon and Partners Inc. achieved on behalf of:

### HALCROW

the following assignments:

- Name of the project: St. Louis Municipal River Terminal

- Scope of Work:

- Assist Prime Consultants Halcrow [now CH2MHill] in the development of an economical supporting heavy duty surfaced area in the wharf handling area and in the provision of value engineering advice.

- Preparation of specifications and advice during construction.

- Construction: New equipped Container deep river terminal in the River Port of St Louis, USA

- Construction Cost: \$19M

This assignment was fulfilled with professionalism, expertise and due care, meeting all HALCROW'S expectations.

This certificate was issued with all advantages thereto pertaining.

In New York, Date 13/8/2014.

Bill Pappas PE

HALCROW VICE PRESIDENT

p:\projects\in - container terminal & port service\mola-ii-5 louis bridge design\build wharf rehab\40 contracts and agreements\44 subcontracts\capacity certificate - nigel nixon & partners.docx



## Capacity certificate

I, the undersigned, Nampor Port Engineer Etevir Gelderbloem, Pr. Eng

Hereby certify that Nigel Nixon and Partners Inc achieved on behalf of:

### NAMPOR

The following assignments:

- Name of the project : Clarification of Pavement Design and Serviceability

- Scope of works :

Assist Port Authority in the selection of design and build contractor with specific emphasis on the container paving areas and rail yards. Interview Contractor and make recommendations. Review Contractors design for entire paved areas and make amendments and provide value engineering advice. Requirement for supervision works and general pavement attendance

- construction : New equipped Container deep water terminal in reclaimed land at Walvis Bay with road and rail link

- Construction costs : ZAR 3,400,000,000 (3.4 billion)

This assignment was fulfilled with professionalism, expertise and due care, meeting all NAMPOR'S expectations.

This certificate was issued with all advantages thereto pertaining.

In Walvis Bay, Date 14 August 2014

Etevir Gelderbloem, Pr. Eng

NAMPOR PORT ENGINEER

# Capability | Capacity

**Patrick**

**Capacity Certificate**

I, the undersigned, Matt Hollamby, Terminal Manager, hereby certify that Mark Smallridge achieved on behalf of Patrick Stevedores, the following assignments :

Name of the Project : Berth 8/9, Port of Brisbane, Queensland, Australia

Scope of Services : > Expert witness services on behalf of the terminal operator in relation to pavement failures in a new marine terminal.  
> Set up major destructive and non-destructive testing program.  
> Undertake reviews of design and construction documentation.  
> Prepare expert report for legal proceedings.


Construction Work :   Pavement Investigation       174,000m2  
                                  Expert witness services       1 U

Construction Costs :   Not Applicable

These assignments were fulfilled with professionalism, expertise and due care, meeting all of Patrick Stevedores expectations.

This certificate was issued with all advantages thereto pertaining.

Date :                           August 22, 2014

Signature : 

Matt Hollamby  
Terminal Manager  
Patrick Stevedores

**Patrick**

**Capacity Certificate**

I, the undersigned, Matt Hollamby, Terminal Manager, hereby certify that Mark Smallridge achieved on behalf of Patrick Stevedores, the following assignments :

Name of the Project : Port Botany Terminal, Port Botany, New South Wales, Australia

Scope of Services : > Expert witness services on behalf of the terminal operator in relation to pavement failures in a new marine terminal.  
> Set up major destructive and non-destructive testing program.  
> Undertake reviews of design and construction documentation.  
> Prepare expert report for legal proceedings.

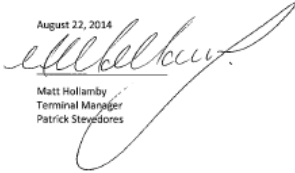
Construction Work :   Pavement Investigation       370,000m2  
                                  Expert witness services       1 U

Construction Costs :   Not Applicable

These assignments were fulfilled with professionalism, expertise and due care, meeting all of Patrick Stevedores expectations.

This certificate was issued with all advantages thereto pertaining.

Date :                           August 22, 2014

Signature : 

Matt Hollamby  
Terminal Manager  
Patrick Stevedores

**CCIS CMA CGM**

**Capacity Certificate**

I undersigned, Eric Bonnemaison, hereby certify that Nigel Nixon and Partners Inc. achieved on behalf of:

**CCIS, Lagos, Nigeria**


the following assignments:

- Name of the project:
  - BEACHLAND CONSULTIUM TERMINAL LIMITED - CCIS, Lagos, Nigeria
- Scope of Work:
  - Undertake a site visit in Lagos for construction works review, meet with designers and contractors to collect drawings and design of (dredging, quay, foundations of the fixed quay crane, yard and networks: drainage, electric, lighting, firefighting, water supply...)
  - Undertake an engineering sanity check & due diligence on drawings and design (assumptions, methods, results)
  - Provide an estimation of the design & build timeline (to compare with contractors proposed timeline)
  - Prepare an organizational chart of the project (owners, owners Rep, Designers, contractors, advisors, consultants ...)
  - Advise & comment on capabilities of contractors involved in the construction works.
- Construction: New Containers Storage yard 36.000 sqm
- Construction Cost: \$15M

This assignment was fulfilled with professionalism, expertise and due care, meeting all CCIS - CMA CGM expectations.

