

**UPGRADE AND DEEPENING OF THE MAYDON WHARF PRECINCT
BERTHS 5 TO 11 AND 15, PORT OF DURBAN
MARITIME ARCHAEOLOGICAL IMPACT ASSESSMENT**

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GLOSSARY

Archaeology: the scientific study of aspects of the human past, primarily through material evidence

Artefact: an object used or produced by people

Chart Datum Point (CD): datum point to which other measurements are related

DFFE: Department of Forestry, Fisheries and the Environment

EA: Environmental Authorisation

Excavation: the practice of documenting, uncovering and recovering of artefacts and finds, together with associated information

Field work: the tasks that are carried out in the field and that include both non-intrusive surveys and excavation

Find: an artefact or other physical trace that provides evidence for past human activities

Geophysical techniques: the various techniques that allow for the scanning and/or analysis of sediments and deposits

Historical archaeology: the archaeology of historical periods that may also include the use of documentary evidence

Magnetometer: an instrument that detects disturbances of the earth's magnetic field

Marine archaeology: the practice of excavating archaeological sites in the sea

Maritime archaeology: the scientific study of people's past relations to the sea through surviving material evidence and all available additional evidence of whatever nature

Material culture: physical evidence of past human activity, mostly in the form of artefacts

NHRA: National Heritage Resources Act

Non-intrusive survey: a survey of an area or site without disturbing its context or any finds contained therein

SAHRA: South African Heritage Resources Agency

Side-scan sonar: a specific type of sonar that records the topography of the sea bed

Site: a place where archaeological material is deposited

Site information: all data that can be gained from the study of a site. These may relate to spatial information pertaining to artefacts and finds, stratigraphy, sedimentology, etc.

Stratigraphy: the sequence of different layers of geological or cultural (i.e. man-made) material

Sub-bottom profiling: a technique that allows for the scanning of deposits and stratigraphies

TNPA: Transnet National Ports Authority

Summary

In August 2023, WSP commissioned the author to undertake a specialist study in maritime archaeology on behalf of Transnet National Port Authority (TNPA), Port of Durban. The study area comprised the Maydon Wharf precinct. The study area is located in an intensively used operational area of critical importance to the port. Due to a lack of depth for the accommodation of modern-day vessels, the berthing facilities need to be deepened. Existing berths also need to be repaired and upgraded, to accommodate current requirements. The most important aspects of the proposed development comprise of:

- deepening of berths 5 to 11 and 15 to 14.5m below Chart Datum (CD); and
- upgrading of these berths.

Dredging is going to be undertaken in the area. The dredged material will either be used as backfill in the harbour area or transported outside the port perimeter. To safeguard any heritage resources that may be present in the area, a Phase 1 survey (i.e. a desk top study) was undertaken. This report includes:

- the terms of reference for the study;
- an overview of relevant legislation;
- a description of the site;
- the research methodology that was followed; as well as
- the research results.

These results indicate that the available information pertaining to cultural heritage resources and specifically maritime archaeological resources is restricted to berth structures, anchorage debris, and shipwrecks. Although some 102 vessels foundered in the greater Durban area during the period 1685-1991 only very few, if any, of these wrecks potentially ended up near the specific area of interest. No specific indicators for other cultural resources were found. To accommodate for the possible discovery and exposure of heritage resources, however, this report also includes detailed recommendations for mitigation.

Impact statement.

The results of the Maritime Archaeological Impact Assessment can be tabulated as follows:

Potential impacts on heritage resources	<ul style="list-style-type: none"> - dredging - re-deposition of dredged deposits - repair / upgrading of berths
Potential consequences of impacts	<ul style="list-style-type: none"> - exposure of heritage resources - displacement - destruction of contextual information - damage to or destruction of finds
Significance of potential impacts	Anchorage debris - low Berth structures - low Shipwrecks - medium
Intensity of potential impacts	High
Probability factor, or the likelihood of impacts occurring	Low / minimal
Extent of impacts	Local
Duration of impacts	Long term / permanent
Confidence based on reliability of available information and predictability	High

It can thus be concluded that the potential consequences of the impact on cultural heritage resources and specifically maritime archaeological resources do not warrant modification or postponement of the construction work that is being planned, and that development may continue.

1. Study objectives and terms of reference

1.1. Study objectives

The general objectives of this study include the following:

- 1- To identify and indicate the different types of maritime archaeological / underwater cultural resources that potentially may be expected in the Maydon Wharf precinct;
- 2- To formulate principles and guidelines for their assessment and management;
- 3- To indicate general requirements and to provide practical advice for the protection of cultural material that may be uncovered potentially by the proposed development.

