

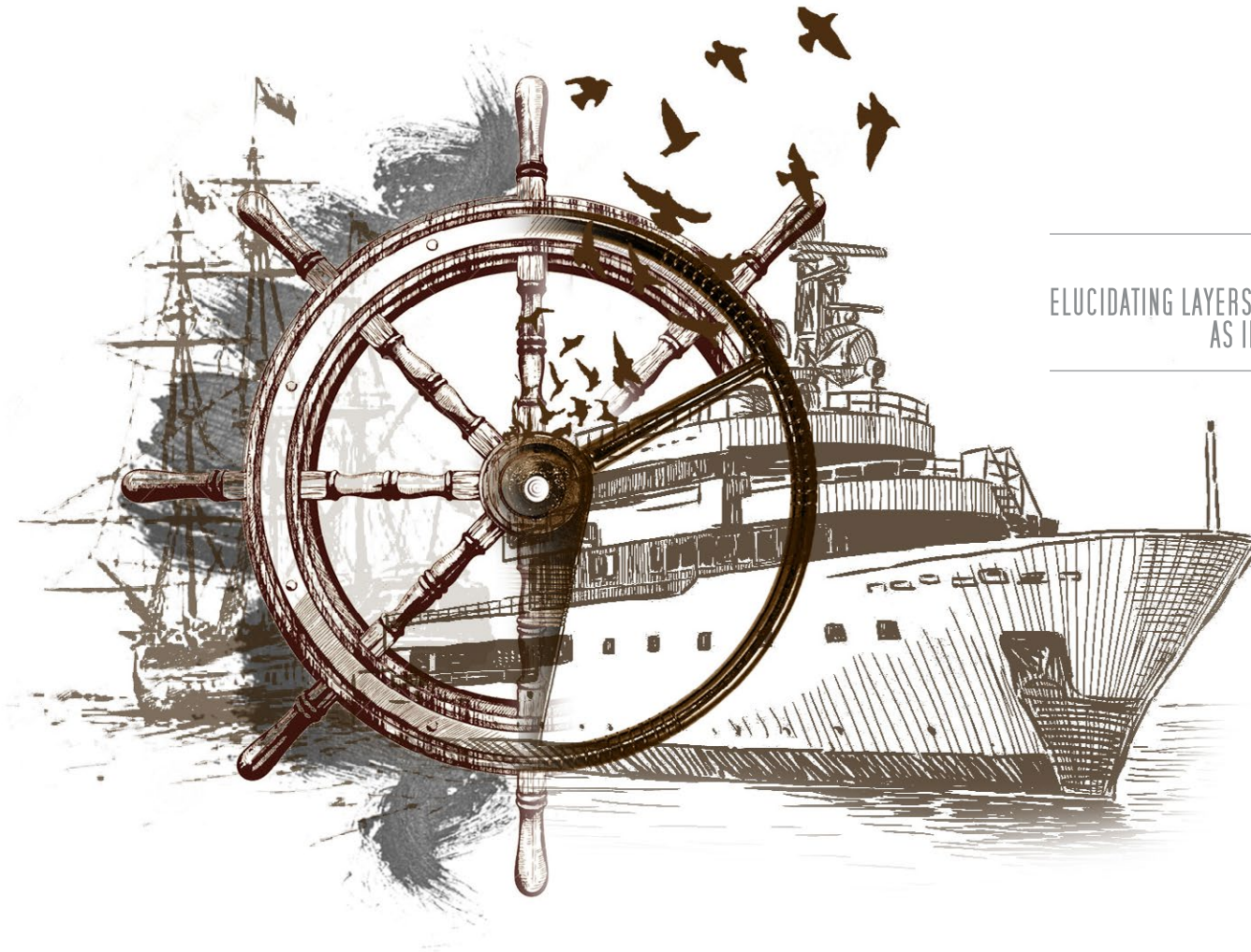
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FROM A SAILING CONVEY TO A DOCKED BREWERY:  
ELUCIDATING LAYERS OF TIME AND ADAPTABILITY USING THE SS NOMADIC  
AS IDEAL ARCHETYPE AND ROBINSON DRY DOCK AS HOST

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Submitted in partial fulfilment of the requirements for the degree  
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#### DECLARATION

In accordance with Regulation 4(e) of the General Regulations (G.57) for dissertations and theses, I declare that this thesis, which I hereby submit for the degree Master of Interior Architecture (Professional) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further state that no part of my thesis has already been, or is currently being, submitted for any such degree, diploma or other qualification.

I further declare that this thesis is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and list of references.

Armand Anton Meyer



## PROJECT SUMMARY

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FULL DISSERTATION TITLE:

From a sailing convey to a docked brewery: Elucidating layers of time and adaptability using the SS Nomadic as ideal archetype and Robinson dry dock as host.