This certificate was issued with all advantages thereto pertaining. In Marseille, Date October 30, 2022.

Eric Bonnemaison

VP, Head of Africa Inland Services - CMA CGM Log  
(Stamp & Signature)  


# Capability | Capacity



## Certificat de Satisfaction

Je soussigné Sylvain Bourgois, Directeur du pôle Développement Portuaire

Certifie que Cédric CORBIERRE a réalisé avec professionnalisme et conformément à nos attentes les missions suivantes:

**Etude sur la pertinence de l'utilisation de véhicules autoguidés (AGV) pour les transferts de conteneurs sur le terminal fluvial de Romainville**

- Faisabilité technique de l'utilisation d'AGV pour le transfert du site de traitement à la plateforme portuaire fluviale.
- Faisabilité économique.

Pour évaluer la pertinence de l'utilisation d'AGV pour les transferts entre le centre de In et la plateforme portuaire, un comparatif économique entre la solution AGV et la solution standard sélectionnée (camion) a été effectuée. Ce comparatif prend en compte les coups d'investissements initiaux (CAPEX), de maintenance (OPEX) et la variation en termes d'emplois.

À Guyancourt, le 09/08/2014

Sylvain Bourgois



## APM TERMINALS

### Capacity Certificate

I, the undersigned, Lee Barco, Principal Engineer, hereby certify that Nigel Nixon and Partners, Inc. achieved on behalf of APM Terminals, the following assignments:

Name of the Project : Mobile Container Terminal, Mobile, Alabama

Scope of Services :   
 ➢ Design of heavy duty asphalt concrete pavement for the new container terminal, considering five differing load cases – loaded container stack area, chassis parking and empty container stack areas, truck gate and circulation roadways, maintenance area and POV parking.   
 ➢ Preparation of subgrade stabilization, base construction and asphalt concrete paving details and specifications.   
 ➢ Assist project team in contractor selection.   
 ➢ Review of contractor proposed alternate roller compacted concrete pavement design, specifications and details.   
 ➢ Visiting site to observe pavement construction.   
 ➢ Agree end of work defects.

Construction Work :   
 ➢ Subgrade stabilization 298,000m<sup>2</sup>   
 ➢ Light duty AC pavement 8,000m<sup>2</sup>   
 ➢ Medium duty RCC pavement 170,000m<sup>2</sup>   
 ➢ Heavy duty RCC pavement 120,000m<sup>2</sup>   
 ➢ RCC pavement joint sealing 29,000m

Construction Costs : \$18.6 Million (USD)

These assignments were fulfilled with professionalism, expertise and due care, meeting all of APM Terminals' expectations.

This certificate was issued with all advantages thereto pertaining.

Date : August 21, 2014

Signature :

Lee Barco  
Principal Engineer  
APM Terminals

## APM TERMINALS

### Capacity Certificate

I, the undersigned, Lee Barco, Principal Engineer, hereby certify that Nigel Nixon and Partners, Inc. achieved on behalf of APM Terminals, the following assignments:

Name of the Project : Houston Terminal Pavement Repairs, Barbours Cut, Houston, Texas

Scope of Services :   
 ➢ Detailed paving condition assessment, including visual, destructive and non-destructive testing.   
 ➢ Design of rehabilitation of terminal pavement for three differing load cases – loaded container stack areas, empty container stack areas, chassis parking and circulation roadways.   
 ➢ Preparation of subgrade treatment, base construction and Portland cement concrete paving details and specifications.   
 ➢ Assist terminal operator in contractor selection.   
 ➢ Visiting site to observe pavement construction.   
 ➢ Agree end of work defects.

Construction Work :   
 ➢ Condition survey 350,000m<sup>2</sup>   
 ➢ PCC pavement demolition 12,000m<sup>2</sup>   
 ➢ Subgrade preparation 12,000m<sup>2</sup>   
 ➢ Subbase construction 2,400m<sup>2</sup>   
 ➢ PCC pavement reinstatement 12,000m<sup>2</sup>   
 ➢ Slab jacking 3,000m<sup>2</sup>   
 ➢ PCC pavement joint repairs 3,000m   
 ➢ PCC pavement joint sealing 40,000m

Construction Costs : \$5.3 million (USD)

These assignments were fulfilled with professionalism, expertise and due care, meeting all of APM Terminals' expectations.

This certificate was issued with all advantages thereto pertaining.