1.2. Terms of reference

The terms of reference of this study include the following:

- 1- To undertake a desktop study with the purpose of gathering data regarding the recorded or assumed occurrence and distribution of marine and maritime cultural resources / sites and artefacts within the study area. This study should include archival and literature research. The desktop study must in addition include a review of previous heritage, marine, and maritime archaeology investigations undertaken in the area, where relevant.
- 2- Review legal requirements in terms of heritage legislation relevant to the proposed development.
- 3- Provide a detailed description of the underwater and maritime cultural resource in the area of interest, if documented during the Phase 1 site survey, that could be affected by the proposed project.
- 4- Identify potential maritime archaeological issues related to the proposed project.
- 5- Identify and assess the significance of the likely impacts (i.e. direct, indirect and cumulative) of the proposed project on heritage, cultural and / or archaeological resources / sites.
- 6- Consult with the South African Heritage Resources Agency (SAHRA) to confirm the approach and findings of the review as well as compliance with relevant heritage legislation.
- 7- Make recommendations on the protection and management of any significant cultural, heritage and / or archaeological sites that may occur within the study site.
- 8- Provide recommendations for any ongoing monitoring that may be necessary for all phases of the project life-cycle (i.e. planning, construction, operation, and decommissioning phases).
- 9- Identify practicable mitigation measures to reduce negative impacts and enhance positive impacts on heritage, cultural, and archaeological resources and indicate how such measures can be implemented for the various phases of the project life-cycle (i.e. planning, construction, and operational phases). The mitigation measures as proposed should be included in the project Environmental Management Programme.

- 10- Provide guidance on any permitting or any other relevant requirements that may be necessitated by the SAHRA, the National Heritage Resources Act (Act nr. 25 of 1999), or any other relevant regulations and / or by-laws.
- 11- Conform to any relevant guidelines for specialist studies applicable to this study. The marine archaeology study will be conducted in terms of the National Heritage Resources Act, Act nr. 25 of 1999, Section 38 Heritage resources management.¹

The following components will need to be addressed in the study.

- An introduction to the study;
- Description of the study methodology;
- Legislative review;
- A detailed description of the sites / resources of heritage, cultural, and archaeological significance identified during the desktop study;
- A description of the potential impacts and an assessment into the significance of such impacts associated with the proposed project on heritage, cultural, and archaeological resources identified within the study area;
- Any assumptions, limitations, and / or constraints associated with the study;
- Detailed guideline measures to manage and mitigate the impacts identified for all phases of the project but in particular the construction phase;
- Recommendations and conclusions of the study. This section must include an impact statement which summarizes all significant impacts identified and the best environmental practicable development option;
- Determine the nature, the extent and the significance of these artefacts or heritage resources;
- Determine whether any heritage resources will be affected by the proposed development and to what extent;
- Identify all potential impacts of construction and operational phases of the proposed development on heritage or archaeological resources, with and without mitigation;
- Define and present mitigation measures to reduce any negative impacts on areas of heritage significance and enhance potential positive impacts;
- Define and delineate appropriate mitigation measures if any heritage resources are identified as possibly affected by the development.

¹ Similar terms of reference were previously applied for the *Specialist study in Maritime Archaeology combined Scoping and Impact Report for the extension of the existing tug jetty, construction of the new tug jetty, and dredging operations in the small crafts basin, Port of Durban*. See: Werz 2013, pp. 7-9.

2. Legislative framework

The South African legislative system includes several acts that are relevant to the protection of archaeological sites, both on land and underwater. Although most of these acts were not formulated with this specific purpose in mind, they contain some clauses and conditions that regulate aspects of management and control. In addition to this, further regulations and conditions have been formulated by the government department that is involved specifically in the management of sites with a palaeontological, archaeological, heritage or cultural importance: the South African Heritage Resources Agency (SAHRA).

Relevant legislation that touches on or incorporates submerged archaeological sites is described in the following acts:

- the *Sea Shore Act*, No. 21 of 1935 (as amended);
- the *Merchant Shipping Act*, No. 57 of 1951 (as amended);
- the *Customs and Excise Act*, No. 91 of 1964;
- the *Legal Succession to the South African Transport Services Act*, No. 9 of 1989;
- the *National Environmental Management Act*, No. 107 of 1998;
- the *National Heritage Resources Act*, No. 25 of 1999.