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Master of Interior Architecture (Professional)

UNIVERSITY:

University of Pretoria  
Department of Architecture

FACULTY:

Faculty of Engineering, Built Environment  
and Information Technology

PROPOSED PROGRAMME:

Saltwater Desalination Craft Beer Microbrewery,  
Craft Market and Exhibition Space

LOCATION AND STRUCTURE:

Robinson Dry Dock, V&A Waterfront, Cape Town  
and Steamship (SS) Nomadic

RESEARCH FIELD:

Environmental Potential and  
Heritage and Cultural Landscapes



# APPRECIATIONS

---

- THANK YOU -

MY CREATOR

*for being the architect of all architects*

MOM, DAD & TWIN SISTER

*for your support, love and work ethic which inspired my foundations*

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*for your esteemed assistance, treasured defense and brilliant mentorship*

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*for your continuous encouragement and frequent phone calls*

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*for your valued friendship, keen interest and loving reassurance*

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*for your love, assistance and being*

LEANDRA & LEANI

*for we will always be the children of Professor Jekot*

## ESKERP

Ontelbare eeue het verby geseil sedert die mensdom 'n reismetode ontwikkel het wat hul in staat sou stel om uitgestrekte oseane, wat onontdekte kontinente verdeel, te verken. Soos opgeteken deur Le Corbusier, was hierdie lynbote beskou as 'n **kordaatstuk vir ingenieurswese in die 20ste eeu**, aangesien die ontwerp daarvan getuig van **toegeeflikheid en gasvryheid**. Omdat die gemiddelde leeftyd van 'n kommersiële boot 25 jaar is, het die skeepindustrie 'n punt bereik waar heelwat **skepe onaktief verklaar** is. As hierdie werktuie oorspronklik bedoel was om funksioneel sowel as aantreklik van aard te wees, waarom dit dan **reduseer tot 'n hoop skrootmetaal** as dit vir 'n ander **doel op land aangewend kan word?**

Ten einde so 'n poging te implementeer, moes 'n onaktiewe boot, tesame met 'n gepaste ligging vir die dok daarvan, voorgestel word. Die keuse van **Robinson Droogdok as gasheer** en die **SS Nomadic as inwoner**, laat ruimte vir 'n omgewings-vriendelike produk waarin die moontlikheid van **kleinhandel en fasiliteite vir vermaak**, voorkeur geniet. Teenoor die blote ingesteldheid van 'n **erfenis-aanslag**, is die **byvoeging van 'n nuwe laag voorgestel**, wat ruimte laat vir dit wat in die verlede gevestig is, sowel as

toekomstige byvoeging – dus 'n **palimpses van ontwerp** in terme van 'n programmatiese oplossing en **materialiteit**.

Soos wat die ruimtelike en strukturele formasie van werktuie hoofsaaklik afhanklik is van **staal** en die konstruksie van 'n dok uit **beton**, sal hierdie materiale deeglik en omvattend ondersoek word in terme van hul kwesbaarheid wat degradering betref. Voorgestelde maniere om hierdie materiale te ondersoek en te toets, sal **beskerming teen roes**, asook **historiese verval** en **doelbewuste oksidasie**-tegnieke insluit, wat moontlik die grondslag kan lê vir potensiële ontwerp implementering. Die uitkoms kan die idee bevorder dat **verval en agteruitgang kan bydra tot argitekturele verfraaiing**, eerder as om 'n blote entiteit vir intimidasie te wees. Hierdie idee word verder bevorder deur die 'n **mikro-brouery** by te voeg, wat die glorie van oudword beklemtoon.

Eerder as om skeepsloping en blote vernietiging voor te staan, sal **argitekturele verandering**, soos uiteen gesit deur Fred Scott in sy boek, *On Altering Architecture*, die skep van 'n ruimtelike ingryping toelaat wat **eerlik, nie-opdringerig en grondig** sal wees.

### KERNWOORDE:

Interieure Argitektuur, Robinson Droogdok, SS Nomadic, Lae, Palimpses, Materialiteit, Degradering, en Mikro-brouery



## ABSTRACT

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Countless centuries has sailed by since humanity first discovered the method of travelling across the far stretched oceans that divided undiscovered continents. As noted by Le Corbusier, these liners were deemed being an **engineering feat of the twentieth century**, as their design resembled an **epitome of indulgence and hospitality**. As the average lifespan of a commercial liner is **25 years**, the shipping industry is reaching a pinnacle point in time where countless **ships will be decommissioned**. As these vessels were originally built to be both **functional and appealing** in nature, why have them **reduced to hazardous scrap metal**, when they can be **repurposed on land**?