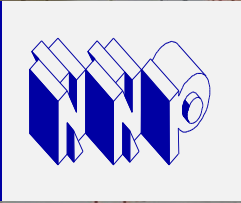
Date : August 21, 2014

Signature :

Lee Barco  
Principal Engineer  
APM Terminals



# Resumes



# Resumes

Nigel Nixon

Chairman



### Personal Profile

Nigel has worldwide experience in managing, planning, design, procurement and construction of many major civil engineering and building projects involving harbors, marine terminals, container, intermodal, automotive yards, airfields and logistic facilities worldwide. A member of UK Port Advisors, he regularly acts as an Expert on a number of construction legal related cases. He enjoys a worldwide reputation as an expert in port related pavement infrastructure and has chaired a number of Port conferences globally as well as a regular conference speaker. A leader in major transport related projects in 60 Countries across the globe.

### Career History

9 years design engineer (South Africa) and construction Contract Manager.

Since 1979 principal of Nigel Nixon and Partners. He served as the Company's Chairman, Managing Director and Project Director on many of the firm's structural, civil, road and paving works internationally.

### Recent Project Experience

Having described Nigel's considerable experience in Maritime developments throughout the world he has over the last five years led the design and procurement of a number of major new and refurbished dry and wet port related and intermodal facilities, including but not limited to:

- New Deep Water Container Terminal and adjoining Logistic Park, Indonesia
- New Container Terminal infrastructure design, South Carolina, USA
- Major extension to an existing container terminal at the Port of New York New Jersey, USA
- 4 new terminal facilities within the Port of Houston, Texas USA
- 200 acre new river side development for wind Farm manufacture and waterside distribution in New York State, USA.
- New Container Terminals in Caribbean
- Owner's representative on a number of "roll out" internal dry ports in 15 different locations globally
- Major port refurbishment works in a European Port
- New Intermodal terminal and densification projects in Canada and USA
- Acting as Paving expert in the Ports of Los Angeles, Antwerp, Gulf Port, Port Beaumont, Port Houston, Port Ringaskiddy, Teesport, Goole, Bristol, Southampton, Namibia and Seychelles
- New Port DD work and studies in Mombasa, Chittagong, Gdansk, Iraq and Haiti.

### Education

BSC (Hons)  
Civil  
Engineering

### Professional Qualifications

CEng FICE PE

### Years' experience

45 years

### Languages

English  
French

### Expertise

Value Added  
Design

Value  
Management

Procurement  
and Delivery

Leadership

### Publications

Fifteen papers from 1984 to 2018 at international conferences on port logistics, rehab of port structures and pavement engineering

Kristopher Kapinos

Chief Executive Officer



### Personal Profile

Highly analytical with 25 years of experience originating, structuring and executing transactions, across a wide range of alternative asset classes, specializing in the logistics and transportation segments. Success in providing leadership in complex financings, developing and executing cross-border, tax efficient transactions. Kris is well versed in determining customer needs and developing "win-win" solutions.

### Career History

25 years working for international financial institutions on both the sell-side and buy-side, including substantial experience in senior leadership, group / area head functions.

Strengths include developing new business platforms from scratch and running transactions full cycle from origination through structuring, distribution, documentation and, ultimately, execution.

### Relevant Project Experience

Louisiana's Gateway Terminal, - LA 23 Devco, Plaquemines, Louisiana: Strategic advice regarding financing options for 66-acre container terminal, CNG Facility and 2,750 ft wharf in Mississippi River.

Project Zeus - Aircraft Acquisition Fund, Seoul, South Korea: Led origination, structuring, pricing and execution of \$500 million aircraft portfolio generating more than \$15 million in revenue in year one. Portfolio remained resilient and, uniquely, 100% performing through COVID crisis.

Desalination Plant - Middle East: Placed \$200 million senior debt financing for a desalination plant owned by a Middle Eastern investment house.

Project Shannon - Hamburg, Germany: Designed, developed and executed an innovative €100 million Sale and Asset Management Back of freight railcars for a top tier European rail client.

Aviation Part-Out Investment Vehicle - Shannon, Ireland: Led negotiation for the establishment of a successful joint venture between a European client and a US-based hedge fund to invest in aircraft and aircraft engines in the part-out segment.

Project Red Dragon - London, United Kingdom: Led the origination and structuring of a private equity investment and senior debt credit facility for the establishment of a \$200 million dry bulk shipping investment vehicle.