Of these, the first four mainly deal with shipwrecks and their contents, either *in situ* or dispersed, or those areas where wrecks have been deposited without specific reference to their age or the cultural and historical-archaeological values of such remains. On the other hand, the *National Environmental Management Act* acknowledges values that can be attributed to cultural heritage. Its principles include: "...that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied", and: "...that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions".² The Act also states that one of the general objectives of integrated environmental management is to: "...identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage (...) with a view to minimizing negative impacts ...".³ The *National Heritage Resources Act*, which will be discussed in more detail hereafter, specifically acknowledges cultural heritage and historical values and includes detailed regulations in this regard. As a result, certain provisions concerning wrecks and salvage activities remain in force side by side, creating a somewhat complicated situation.⁴

The territory that is covered by the various acts is described in the *Sea Shore Act*, No. 21 of 1935 (as amended). In this Act, the 'sea' is defined as the water and bed of the sea below the low water mark

² *National Environmental Management Act*, No. 107 of 1998, (2) (4) (a) (iii); (2) (4) (a) (vii).

³ *Ibid.*, 23 (2) (b)

⁴ Van Meurs 1985, *Legal aspects of marine archaeological research*, p. 63.

and within the territorial waters of the Republic, including the water and bed of any tidal river and of any tidal lagoon. The 'sea shore' is the water and the land between low water mark and high water mark. The 'territorial waters' are defined in the *Territorial Waters Act*, No. 87 of 1963, and the *Territorial Waters Amendment Act*, No. 98 of 1977, as the water and the bed of the sea within a distance of twelve nautical miles from low water mark.⁵

Within this area, a variety of archaeological sites can be found, the largest identified category of which consists of shipwrecks. In a legal context, as described in the *Merchant Shipping Act*, No. 57 (as amended), the term 'wreck' relates to any portion of a ship or aircraft lost, abandoned, stranded or in distress, any portion of the cargo, stores or equipment of such ship or aircraft and any portion of the personal property on board such ship or aircraft when it was lost, abandoned, stranded or in distress and belonged to any person who was on board that ship or aircraft at that time. This also includes flotsam, jetsam, lagan, and derelict remains from wrecks found in or on the shores of the sea or of any tidal waters of the Republic. In this context, 'flotsam' relates to goods which float on the sea when a ship or aircraft has perished, 'jetsam' relates to goods which have been cast into the sea to lighten a vessel which is in danger of sinking, while 'lagan' relates to goods cast into the sea before a vessel has perished, which goods have been tied to a buoy or cork to prevent them from sinking. It is interesting to note that flotsam, jetsam and lagan are only referred to as 'wreck' the moment they are washed ashore.⁶ Based on this definition it will be clear that the *Merchant Shipping Act* can relate to contemporary as well as historical wrecks. Although in most cases only relevant to relatively recent maritime incidents, Section 299 (2) of the Act indicates that: "No person shall (b) secrete any wreck, or deface or obliterate any marks thereon; or (c) wrongfully carry away or remove any wreck". This section is certainly of relevance to historical wrecks as well.⁷

'Wreck' is also defined by Section 112 (1) of the *Customs and Excise Act*, No. 91 of 1964. The definition used here is similar to the one described in the *Merchant Shipping Act* and reads: "... 'wreck' includes (a) flotsam, jetsam and lagan; (b) any portion of a ship lost, abandoned or stranded or of the cargo, stores or equipment thereof or any article thereon; and (c) any portion of an aircraft which has been wrecked or abandoned or of the cargo, stores or equipment thereof or any other article thereon."⁸

The *National Heritage Resources Act* (NHRA), No. 25 of 1999 defines 'wreck' as: "... being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic, as defined respectively in sections 3, 4 and 6 of the *Maritime Zones Act*, No. 15 of 1994, and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy

⁵ Van Meurs 1985, *Legal aspects*, pp. 63-64.

⁶ *Ibid.*, p. 64; *Merchant Shipping Act*, No. 57 of 1951 (as amended), Section 2.

⁷ *Ibid.*, p. 64-65; *Ibid.*

⁸ *Customs and Excise Act*, No. 91 of 1964, Section 112 (1); Van Meurs 1985, *Legal aspects*, p. 65.

of conservation”.⁹ The definition of “heritage objects” is also important in this regard. Heritage objects include: an object or collection of objects, or a type of object or list of objects, whether specific or generic, that is part of the national estate and the export of which SAHRA deems it necessary to control, may be declared a heritage object, including (...) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, meteorites and rare geological specimens.¹⁰