In order to physically implement such an interior endeavor, both a **decommissioned ship ideal in typology and status**, along with a suited **location for docking** was to be advocated. The selection of **Robinson Dry Dock as host** and the **SS Nomadic as habitant** allowed for the spatial intervention of a **retail-orientated and recreational facility** to be envisioned. As opposed to the mere institution of a heritage approach, the **appendage of a new layer** is proposed that will allow for **past recollection and future addition thereon** -

thus a **palimpsest of design** in terms of programmatic response and actual **materiality**.

As the spatial and structural formation of vessels primarily rely on **steel** and the construction of a dock on **concrete**, these materials will be probed comprehensively in standings of their **vulnerability to degradation**. Proposed avenues of material investigation permits **corrosion protection, historic decay preservation** and intentional oxidation techniques that can conceivably ground potential design implementations. The decisive spatial outcome aims to endorse the idea that **corrosion can act as a tool of architectural beautification**, rather than a mere entity of intimidation. This idea is heightened by the insertion of a **microbrewery** that factually exemplifies the splendor of aging.

Rather than promoting slavish **alternative shipbreaking approaches** and mere demolition practices, **layered architectural alteration**, as outlined by Fred Scott in his book, *On Altering Architecture*, will allow for the creation of a spatial intervention that is **honest, non-intrusive** and **profound**.

### KEYWORDS:

Interior Architecture, Robinson Dry Dock, SS Nomadic, Layers, Palimpsest, Materiality, Corrosion, and Microbrewery



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# INTRO DUCTION

*interior design afloat*



As an introduction, this chapter will announce all topics relating to the envisioned study. Avowing current conditions as background, a theoretical premises pertaining to interior architecture is proposed, alongside probable methodologies aspiring to resolve the acknowledged dispute.