### Additional relevant information:

- Raised +\$4 billion in capital
- Traded +\$1 billion in asset-backed loans in secondary market
- Successfully led a major restructuring project
- Closed a project awarded *Asset Finance's* "Deal of the Year"

### Education

BA, PPE

MSC,  
Administration:  
Multinational  
Commerce

Certificate,  
Financial  
Management

Certificate,  
Commercial  
Real Estate

### Experience

25 years

### Languages

English

### Expertise

Strategic  
Advisory

Financial  
Structuring

Equity and Debt  
Placement

Financial  
Execution

Project  
Development &  
Management



# Resumes

Mark Smallridge

President



### Personal Profile

Mark has worldwide experience in civil engineering analysis and design and has specialized in pavement related work. Mark has been involved in the development of pavement design methods for port operations and for segmental paving systems, has undertaken forensic investigation of pavement failures and has served as an expert witness. He has undertaken the design of pavements for ports, airports and railyards as well as for commercial, civic and private projects throughout the US.

### Career History

Starting with Nigel Nixon and Partners in the U.K. in 1981, Mark has participated in the majority of the company's US projects since 1985 he has managed the US office since 1995.

### Project Experience

Extensive experience in analyzing traffic loadings and environmental data to prepare pavement designs, details and specifications; reviewing contractor submittals during construction; investigation and upgrading of pavements; designing pavement rehabilitation, overlay and inlay works.

- Bayport (Various Projects), Port Houston, TX: Container terminal
- Berth 30, Port of Oakland, CA: Container terminal
- Evergreen Terminal, Port of Los Angeles, CA: Container terminal
- Piers A, G and J, Port of Long Beach, CA: Container terminals
- NYCT Intermodal Yard, Howland Hook, NJ: Intermodal yard
- Berths 5 and 6, Barbours Cut Terminal, TX: Container terminal
- ExpressRail, Port Elizabeth, NJ: Intermodal terminal.
- Mobile Container Terminal, Alabama State Ports, AL:
- Conrail Rail Yard, North Bergen, NJ: Intermodal rail yard
- Pier 300, Port of Los Angeles, CA: Container terminal
- Port of Savannah, GA: Container terminal
- Terminal 5 Expansion, Port of Seattle, WA: Container terminal
- Hanjin ILY, Port of Long Beach, CA: On-dock intermodal rail yard
- Port of Miami, FL: Container terminal
- Berth 55-56, Port of Oakland, CA: Container terminal
- Berths 6 & 7 Barbours Cut, TX: Container terminal.
- Tivoli Terminal, Port of Cork, Ireland: Container terminal
- Port of Xaimen, China: Container terminal.
- Gordon Quay, Port of Kingston, Jamaica: Container terminal.
- Globe Terminal, Keelung Harbour, Taiwan: Off-dock container terminal
- Berths 8 and 9 Port of Brisbane, Australia: Container terminal
- Port of Southampton Freightliner Terminal, UK:
- Delta Port, Canada: Container terminal
- Surrey Docks, Canada: Container terminal

### Education

BSC (Hons)  
Civil  
Engineering

### Professional Qualifications

CEng PE

### Affiliations

ASCE

ICE

PIANC

ACI

### Years' experience

40 years

### Languages

English

### Expertise

Pavement  
Design

Expert Witness

### Publications

Seven papers  
from 1982 to  
2015 on port  
pavement  
engineering

Keith Abraham

Project Director



### Personal Profile

Keith has excellent presentation and interpersonal skills, able to build and work within a team to achieve quality results within a pressurized environment. Keith has an excellent recent record of delivering projects on time with minimal or no work change orders. His particular skill is the ability to accurately predict project costs and procure contractors to deliver cost certainty leaving the project owner with minimal risk.

### Career History

12 years working for national and international construction companies specializing in construction planning, methodology, design management, bid management and delivering design build projects in many sectors.

25 years as Project Director, delivering projects from owner concept, feasibility, costing, design team integration, budget and timeline setting, seeing projects through to procurement, contractor selection, project implementation and compliance.

### Recent Project Experience

Louisiana's Gateway Terminal, - LA 23 Devco, Plaquemines, Louisiana: Strategic advice, timeline, cost and procurement lead for 66-acre container terminal, CNG Facility and 2,750 ft wharf in Mississippi River.

Bayport, West Empty Container Yard - Terminal Link Texas, Houston, Texas: Owner's Representative responsible for delivering a 25-acre empty container yard linked to the Bayport container terminal. \$19 million contract procured on a Design Build basis. Pre-bid design management, cost planning, procurement, selection and management of the contractor through to completion. Also represented the funder through a letter of reliance.

Bayport, East Empty Container Yard - Houston Terminal LLC, Houston, Texas: Owner's Representative responsible for delivering a 26-acre empty container yard linked to the Bayport container terminal. A \$23 million contract procured on a Design Build basis. The role was as the above project.

Bayport, Inland Container & Chassis Yard - C&C, Houston, Texas: Owner's Representative responsible for delivering a 21.5-acre empty container yard as above projects for a joint venture between IIC and Medlog.