The right to interfere with, to salvage, remove or manage and protect wrecks is vested in different authorities depending on their individual tasks, as well as the circumstances surrounding a specific wreck, such as position, condition and age. In this respect, relevant authorities can also transfer certain rights, tasks and duties to private companies and individuals. To indicate where different responsibilities lie, reference can be made to various acts. According to the *Legal Succession to the South African Transport Services Act*, a division of the company which took over responsibility from the South African Transport Services in 1989, Portnet, now the Transnet National Ports Authority (TNPA), holds jurisdiction over the harbours. The TNPA is empowered to raise, remove or destroy any sunken, stranded or abandoned ship or wreck within the area of its jurisdiction which includes all port and harbour areas as defined by specified boundaries.¹¹

Furthermore, no one may break up any wreck, hulk or ship in a harbour without the permission of the port captain in charge.¹² The power to deal with wrecks and strandings in territorial waters outside the harbour areas, when a wreck proves to be a danger to navigation, is vested with the Minister of Transport.¹³ It should be noted, however, that the sea and sea-shore outside any port or harbour area fall under the Department of Environmental Affairs and Tourism and are thus under the control of the Minister of Environmental Affairs and Tourism.¹⁴

The Transnet National Ports Authority can order the owner or master of a wreck which proves a danger to navigation to remove or destroy such wreck. If the owner or master is not traceable or not in a position to follow such an order, the company can remove or destroy obstructions i.e. wrecks themselves or by using the services of salvage companies or other outside bodies. Sometimes the process is reversed and permission is sought by companies or individuals to salvage wrecks for commercial gain. All such activities, irrespective of the age of the wreck in question, fall under regulations contained in the *Customs and Excise Act*, No. 91 of 1964. This Act states that anyone who has any wreck in his possession, including the owner or his representative, must inform the

⁹ *National Heritage Resources Act*, No. 25 of 1999, 2 (ii) (c).

¹⁰ *National Heritage Resources Act*, No. 25 of 1999, 32 (1) (a).

¹¹ *Legal Succession to the South African Transport Services Act*, No. 9 of 1989, Schedule 1, Section 11 (d).

¹² Van Meurs 1985, *Legal aspects*, p. 63.

¹³ *Merchant Shipping Act*, No. 57 of 1951 (as amended), Section 304A; Van Meurs 1985, *Legal aspects*, p. 65.

¹⁴ *National Environmental Management Act*, No. 107 of 1998, Definitions (xxviii); Dr. Jan Glazewski, Institute of Marine Law, University of Cape Town, pers. comm.

Controller of Customs and Excise. If such a person is not the owner of the wreck or his authorised agent, the wreck has to be delivered to the Controller. In addition, the removal or alteration of any wreck without the permission of the Controller of Customs and Excise is not allowed unless such an act is necessary for the preservation or safe-keeping. The Controller should, however, be informed without delay in case this happens and the wreck must be handed over.¹⁵

Under the *Customs and Excise Act*, it is compulsory to obtain permission to search for or salvage any wreck. As with the *Merchant Shipping Act* and the *Legal Succession to the South African Transport Services Act*, there is no time restriction involved and regulations cover both contemporary and older shipwrecks and other material remains. Permission to search, or search for, abandoned wrecks along the coast of the Republic is granted by the Controller of Customs and Excise, who is under the direction of the Department of Finance and who can issue a licence to that effect. This licence is valid for a period of one full calendar year. The fee for obtaining a licence is nil and the applicant does not have to show proof of competence in salvage proper or diving. The only requirements are to take out a security bond, to produce an annual report describing any salvage activities undertaken and plans for the following year, and the compilation of a register. The register, which must be open to inspection at all reasonable times by relevant authorities, should specify all articles recovered by the licensee, the date of recovery, the manner and the date of disposal of such articles, and to whom and for what sum or consideration the goods have been disposed of. Licence holders are liable to pay the Controller of Customs and Excise fifteen percent royalty on all items of value salvaged and declared and, in addition, import duties, surcharge and Value Added Tax (VAT) can be levied depending if recovered goods are to be sold and/or exported by the licence holder.¹⁶

It should be noted that the licence issued by the Controller of Customs and Excise does not give exclusive rights to the holder to search for or salvage any particular wreck. The wording on the licence clearly indicates that permission is only given: "...subject to the rights of others, including any person to whom a licence similar to this licence may have been granted or may hereafter be granted...".¹⁷ Furthermore, the Act does not suggest or indicate that special attention or significance should be attached to older wrecks which can be of historical-archaeological interest although, upon issuing a license, it is indicated by the Controller of Customs and Excise that the SAHRA should be approached for the necessary permit or authority when dealing with wrecks falling under the *National Heritage Resources Act*.

In the *National Heritage Resources Act* it is stated that: "... the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority; provided that the protection of any wreck in the territorial waters and the maritime cultural zone shall be the responsibility of SAHRA". And further: "... all archaeological

¹⁵ *Customs and Excise Act*, No. 91 of 1964, Section 112 sub-section 2; Van Meurs 1985, *Legal aspects*, pp. 65-66.