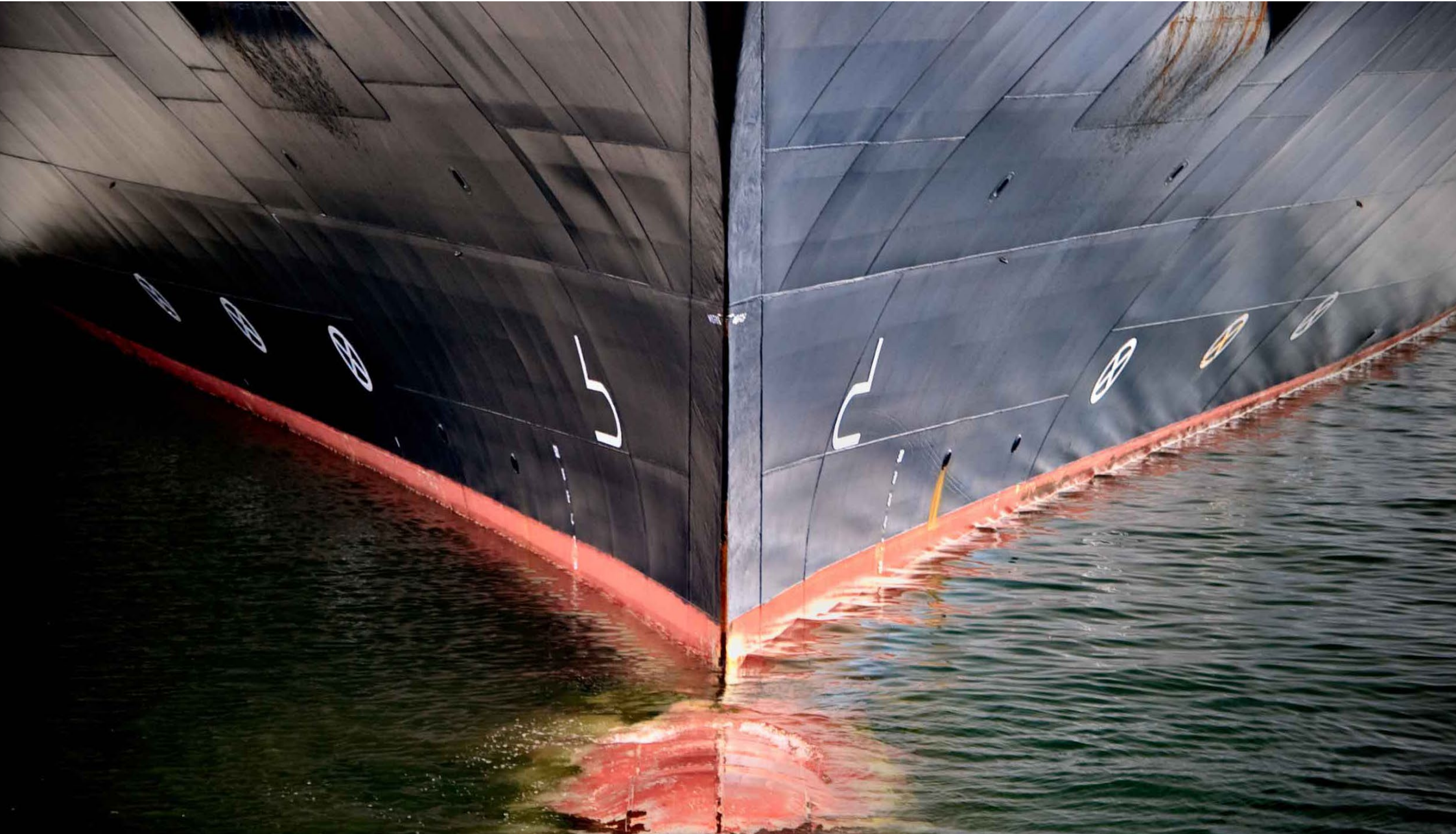


Figure 0.1. Ship's Bow (Lalizas, 2010)



## BACKGROUND

---

*"The steamship is the first stage in the realisation of a world organised according to the new spirit ..."*

Le Corbusier, 1987

Countless centuries has sailed by since humanity first discovered the method of travelling across the far stretched oceans that divided undiscovered continents. As noted by Le Corbusier (1987:95), these liners were deemed being an engineering feat of the twentieth century, as their **design resembled an epitome of indulgence and hospitality**. Providing conditions ideal for habitation, various scholars have marveled in a **ship's ability to be both functional and beautiful**, since the onset of modern naval engineering (Curtis, 1985:34). The notion of heterotopias pronounced by Foucault (1967:6) in his lecture, 'Of Other Spaces', supports this contemporary idea of oceanic occupancy. Considering a boat as being a **floating portion of space**, an **enclosed place** deprived of space that merely exists by itself, whilst simultaneously subjecting itself to the boundlessness of the sea, its utmost substitute remains imagination - a **heterotopia par excellence**.

As ocean liners are a **harmonious synthesis of communal and private space** of technology and design, of form and function, of machine and man, this opulent approach to design excellence was far from inclusive upon original intent (Curtis, 1985:34). Afore the age of mass passenger ocean voyages, ships were primarily **premeditated to transmit the optimum amount of cargo**, let alone reflecting on passengers **comfort and visual aesthetics**. "Therefore, the interior design of these ships was considered less important than their safety and speed" (Wealleans 2006:6). With the dawn of the **Industrial Revolution**, as ships progressed from **timber to steel** and **wind to steam**, emphasis was directed towards the innovation of extraordinary and **technological advancements** in all areas of leading transport – have it be human or object transference (Urry 1995:130). As the solitary method of continental transportation for its time, modernity allowed for the design of humane interiors aspiring to provide prime **comfort to the elite, similar to that of hotels on land**. This became a significant commercial aspect in charming passengers, as the number of passenger lines and liners grew during the second half of the twentieth century. Given the advancement in technology, ocean liners were finally **surpassed by the aeroplane** for long-distance commute. As noted by John Maxtone-Graham (1972:xiv) in his book, 'The Only Way to Cross', this paradigm shift in conveyance allowed for cruising to become an **act of mere leisure**, as opposed to an earlier

necessity. Moreover, this shift in primary utilisation highlighted post-modern maritime architecture where **sea-consciousness became a key commercial feature**, whereas prior modern naval design aspired to create a land-like familiarity oblivious to the sea (Wealleans 2006:54).

Regardless of its necessity, **the production of these luxury liners continued to flourish, reaching a pinnacle point during the late twentieth century**. As the average lifespan of a commercial liner is 25 years, based on statistics provided by the Commission of the European Communities during 1991, the shipping industry are reaching a point in time where **countless ships will be decommissioned** (CEC, 2011:19). As the regulations for the demolition of vessels are subjected to various policies set out between numerous authorities and industry organisations, the essential emphasis is placed on monetary gain, as opposed to **environmental consciousness** (Stuer-Lauridsen et al, 2003: 31). The act of recycling decommissioned vessels, known as ship breaking, is widely associated with a range of **destructive outcomes** in terms of its impact on the **immediate environment** and **work-related wellbeing and protection** of its labourers. Deplorably, the disposal of liners at the conclusion of "their economic lifecycle has excessive worth for the continual regeneration of the merchant marine fleet industry" (White and Molloy, 2001:6) and for justifiable growth and expansion thereof (Sundelin, 2008:9). In addition to ship breaking, Hess and Rushworth (2001:35) have identified three **additional methods of disposal**, namely **long-term storage, overseas recycling and reefing**.