Hoyer, Pasadena, Texas: Providing Owner's Representative support to Client Project Manager, 14 acre existing facility, comprising 8 acre full depth pavement renewal, wash rack and pump room installation, re-fit offices and re-cladding existing building

Port of Belize, Belize City: Owner's Representative responsible for cost planning, design management and empowering local engineering consultancy to control the project at a local level. A \$4 million project includes an in-place cement stabilization of existing lime rock surface.

Termont, Montreal: Provided procurement advice and assistance for the installation of beams to support a new Rail Mounted Gantry crane.

### Education

BSC (Hons)  
Building

### Professional Qualifications

MCIOB

### Years' experience

37 years

### Languages

English

### Expertise

Cost Planning

Project  
Delivery

Construction  
Scheduling

Procurement

### Publications

Bringing  
Design Build to  
the Port Sector  
- ASCE 2019

# Resumes

Andrew Griffiths

Title: Project Director



### Personal Profile

Andrew has combined specialisation in general management with operational, commercial and contractual aspects of the port and shipping industries as well as port master planning, market appraisal, traffic analysis, financial planning and design and development of business models and plans. He has undertaken a number of due diligence projects covering a range of port and shipping operations for financial institutions. He is a qualified project manager and has led a number of international and multi-disciplinary projects.

### Career History

Andrew is an experienced consultant who has spent 30 years working in the maritime industry and public sector with world wide experience. He has held senior positions in a major shipping company latterly as a Commercial Director, and in port and shipping management teams. His focus in the last 10 years has been on the provision of shipping, trade and port project feasibility and market studies and due diligence port projects, including the provision of freight forecasts, the competitive analysis of port and shipping markets and the development and appraisal of port business plans.

### Project Experience

- Commercial Study, forecasting and financial modelling for greenfield port in USA.
- Due Diligence for an LPG Gas Terminal in Mombasa, Kenya
- Valuation and Due Diligence for worldwide port assets for US Financial Institution.
- Due Diligence and feasibility study on the JNPT Container Terminal 4 in Mumbai, India
- An Overview and Outlook for the Global Ethane Market – a focus on sourcing US Ethane to India
- U.A.E. LPG Market Study and Technical Analysis
- Commercial study for a new container terminal in the Port of Philadelphia
- Analysis of the competitive position of Philadelphia
- FUTURE TRENDS IN SHIP SIZES AND SHIP SIZE DISTRIBUTIONS – PORT OF SINGAPORE
- Commercial and Technical Appraisal of Mediterranean Container Transshipment Terminal Asset
- Masterplanning for Multi-modal Coal Transportation Corridor in South Sumatra ( Pelindo II)
- Feasibility Study for Iron Ore Distribution Hub in Saudi Arabia
- Commercial feasibility of consolidating, storing, blending and exporting coal from the South Sumatera coal fields via the Musi River.
- Market Study and forecast for concession in the Port of Chittagong, Bangladesh.
- Due Diligence, Market Study and Traffic forecast for concession for a new port in Aqaba, Jordan.
- Market Study and feasibility study for a new terminal in Chennai, India

### Education

BA (Hons) Economics / Politics – University of Leeds, UK

MBA – University of Brighton, UK

### Professional Qualifications

Association for Project Management (APMP) - IPMA Level D Qualification, Managing Successful Programs (MSP)

### Expertise

Economic Analysis, Traffic Forecasting, Investment Appraisal, Market Studies, Cost Benefit Analysis, Benchmarking, Business Improvement and Planning, Commercial Due Diligence, Project Management.

David Fanthorpe

Pavement Engineer



### Personal Profile

David has over 30 years experience in highway construction and maintenance specialising in construction materials technology. My technical ability and knowledge is supported by sound and wide practical international experience of construction techniques, site practice, materials behaviour, materials production, and construction processes. This experience is a vital element to my overall knowledge and enables me to deliver solutions that are not only sound technically but which are practical and "buildable". The design of Port pavements often has to accommodate poor and variable ground conditions. I have investigated and determined the cause(s) of failure of many container port pavements. From forensic investigations I have written technical specifications for materials and construction based on the use of locally available materials. This knowledge and experience has resulted in him providing expert witness legal support.

### Education

O-levels

A-levels

### Professional Qualifications

HTEC Civil Engineering

### Years' experience

30 years

### Expertise

Industrial Pavement Design and materials specification

### Languages

English

### Publications

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### Career History

David's 30 years' experience in materials design, inspection and testing includes over 14 years' international experience in analytical design of heavy duty pavements for ports and highways. David has international experience as Expert witness in connection with the design, and construction of industrial, marine and highway pavements. He has been a member of the British Standards Institute (BSI) committee for the development of BS 6349-9 Port Surfacing and a member of the Britpave task groups for (a) the development of an Airfield Paving Handbook and (b) the development of an RCC specification for highways and marine industrial pavements in the UK and working group for PIANC Report 165 Design and Maintenance of Container Terminal Pavements