¹⁶ Werz 1999, *Diving up the human past*, p. 337; Van Meurs 1985, *Legal aspects*, p. 66.

¹⁷ Van Meurs 1985, *Legal aspects*, p. 66; Department of Finance, Controller of Customs and Excise. *License to search or search for abandoned wreck*.

objects (...) are the property of the State”, whereas: “Any person who discovers archaeological or palaeontological objects or material (...) in the course of development (...) must immediately report the find to the responsible heritage resources authority ...”.¹⁸

In this context, the following is also relevant. “... any person who intends to undertake a development categorised as the construction of a (...) pipeline, canal or other similar form of linear development or barrier exceeding 300m in length; the construction of a bridge or similar structure exceeding 50m in length; any development or other activity which will change the character of a site exceeding 5 000 square metres in extent; or (...) the re-zoning of a site exceeding 10 000 square metres in extent; or any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority ...”.¹⁹

The *National Heritage Resources Act* of 1999 is the only act within the South African legal system which makes specific provisions for the historical-archaeological, heritage and cultural values that can be attributed to shipwrecks. This act has replaced the *National Monuments Act*, No. 28 of 1969 and its amendments. The objective of the Act is to establish a national system for the management of heritage resources which it applies throughout the Republic. It will be clear that the scope of this Act is quite extensive. The protection and management of submerged historical shipwrecks and other underwater archaeological sites is only one of its objectives.

The above clearly indicates that it is a legal requirement to obtain the necessary approval to undertake any disturbance, excavation or removal of archaeological sites and/or material contained therein. In practise, the first phase is to obtain a license to search or search for abandoned wreck from the Controller of Customs and Excise. This license is issued in the name of an individual and requires a surety. The time it will take to issue the license may range from a few weeks to a few months. After the license has been obtained, a permit is required from the SAHRA. Information requested during the application includes personal details of the applicant, details related to the envisaged project, site information and details of the project archaeologist if it concerns wreck that pre-dates 1850. In addition, a declaration is required from a collaborating institution, such as a museum or university that will assist in the project. Furthermore, the application has to be accompanied by a detailed project motivation and proposal. It will take several weeks to process this permit.

Concluding this chapter on relevant legislation and permit requirements, it can be stated that the management, protection, salvage and destruction of underwater sites is covered by various acts. The historical-archaeological importance of submerged archaeological sites is, however, not specifically acknowledged in the *Merchant Shipping Act*, the *Sea Shore Act*, the *Legal Succession to the South African Transport Services Act* or the *Customs and Excise Act*. The *National Environmental Management Act* recognizes cultural heritage as a factor to take into consideration, besides living

¹⁸ *National Heritage Resources Act*, No. 25 of 1999, 35 (1), (2), (3).

¹⁹ *National Heritage Resources Act*, No. 25 of 1999, 38 (1) (a), (b), (c) (i), (d), (e).

and natural resources, whereas the *National Heritage Resources Act* incorporates specifically heritage resources such as archaeological sites on land and under water. The various acts involve different organizations. These include but are not limited to the Department of Environmental Affairs and Tourism, the Transnet National Ports Authority, the Department of Finance and specifically the Controller of Customs and Excise, and the Ministry of Arts and Culture under which the SAHRA resorts.

3. Description of the site, plans for development, and identified potential impacts

3.1. Site description

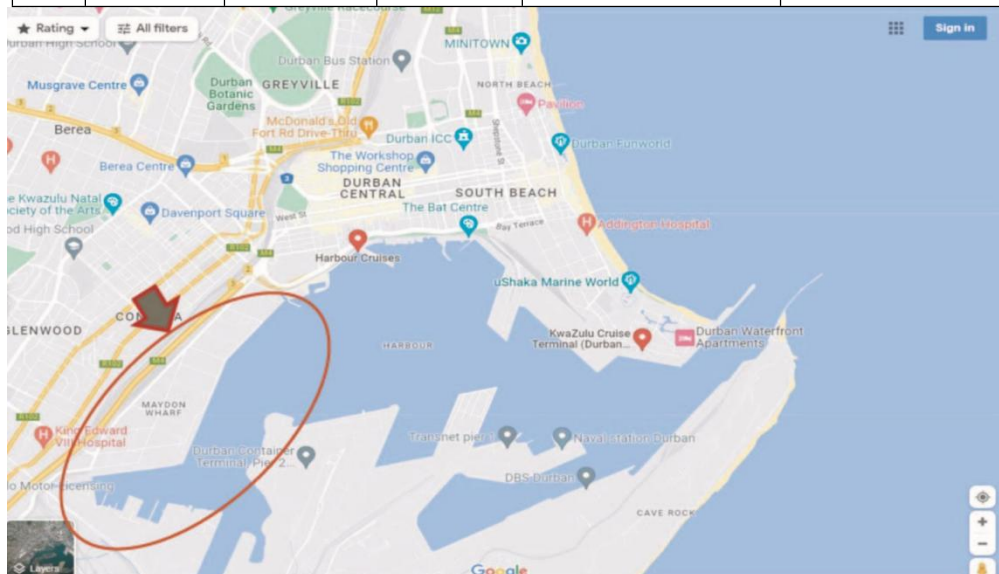
The Maydon Wharf precinct is one of the oldest in the Port of Durban. It has multi-purpose terminals consisting of 15 berths with an average age of more than 50 years. The terminal was constructed to accommodate vessels transporting dry and liquid bulk. The terminal consists of different types of berth structures. These structures include deck-on-pile and concrete block-work structure.