As a global inclination in architecture, spatial designers are encouraged to **promote sustainable practices**. During the last decade, the alteration of existing structures for building **reuse and adaptation, as opposed to mere demolition**, has become a cumulative trend (Ball, 2002:95). With a wide acceptance thereof within the building environment, this study aims to investigate the feasibility of **adaptive reuse** through the **conversion of oceanic vessel into land-manipulated interiors** - thus aspiring to adjoin a **fourth alternative to the utilisation of decommissioned liners**. Realignment this with an actual spatial intervention, the original design and intent of ocean liners as heterotopian spaces will prove vital in the selection of a suitable pragmatic response. The ultimate conversion of

these decommissioned ships as a structural whole into a **retail orientated typology** is envisioned, seeing that their heterotopian intent was to be spaces of free time and economic, social, cultural and political activity, as argued by Dehaene and De Cautier (2008:55). In order to ground this study theory-wise, the investigation aims to survey the actual **materiality associated with naval design**.

As the spatial and structural formation of vessels **primarily rely on steel and the construction of a dock on concrete**, these materials will be probed comprehensively in standings of their **vulnerability to corrosion**. The materialisation thereof will prove vital when suggesting an alternative utilisation for ships and the induction of **oxidisation as a form of beautification**. As naval architecture is in dire need of **alternative solutions to the disposal and recycling of decommissioned ocean liners**, this proposed topic pertains to essential avenues for possible explorations within the field of Interior Architecture.



Figure 0.2. History of Sea Voyage as Depicted by Advertisements (Author,2016)

0.1

## PROBLEM STATEMENT AND SUB-QUESTIONS

Against the preceding introduction and background, it appears as if there might be a reason for the built environment to introduce an **alternative use for decommissioned vessels**.

As opposed to conventional shipbreaking techniques, can the application of **intentional corrosion act as a tool of interior beautification**, thus transforming a decommissioned oceanic vessel into a land-used retail typology?

### - PROBLEM STATEMENT -



AS THE AVERAGE  
LIFESPAN OF A COMMERCIAL LINER IS

**25 YEARS,**

THE SHIPPING INDUSTRY IS REACHING A POINT IN TIME  
WHERE COUNTLESS SHIPS WILL BE DECOMMISSIONED  
(CEC, 2011: 19)

AS THESE VESSELS WERE ORIGINALLY BUILT TO BE BOTH

**FUNCTIONAL & APPEALING**

IN NATURE,

WHY HAVE THEM BE REDUCED TO HAZARDOUS  
SCRAP METAL, WHEN THEY CAN BE

**REPURPOSED ON LAND?**

### - SUB RESEARCH QUESTIONS -

*What has been reported on the pressing issue of shipbreaking? Could revolutionary methods of metal recycling alleviate the need thereof in addition to land-repurposing?*

*How can the induction of revolutionary steel and concrete materials be seamlessly employed alongside safeguarded corrosion to balance aesthetical and structural feasibility?*

*Can the incorporation of intentional corrosion be naturally introduced, monitored and halted without the creation of structural and unsanitary impairments?*

*How are the material properties associated with steel and concrete deterioration influenced by the rising height in sea-level both inland and along the coast?*

THE  
**INTERIOR APPLICATION**  
OF  
**INTENTIONAL CORROSION BEAUTIFICATION**

0.2

PURPOSE AND OBJECTIVES  
OF THIS STUDY

As interior design is primarily associated with the **production of interior spaces**, it can be argued that an interior space is not merely an empty volume waiting to be filled, but rather any **product that cannot be separated from human activity** (Lefebvre, 1991:135). As the product is affected by and affecting the activity itself, the envisioned spatial intervention aims to **produce a product of the everyday that is constantly producing experiences**. As opposed to the actual limitation of these interior experiences, based on structural capabilities, this study advocates the role of an **interior designer within a context generally associated with nautical engineering**.

The intention of the study is to provide a possible solution to the pressing matter of ship recycling methodologies presently employed nationwide. Regardless of its ecological penalties, "currently the global shipping industry relies on **developing countries to dispose of decommissioned ships** through the process of ship recycling" (Rousmaniere, 2007:359). Although this service is not directly conducted on native soil, the **implications thereof proffer the future possibility of international environmental devastation** (Chang et al, 2010:1391). Furthermore, South Africa accounts for a growing average of **1.7% to the total cruise-ship industry utilisation** on a yearly basis, thus contributing towards this international dilemma (Stuer-Lauridsen et al, 2003:15).

The ultimate reasoning for the conducted research is to provide a solid foundation onto which the proposed design can be visually implemented within the built environment. The proposed response of **converting these vessels** due for recycling into retail oriented facilities, will allow for a contemporary method to ship disposal. As this is a relatively novel field of research, the benefits in terms of the accumulated research will be highly beneficial in order to support future prospective students within the field of interior architecture.