### Project Experience

- MPET, Antwerp – pavement investigation and refurbishment design
- Port of Felixstowe, UK – new slip-form concrete pavement design and supervision
- Teesside, UK- new Roller Compacted Concrete pavement design and stabilization of poor soils
- Milton Intermodal Terminal, Toronto – design of new asphalt pavement for reach stacker operations and concrete pavement for truck gate access and customs
- Expert witness – Port of Caucedo. Failure of concrete block pavement and asphalt pavement
- Expert witness – Port of Brisbane. Failure of concrete block pavement
- Expert witness – Peel Ports. Failed RCC pavement
- San Pedro dry bulk terminal – new pavement concrete block and asphalt pavement design
- Port of Bristol – advice for repair of recently constructed RCC pavement
- Maritime EMG Rail Terminal – review of third party pavement design
- DP World Berbera Somaliland – new concrete block pavement design for RTG loaded container operation and empty container handling yard
- CSX Intermodal facility, Pittsburgh. New concrete pavement design for RTG container handling operations
- PNCT, New York. Design of major refurbishment of existing asphalt pavements

# Resumes

Cedric Corbierre

Port Operations Planner



### Personal Profile

Cedric has many years' experience in management of infrastructure projects and in management of port terminals.

Cedric has acquired an extensive experience in management of large-scale International port projects covering financing, legal, operational and technical issues.

### Career History

Cedric started his career as a Head of Port Engineering Services within an engineering consulting company, moving to CMA CGM as a Project Manager.

Cedric has been with NNP since 2015.

### Project Experience

- South Carolina Port Authority, HLT Charleston new deep sea container terminal (280 Acres) Functional Analysis
- Paris River Container Terminal Syctom Bobigny, Automated Guided Vehicle feasibility study (functional, technical and financial analysis)
- CMA CGM Brazil e-RTG Container Terminal (1MTEU, 76ha, 1400 mL quay) Functional Analysis, Layout, Conceptual Design
- CCIS West Africa Inland Container Depot (10ha), Layout, Feasibility study
- CCIS Uganda/ Kampala Inland Container Depot (7ha), Layout, Feasibility study
- World Bank – SETEC Analysis of San Pedro Port Layout Ivory Coast
- Misurata Free Zone (MFZ) – New Deep sea container port – Libya 3000 lm (-18m) wharf, 90 0000 m<sup>2</sup> open yard area, 30 gantry cranes, 60 RTG €800M, Port master plan and feasibility study.
- CMA CGM – Caribbean area CMA CGM loading hub layout – Kingston – Jamaica 2600 lm (-18m) wharf, 520000 m<sup>2</sup> open yard area, 26 gantry cranes, 60 RTG. 380 M€ Kingston port
- CMA CGM – Extension of Terminal Link Texas container terminal – Houston – US 50000 m<sup>2</sup> empty container yard.
- CMA CGM – Petkim container terminal development- Izmir – Turkey 765 lm (-16m) wharf, 270000 m<sup>2</sup> container yard, 7 gantry cranes, 10 Reach Stackers, 30 terminal trucks. €275M
- CMA CGM – Loading hub layout – Point Lisas – Trinidad y Tobago 300 lm wharf, 60000m<sup>2</sup> container yard, 3 gantry cranes, 10 RTG. €82M
- CMA CGM – Reorganization and extension of La Pointe des Grives container port terminal – Martinique Island Optimization options
- CMA CGM – Container port terminal – Guadeloupe Island Optimization options for storage and handling operations.
- CMA CGM – ALTERCO Dry port – Algeria Improvement options and analyzing extension options.

### Education

M.Sc.

C.Eng.

MBA

### Years' experience

25 years

### Expertise

Port Management, operations and equipment

Port Strategy

Masterplanning and development

Port Engineering, Procurement and Construction Management

### Languages

French

English

Jabir BEN HAJ TAIEB

Project Manager



### Personal Profile

I started my career in 1997 as a technical & commercial for an international oil & gas group prior to move to several industries as EPC project manager, continuously improving my competences in project management & contracting, sales & business development.