The size of the vessels calling in at the berths has been increasing over the years, as there has been a larger demand and an increase in the shipping industry. To keep up with these demands, TNPA has set out a programme to update and deepen the berths at Maydon Wharf to accommodate larger vessels.

Berths 1 to 4 and berths 12 to 14 have been upgraded in the last ten years as Phase 1 of this programme. Phase 2 of the programme was initiated in 2021, with the aim to upgrade and deepen berths 5 to 11 and berth 15.²⁰

The cadastral details of the site are as follows.²¹

NO	NAME	ERF NO.	PORTION	LATITUDE	LONGITUDE	TYPE
1	DURBAN	10004	203	29° 52' 28.19 S	31° 00' 12.11 E	ERVEN
2	DURBAN	10019	1	29° 53' 01.43 S	30° 59' 59.14 E	ERVEN



²⁰ TNPA 2023. *The feasibility design for the upgrade and deepening of Maydon Wharf berths 5-11 and 15 in the Port of Durban*. Compulsory Tender Clarification Meeting, 31 March 2023.

²¹ WSP 2023. *Screening report for an environmental authorization as required by the 2014 EIA regulating-proposed site environmental sensitivity*, 19-04-2023, p.4.

3.2. Development plans

The Maydon Wharf precinct is an area with the potential to increase cargo handling capacity and efficiency. The current berths are too shallow at present and increased draught depths along the berths will facilitate larger vessels, thereby increasing the amount of cargo that can be handled. For that reason, the current water depth needs to be increased to -14.5m or 14.5m below Chart Datum (CD).

Positions of berths 1 to 15²²



In addition to the need to increase the depths of the berths, several berths are in a poor state. They require maintenance or upgrading to meet present-day standards. Construction activities associated with the type of berths, i.e. deck-on-pile, caisson, or sheet-pile wall, have not been fully specified and this Maritime Archaeological Impact Assessment only can take the general impact associated with the different construction methods in consideration. It is also important to note that the area of impact has been an active part of the harbour for many years. For that reason, it has been subjected to maintenance dredging, earlier construction activities associated with the berths, and general shipping and cargo handling. If any material with cultural and / or maritime archaeological value was deposited in the Maydon Wharf precinct previously, there is a reasonable possibility that this resource was affected negatively.²³

²² TNPA 2023. *The feasibility design for the upgrade and deepening of Maydon Wharf berths 5-11 and 15 in the Port of Durban*. Compulsory Tender Clarification Meeting, 31 March 2023. C4, p. 4.

²³ Bickerton 2003, p. 1; TNPA 2023. *The feasibility design for the upgrade and deepening of Maydon Wharf berths 5-11 and 15 in the Port of Durban*. Compulsory Tender Clarification Meeting, 31 March 2023.