CORROSION OF MATERIALS

main material associated with a dock (host) and a ship (habitant)



Figure 0.3. Theory Objectives (Author, 2016)

## 0.3 DEMARCATION

The intention of the research is to provide a **possible solution** to the pressing matter of **ship recycling methodologies** presently employed nationwide, regardless of its **ecological penalties**.

### - TARGET GROUP -

According to Kotler (2004:n.p.), one can subordinate two forms of market segmentation categories within the target audience of retail and hospitality - **causal base and descriptive base**. The causal segmentation includes self-concept, attitude or preference or perceptions, benefits and usage situation, whereas the demographic segmentation uses demographic, socio-economic, geographic, personality, lifestyle, product usage and brand loyalty as the characteristic to attract intended audience. The **balanced combination** between these two segmentations is essential in order to ensure viable and **continuous public interactivity** (Lee Hew & Fairhurst, 2000:20).

### - TOPICAL DIFFERENTIATION -

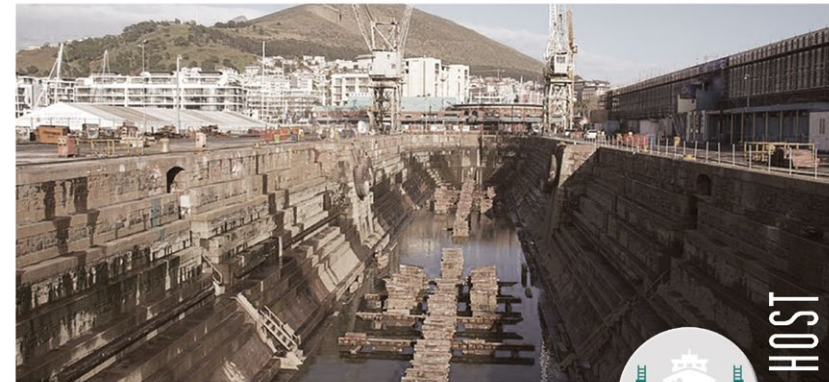
Associated topics to be covered includes a brief introduction to **interior design afloat**, followed by **ship recycling** and **adaptive reuse probabilities**, grounded by the theory of **materiality and corrosion**.

### - DISCIPLINE DIFFERENTIATION -

The proposed findings aim to contribute primarily towards the subject of **Interior Architecture** within the field of **Environmental Potential**, and secondly towards the discipline of **Naval Engineering**.

### - GEOGRAPHICAL LOCATION -

In order to implement the proposed theory, a locality worthy of spatial intervention must be identified. In order to physically implement and execute such an interior endeavour, both a **decommissioned ship (habitant)** due for recycling and a proposed **location for docking (host)** must be advocated (Figure 0.4).



HOST



CONTRACTED BY: Governor Sir Hercules Robinson  
LOCALITY: Sea Point, Cape Town, South Africa  
DOCK TYPE: Dry Dock  
YEAR OF COMPLETION: 1882  
OVERALL DIMENSIONS: 153m (Length) by 27m (Width)

ROBINSON DRY DOCK



HABITANT



CONTRACTED BY: White Star Line  
SHIPYARD: Harland and Wolff, Belfast, Northern Ireland  
SHIP TYPE: Tender Ship  
YEAR OF COMPLETION: 1911  
OVERALL DIMENSIONS: 70m (Length) by 11m (Width)

STEAMSHIP NOMADIC

Figure 0.4. Proposed Host and Habitant (Author, 2016)

## 0.4

### SCOPE AND LIMITATIONS

---

As this is a relatively **novel field** within the architectural realm, demarcated outcomes and clear boundaries must be set in order to prevent this study from becoming too broad and/or unresolved. Though naval engineering will form a fundamental part in the development of the study, the focus remains on the architectural conversion of the interior design of vessels into a **retail facility that adheres to the South-African building regulations and standards.**

As literature on this topic is limited, various articles pertaining to related topics will have to be connected in order to be of any value. These include disciplines relating to **naval design and metallurgical engineering.** As most historical ocean liners of an appropriate scale has either been scrapped or are still in working condition, the availability of suitable vessels for possible adaptive reuse are limited. Apart from relevant literature and implementation possibilities, the retrieval of actual engineering drawings might prove challenging, as most original blueprints are either deteriorating, illegible, unavailable, or redundant due to their outdated drawing conventions. Likewise, the geographical location of the ship might also prove problematic, as investigation will primarily occur via long distance interpretation, thus needing **comprehensive prior explorations** to realise the interiority.