### Career History

NIGEL NIXON & PARTNERS OCTOBER 2017 to Present

Project Manager

BE ENGINEERING CONSULTANTS MAY 2020 to Present

Project Manager

beBIMENERGIES OCTOBER 2017 to Present

BIM Manager

TRACTEBEL ENGIE JULY 2012 TO SEPT 2017

Head of Gas & LNG Product

BESIX GROUP - BELGIUM JANUARY 2007 TO JUNE 2012

Head of Industrial Projects

EPE ENGINEERING – LIEGE – BELGIUM – May 2004 to December 2006

Projects Construction Manager

PYRONICS INTERNATIONAL – BELGIUM March 2002 to April 2004

Procurement & Logistic Manager

### Education

Master Engineering

### Professional Qualifications

Business & Management

### Years' experience

25 years

### Expertise

Ports

Industrial Project

### Languages

English

French

Spanish

Arabic

### Project Experience

- 2020 PIZANO DRY PORT
- 2020 MPET Rails Cracks Project
- 2020 MPET Pavement Investigation
- 2020 EXPANSION OF LPG TERMINAL
- 2019 LUB OIL PLANT EPC BID MANAGEMENT
- 2019 KAMPALA DRY PORT
- 2018 MATADI PORT
- 2018 SAN PEDRO TERMINAL
- 2013 – 2017 Contract Manager Uruguay LNG Import Terminal
- 2012 – 2013 Head of Gas & LNG
- 2010: OYALA Equatorial Guinea – Besix Camp Implementation
- 2010: Quay 52 – Douala – Cameroon
- 2009 - 2011: EDEA Cameroun Spillage Gates Construction
- 2008 – 2010 EG LNG Jetty – Warranty Manager
- 2008 Handing over Bioko LNG Export Jetty
- 2008 – 2010 AIN SOKHNA – Egypt – Ammonia Unloading Jetty
- 2007 – 2008: Millford Heaven UK South Hook LNG Jetty
- 2005 – 2007 France Arcis-Sur-Aube – Brown coal grinding & power plant

# Resumes

Ian Cairns

Consultant



### Personal Profile

Over 40 years in the Maritime Industry, spent largely in Vessel and Terminal Operations and General Management. The majority of this time has been spent in North America, latterly as CEO of Terminal Link USA overseeing the Terminal Investments of the CMA CGM Group in North America. Terminal Link is a JV between the CMA CGM Group and China Merchants.

Responsible for setting up Joint Ventures for Stevedoring & Terminal Operations, In Mobile, Houston, Miami and Long Beach, as well as performing terminal evaluations throughout the USA, Canada, the Caribbean and South America.

### Career History

On the Commercial side prior to joining the CMA CGM Group, I was Chartering Manager for GE Power Systems, moving Power Stations and related cargoes around the world, also helped integrate the Wind Division of Enron into GE Power Systems (GE Wind). Set up the logistics for the first Wind Farm in the Irish Sea and in Colorado as well as preliminary work for US East Coast wind farm locations.

Previous experience as GM for the National Shipping Company of Saudi Arabia, and early sea experience with the Ocean Group UK.

### Relevant Experience

- Served as a Board Member on several Boards including US Labor Relations.
- Board positions with SFCT (South Florida Container Terminal) TL Texas (Terminal Link Texas) Board Director USMX (United States Maritime Alliance) Board Director PMA (Pacific Maritime Association) Board Director NYSA (New York Shipping Association). Served as a Trustee on several USMX and NYSA Trust Funds with the ILA including the NYSA-ILA Pension Fund. President SIMAS ( Shipping Industry Mutual Assurance Society)

### Education

British Masters License Foreign Going, Class 1, Unlimited Tonnage

### Years' experience

40 years

### Expertise

Terminal Operation  
Labor Relations

### Languages

English

Richard Jennings

Consultant



### Personal Profile

Richard is a highly experienced commercially focused consultant who has over 35 years' experience working in the global ports, logistics and infrastructure sectors. He has previously held senior executive board level positions in major operators in the UK, Europe, Latin America, USA, Africa and Asia. His experience includes managerial responsibility for M&A, fund raising, port development, leading commercial growth of port and logistic operations, restructuring, personnel development, port operations, inland transportation and logistics.

### Career History

Richard brings over 10-years of corporate board experience across multiple countries and jurisdictions gained in European, global and UK terminal infrastructure businesses with varying ownership structures including institutional and private. He has travelled and worked extensively throughout the globe.

### Recent Experience

With a focus on the Dry Bulk and General Cargo sectors, Richard is a hands-on inspirational leader with a record of leading complex development and acquisition projects, attracting capital, building successful international infrastructure businesses, driving growth, and managing diverse organizations through cultural change.

Richard has extensive experience in port M&A and Commercial Due Diligence processes, and leading Market and Feasibility Studies in both an employed and advisory capacity. Projects and positions include:

- OT Logistics SA, Poland (Advisory)
- African Ports & Corridors Holdings (Advisory)
- African Ports & Corridors Holdings (Advisory)
- Cemineral Ltd UK (Advisory)
- ZonesCorp Abu Dhabi (Advisory)
- East Anglia Offshore Wind (Advisory)
- Gearbulk Shipping Bermuda (Advisory)
- Polo Operadores Portuários Brazil (Advisor)
- Impala Terminals / Trafigura, Geneva (Executive : COO)
  - Porto Sudeste, Brazil.
  - Barrancabermeja, Colombia.
  - Lubumbashi, Democratic Republic of Congo.
  - Burnside, Louisiana USA.
  - Dar es Salaam, Tanzania.
  - Antwerp, Belgium.
  - Developed a network of port and inland metals terminals in China.
- Euroports, Luxembourg (Executive : CCO)
- Solent Stevedores, UK (Executive : Director)
- Associated British Ports, UK (Executive : Development Director)