Details of berths 5 to 11 and 15²⁴

Berth	Berth Bollard Numbers	Structure Type	Year of construction (estimate)	Designer	Contractor	Design depth [mCD Port]	Surveyed depth [mCD]	Condition
5	41 - 52	Deck on piles (wharf)	1964	Christiani & Nielson (S.A.)	Christiani & Nielson (S.A.)	-9,9	-11	Slight corrosion and spalling. Settlement of slope.
6	52 - 61	Deck on piles (wharf)	1964	Christiani & Nielson (S.A.)	Christiani & Nielson (S.A.)	-9,9	-11	Slight corrosion and spalling. Settlement of slope.
7	61 - 75	Deck on piles (wharf)	1961 - 63	Christiani & Nielson (S.A.)	Christiani & Nielson (S.A.)	-9,9	-11,5	Slight corrosion and spalling. Settlement of slope.
8	75 - 86	Deck on piles (wharf)	1985	Van Niekerk, Klein & Edwards (VKE)	Grinaker Construction (Natal)	-10,4	-12	Good condition. Damage mostly related to settlement. Extensive damage to cut-of wall noticed
9	86 - 96	Deck on piles (wharf)	1965 - 66	Michal S. Zakrzewski & Partners	Grinaker Construction (Natal)	-9,9	-11,5	Moderate corrosion and spalling. Slope settlement
10	96 - 107	Deck on piles (wharf)	1964 - 67	Michal S. Zakrzewski & Partners	McLaren & Eger	-9,9	-11	Moderate corrosion and spalling. Slope settlement
11	107 - 116	Deck on piles (wharf)	1940 (dolphins), 1957 - 59 (deck on piles)	Christiani & Nielson (S.A.)	Christiani & Nielson (S.A.)	-10,6	-11	Severe corrosion and spalling. Slope settlement
15	159 - 172	Concrete block wall	1923 -25	S.A.R & H Harbour Engineer (Durban)	unknown	-10,9	-11	Good condition, with local damage

3.3. Identified potential impacts

A number of consequences may be expected from the planned berth refurbishment and deepening in the Maydon Wharf precinct. The majority of these relate to the environment and it has been acknowledged that these consequences may impact significantly on:

- climate
- (marine) ecological status
- hydrodynamic functioning, and
- water and sediment quality.

²⁴ TNPA 2023. *The feasibility design for the upgrade and deepening of Maydon Wharf berths 5-11 and 15 in the Port of Durban*. Compulsory Tender Clarification Meeting, 31 March 2023. Part C4, p. 8.

The potential impacts have been divided into significant adverse impacts and cumulative impacts.

The *significant adverse impacts* include the following:

- impacts to marine habitats
- climate change vulnerability
- water quality deterioration in the marine environment
- impacts to the existing transportation network, and
- impairment of subsistence fishing and recreation.

The potential *cumulative impacts* that were identified are:

- climate change
- hydrodynamic functioning of the bay
- water quality in the bay
- air quality
- marine habitats and biodiversity
- traffic (marine and land).

For these reasons, the following specialist studies are required:

- estuarine ecological impact assessment
- hydrodynamic modelling
- bathymetric surveys and modelling
- erosion prediction modelling
- plume deposition models
- climate change impact assessment
- traffic impact assessment
- maritime archaeology impact assessment, and
- assessment of alternative design options.²⁵

²⁵ TNPA 2019. *Port of Durban SEA. Strategic Impact Assessment & SEMP (draft). PDPP Project berth deepening Maydon Wharf 5-11 & 15.* July 2019.

Subsequently, it has become clear that the above-mentioned studies are not required for the planned Maydon Wharf upgrade. As no Environmental Authorisation (EA) is required, no specialist studies are required. The Department of Forestry, Fisheries and the Environment (DFFE) have confirmed that this upgrade and port deepening and widening does not require Environmental Authorisation as the project is not changing the port's development footprint.²⁶

In the *Screening report for an environmental authorization*, under the heading *Proposed development area environmental sensitivity*, the archaeological and cultural heritage theme is mentioned and classified as: "Very high sensitivity". Nevertheless, no reference is given to any specialist study that was undertaken in that regard, nor is a suitably qualified assessor mentioned who may have commented as such. In addition to this, no indication is given of the exact location and size of the extend of the footprint of the area that is supposedly negatively affected. The motivation for this classification, as mentioned under *Sensitivity features*, is that the Maydon Wharf precinct is within 2 kilometers of a Grade II heritage site.²⁷ Further enquiries indicated that there are six sites of cultural / historical value in the vicinity, situated at a distance of between 3 and 4 kilometers from the Maydon Wharf precinct. These are: the Dick King statue, Victoria Embankment, South Beach; Howard College / Memorial Tower; City Hall; Old Post Office; Local History Museum; and Farewell Square.²⁸

All of these are situated outside the Port of Durban and will not be negatively affected by any proposed developments at the Maydon Wharf precinct. There is one site within the port, the Ocean Terminal Building, that has cultural / architectural value. The building was completed in 1962 and served as the passenger terminal for ocean liners.²⁹ It should be noted that this site is at a distance from the Maydon Wharf precinct and is not going to be adversely affected by the planned development. For these reasons, the classification in the screening report should be re-assessed.

²⁶ E-mail correspondence Mr. Rob Rowles, WSP Principal Consultant, to Dr. Bruno Werz, maritime archaeologist, Tuesday 14 November 2023.