As for any architectural limitations, given the exact shape and size of an oceanic vessel's hull, it might prove problematic in terms of **volume, light distribution and acoustics.** These factors however will not be regarded as being closing restrictions, but rather as **opportunities for inventive design solutions.**

## 0.5

### DELIMITATIONS AND ASSUMPTIONS

---

Apart from the previously identified scope and limitations (section 0.4), seeing that this study is aligned within the field of **environmental potential**, actual historical naval research will be limited. Attention will be directed away from the development of interior design afloat, and guided towards the **adaptive reuse of decommissioned vessels.** Material investigation will also be limited to the specific **materials identified as being most dominant within naval architecture.** In addition to the investigated theory, the actual interior design **will be restricted to a selected area**, with hypothetical suggestions for additional programs in the remaining areas only to be declared.

Moreover, in addition to the above delimitations, the following will be assumed in order to render the intended spatial intervention feasible and probable:

- The Nomadic Preservation Society (current owner of the SS Nomadic) will allow for the intervention to occur as they have been in search for a **reputable elucidation for the ship's revitalisation.**
- The SS Nomadic has been **restored completely to its original state**, with the distinct **exception of the boiler room's machinery**, which had been removed upon its last transit. The restoration will allow for **hull stability and spatial intervention** to occur.
- Future planning and funding to the restoration of Robinson Dock as an operational berth has been suspended. As aligned with the urban vision of Cape Town for 2020, the **area has been declared as location in need of alternative interpolation.**

## 0.6

# RESEARCH DESIGN AND METHODOLOGY

Subsequently, upon studying **qualitative research** methodologies, one comes across various research methods such as action research, precedent investigation, ethnography, experimental research, and historical research that one can utilise in order to commence with an empirical investigation (Leedy & Ormrod, 2014; Pickard, 2013; Struwig & Stead, 2001). Moreover, Pickard (2013:97) points out that the choice of method relies on an amount of dynamics that include the **purpose of the study, audience, resources and time constraints**. For the resolution of this study, a **precedent and literature research methodology** will be employed in order to provide a holistic overview to the availability of limited publications arranged to provide an in-depth knowledge gain, pertaining unambiguously to the previously identified research questions.

According to Yin (2013:16), a case study refers to the “empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used”. Moreover, three assortments of precedent methodologies are envisioned in order to acquire all obligatory information needed in order to eliminate any discrepancies (Pickard, 2013:102; Stake, 1994: 237). Firstly an **intrinsic case study** will be conducted. This includes the **familiarisation of all relevant literature** leading up to the desired outcome. As interior architecture and naval engineering forms the basis of this study, historic publications thereof will be investigated. The second form of precedent investigation allows for **instrumental case study**. Here the investigation is directed towards **marvels and theories more directly associated with the research topic itself**. This will primarily include literature that investigates ship breaking as an enabler of ecological degradation. The final subcategory of qualitative precedent studies, are reserved for **collective data** belonging to the descriptive study that investigates **direct implementation strategies**.

In this phase, possible passenger liners up for adaptive reuse will be scrutinised, along with conceivable perpetual dry-docking solutions.

Furthermore, in addition to the qualitative method of researching precedents, **historical and correlational research** will also be conducted in order to ground the theoretical approach of **materiality**. Evaluating and comparing these findings based on their **context** (sea vs. land), **discipline** (architecture vs. interior design) and **timeframe** (industrial design vs. modern design) will allow for the correlation, or lack thereof, between variables to occur. This combined methodology is illustrated diagrammatically in figure 0.5.



Figure 0.5. Research Methodology (Author, 2016)

## 0.7 LITERATURE ANALYSIS

---

As accredited literature hosts a prominent part within the fundamental exploration towards the feasibility of this projected topic of research, the attained information will also prove informative when attempting to spatially implement the proposed intervention. Although some literature will not directly influence the primary investigation of materiality, the knowledge thereof will prove fundamental. Here follows a range of selective literature seeking to enrich, direct and authorise this investigation:

- Literature relating to the history of architectural materials,
- Literature relating to the history of interior design afloat,
- Literature relating to naval engineering and,
- Literature relating to ship recycling and shipbreaking.

### - LITERATURE RELATING TO THE HISTORY OF ARCHITECTURAL MATERIALS -

As the primary basis for investigation, all literature pertaining to the historical development of materials will be investigated. In order to articulate the future probabilities of how revolutionary material application can be conjoined within the actual envisioned design intervention, **materials associated with naval design (steel, timber and glass)** must be explored systematically. Providing a clear historical background of the selected materials, 'Constructing Architecture' by Andrea Deplazes, will provide a foundation onto which additional literature can deliver insight of how **materials are shaped, joined and applied**. In conjunction with these past and present technologies, additional levels of investigation (sea vs. land and/or interior vs. exterior) can be affixed to deepen the investigation. Ultimately this investigation aspires to deliver regulation as to the innovative methods in which **current materials** on site can be reintroduced, or newly announced materials can be considered to enhance the overall interiority of the proposed spatial mediation.