### Years' experience

35 years

### Languages

English

### Expertise

M&A

Commercial Due Diligence

Market Studies

Feasibility Studies

Financing

Corporate Restructuring

Operations

# Resumes

Mihut Motrescu

Project Director



### Personal Profile

Mihut has a solid background in engineering infrastructure with wide international experience and cross-sector exposure. Good strategic appreciation and vision, able to build teams and implement sophisticated plans to support business needs. Self-driven and reliant, leading by example and through collaboration. Strong interpersonal skills to engage, motivate and lead through relentless change.

### Career History

6 years working as a design engineer in Southern Africa.

2 years in worldwide material procurement.

18 years in design, head of infrastructure and project manager for container terminal operator.

### Recent Project Experience

Responsible for planning and overseeing the early implementation/ramp-up phase of new, zero greenhouse emission, sea container terminals with investment/concession values of \$420m / \$2.7b. Concerned with establishing the business, creating the organization (business & technical), mapping the stakeholders, obtaining permits and licenses, scoping the technical assets (civil engineering, equipment, IT and automation) and procuring consultancy & advisory services.

In charge with all aspects concerning the engineering infrastructure of 8 multi-commodity, existing, sea and inland terminals. Transition from portfolio to centralized governance within a fluctuating market and regulated environment. Responsibilities included:

- Development of infrastructure strategy, standards, policies and tools covering technical, procurement, contracting, safety and business reporting
- Control of \$30-35mil. total annual budget
- Set-up of central team, functions and competencies unifying corporate procedures and terminal live operations
- Coordination of master development plans and major upgrade projects
- Deployment of ERP infrastructure module, capable to monitor asset condition, prioritize M&R needs, enable procurement and support finance.

Aggressive CAPEX adjustment without compromising service reliability & safety.

Oversaw the infrastructure needs of multi-commodity marine projects (ports and terminals, green/blue/brownfields, sea-river-inland, MDB-EPC-Dredgers).

Managed complex deliverables for public-private stakeholders and international finance institutions for tenders, concessions, and M&A transactions. Projects included Badagry mega-greenfield (Nigeria) and Ningbo-Zhousan super-port expansion (China)

### Education

M-Eng

### Professional Qualifications

MBA

### Years' experience

26 years

### Languages

Romanian

English

Dutch

Spanish

Russian

### Expertise

Project & Asset Management

Contract & Change Management

Business Development

Design & Engineering

### Publications

Five papers / articles

Rodrigo Tavares Paiva

Curriculum Vitae



### Personal Profile

Specialized in Infrastructure projects with large experience in business development, project management and market and feasibility studies. Has worked in projects in Latin America and North America for global and local companies such as Vale, Santos Brasil, CSN, and others. Has led seaports, airports, roads and shipyards projects with more than USD 2 billion capex.

### Career History

- MIND ESTUDOS E PROJETOS - Director - Business Development and port consulting leader
- LabTrans/UFSC - Ad Hoc Port Planning & Strategic Senior Consultant
- Halcrow do Brasil - Maritime Leader Brazil
- Planave S/A Estudos e Projetos de Engenharia - Manager of logistics and port consulting
- Wilson, Sons Group - Position: Project Coordinator
- Planave S/A Estudos e Projetos de Engenharia - Position: Project manager

### Project Experience

- Technical and financial evaluation of dry bulk cargo terminals in Ciudad Guayana - Venezuela;
- Elaboration of the Master Plan of Port of São Francisco do Sul in Santa Catarina/ Brazil
- Development of technical feasibility study for the operations of a river barges Transport Company in Paraná & Paraguay River. Products: soy, wood and mining products. Position: Coordinator
- Leasing process support, feasibility study and government relations support for cooper concentrate terminal in Maranhão/Brazil
- Development of the Basic engineering design: Heavyweight equipment and consumable inland terminals in Pará/Brazil
- Study of the port and maritime logistic evaluation for receiving operational raw materials and shipping finished products - Pará/Brazil and Saint John's/Canada;
- Management of the development of a Basic Engineering, Environmental Licenses & Government Relations Support of a Cellulose Seaport Terminal in Maranhão/Brazil

### Education

- Master's degree: Industrial Engineering - Transportation. PUC-RJ - 2006

- Post-graduation: Economic Engineering. UERJ - 2003

- Bachelor's degree: Economics. UFRJ - 2000

- Course: Finance Management FGV - 2001

- Post-graduation: Professor of Macroeconomics. UERJ - 2005

### Years' experience

20 years

### Expertise

Infrastructure Projects

Business Development

Project Management

Economics

Finance

### Languages

English

Portuguese

French

Spanish