### - LITERATURE RELATING TO THE HISTORY OF INTERIOR DESIGN AFLOAT -

It has been noted that general publication focusing on interior architecture within the maritime environment has the distinct tendency to celebrate the image of glamorous travel, on a trajectory of innovation regarded within the representations of technological determinism. As accredited literature are very limited on the topic, those available that situate themselves unambiguously within the developing discipline of **naval interior architecture**, will prove to be of high assessment. 'The Nautilus and the Drunken Boat', a primary source of literature to acknowledge the association between a **ship's interiors and conventional interior architecture**, argues that a ship is a habitat before being a mere means of transport (Barthes, 1973:66). This notion is further supported by later publications of Miller (1985:12) and Brinnin (1982:47) which poses the fact that a passenger liner should be appreciated for its interior luxury, as opposed to its mere construction and technical details. In addition to these earlier publications, a more recent book by Anne Wealleans (2006:1), '*Designing Liners: A History of Interior Design Afloat*', allows for in-depth investigation into the developing field of interior design which contemplates the effort of the spatial designers within the settings of national identities, modernity and social class. As for the **physical design**, the seven architectural attributes which constitutes the interior design elements onboard a cruise ship along with its strict adherence to the standards as set out by the Convention and the International Maritime Organization, must be appreciated in order to provide typology conversion (Byun, 2006:5). Furthermore, additional literature pertaining to the idea that maritime design played a profound role in the development of interiors on land, will be investigated in order to assert to the viability of **converting decommissioned oceanic vessels into land-used structures**.



### - LITERATURE RELATING TO NAVAL ENGINEERING -

In order to fully **comprehend and utilise the provided structural amenities of a decommissioned liner**, it is essential that the fundamentals to **marine engineering be investigated**. As with whichever diverse field of study, there are a number of particulars to be taken into account when attempting such an endeavour. An 'Introduction to Naval Architecture' concentrates explicitly on the fundamental characteristics of a ship's design (Tupper, 1996:3). In addition to this, the before mentioned publication highlights the clear nautical comprehension engineers and architects should possess along with the **distinct origin**, development and means of implementation bounded by these principles. Regardless of the fact that no significant structural amendments are envisioned for the exterior of the pre-identified vessel, the implications of interior modification to the structure must be probed (Partington, 1826:26). Moreover, the wide arrange of prior studies conducted on the actual interiority of oceanic vessels, specifically cruising yachts, will provide additional **understanding to the materiality** thereof. As a wide array of challenges associated with the internal spaces of such **typologies** will be evident, a variation of approaches to the **adoption of suitable solutions** will be verified in order to provide ultimate comfort. A design that is humble, respectable and pleasing can be trying to quantify. Following proposed principles, these characteristics can be assessed using comfort as a tool of measuring physical space, ergonomics and visual space (Payne & Siohan, 2008:1).

### - LITERATURE RELATING TO SHIP RECYCLING AND SHIPBREAKING -

Recent studies have indicated that the **maritime industry is reaching a highpoint in the disposal of decommissioned ocean-going vessels** which has grasped the end of their economic life cycle (Studier, 2008:8). Seeing that the act of leisure cruises is regarded as being the "most important link in the world manufacturers' global logistical chain" (Chang et al,

2010:1390), the **trade of shipbreaking remains viable**, regardless of the admitted datum that it is also **negatively impacting the marine environment**. As the demand for contemporary, more sumptuous and capacity bearing vessels increase, the need in addition for marginal reconditioning methods also escalates. Due to the hazardous derivatives produced as a result from conventional shipbreaking, countless scholars have devoted their studies towards more biological and ecological responsive tactics. Currently there are four main methods of disposal (Hess et al, 2001:35), allowing for the built environment to produce input. Though scarcely mentioned that ships in their entity could pose incentive for **land used conversion, the adaptive reuse of shipping containers have shown a growing interest**, allowing possible implementation campaigns with similar outcomes in the vessel industry. John Smith (2005:11) mentions in his article entitled, 'Shipping Containers as Building Components', that the initial inclination towards containers as a sustainable alternative proved to be far more challenging to fully ordain than originally anticipated. However, as the outcome proved to be highly feasible, its reluctant initiation was soon forgotten, as can the negativity surrounding ship conversion. In addition to this alternative proposition, a vibrant examination into the shipbreaking industry will provide understandings to the considerations made before deeming a vessel suitable for public vending, as well as where and in what way the scrapping ensues.

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Respectively, this chapter endeavoured to present the significant value for further investigation within the field of interior and naval architecture, unambiguously leveling to introduce an **alternative method of ship disposal**, alleviating environmental discomfort and amplifying the abilities of an interior designer.