²⁷ WSP 2023. *Screening report for an environmental authorization as requested by the 2014 EIS regulations - proposed site environmental sensitivity* 19-04-2023, pp. 5, 10.

²⁸ E-mail correspondence Mr. Rob Rowles, WSP Principal Consultant, to Dr. Bruno Werz, maritime archaeologist, Wednesday 30 August 2023.

²⁹ R. Sewnarain 2020. *Report on the significance of the Ocean Terminal Building in the Port of Durban*, 14 December 2020, pp. 5-6; WSP 2023. *Screening report for an environmental authorization as requested by the 2014 EIS regulations - proposed site environmental sensitivity* 19-04-2023, pp. 5, 10.

4. Research methodology

4.1. Desktop study

The methodology to identify, locate, and assess potential maritime archaeological sites can be generally divided into three different phases. Phase 1 consists of a desk top study. The specific desk top study that was undertaken for this specialist study is reported further on in *Chapter 5 Research results*. The main aim of this phase was to identify and assess the different archaeological entities or sites that may be present in the Maydon Wharf precinct in Durban harbour and, if possible, to indicate their approximate location. The desk top study is based on available information as contained in relevant literature, archival documentation, and other published and unpublished material. For an overview of the sources used for this study, see the section 'References'. These different sources have provided for an initial inventory of potential archaeological sites. Research has indicated that most of the information that is currently available pertains to the wrecks of some 102 vessels that foundered in the greater Durban area during the period 1685-1991. Only very few, if any, of these potentially ended up near the specific area of interest.

4.2. Practical site assessment

Phase 2 of the methodology to identify, locate, and assess potential maritime archaeological sites consists of field work. Its aim is to investigate those areas that have been earmarked for future development, or where other activities will take place that may result in interference with, or disturbance of potential sites. In general, Phase 2 field work is non-intrusive and includes scanning of the sea bed and its sub-strata using geophysical survey techniques, as well as diver observations. Whenever possible, field work should include detailed side-scan sonar, sub-bottom profiling, and magnetometer surveys within demarcated areas. The exact geographical position of any contacts or anomalies is to be established by Global Positioning System (GPS) or other means, after which the survey results must be analysed by geophysicists and an experienced maritime archaeologist.

In the above, reference was made for the possibility to undertake a number of specialist studies (see page 17). They include bathymetric surveys and modelling before development is going to take place. It is advised that should these specialist study are going to be undertaken, that the results are going to be analysed and interpreted in reference to the Maritime Archaeological Impact Assessment as well, bearing in mind the potential presence of buried archaeological material.

Phase 3 involves intrusive underwater sampling, selected sea bed coring to obtain more information on identified anomalies and their context, and / or partial or complete excavation of selected sites that may be identified during Phases 1 and / or 2. Phase 3 should only concern those sites that are immediately threatened by destruction as a result of dredging or construction, or those that have a specific historical, cultural, or research value. This phase includes sampling and possible excavation and / or removal, or alternative protection, of endangered sites or cultural material contained therein that has specific value.

In section 6.2. *Mitigating measures* of this report, and specifically points 5 to 10, specific guidelines are given in case of such event. However, it does not seem likely that this will occur, as Phase 1 has indicated that the probability that archaeological-cultural sites of importance will be disturbed during the proposed development of Maydon Wharf is minimal.

5. Research results

5.1. Desktop study

A heuristic survey was undertaken as part of this desk top study. This did not reveal any publications or reports relating to the possible presence of maritime archaeological material in the Maydon Wharf precinct other than the existing berth structures.

Previously, a similar exercise was undertaken for the whole area of the Port of Cape Town.³⁰ This involved a primary assessment of archival sources, a study of relevant literature and unpublished research projects, as well as discussions with local developers, palaeontologists, heritage resources specialists, historians, and archaeologists. The study indicated the possible presence of five general categories.

1. Prehistoric material under water and on shore;
2. Historical occupation sites on shore;
3. Historical harbour works (including berths);
4. Shipwrecks; and
5. Anchorage debris.

In order to be as inclusive as possible, these categories were also identified initially for this specific specialist study. From the onset, it was nevertheless acknowledged that subsequent research would probably reveal the absence of one or more of the above-mentioned categories in the Maydon Wharf precinct. Nevertheless, bearing in mind that the area of investigation is situated in a harbour that has seen intensive shipping traffic over many decades, the presence of two other categories of sites besides harbour works cannot be ruled out. These are: 'Shipwrecks' and 'Anchorage debris'. Both are indicators of the role that the Port of Durban has played as a focal point for maritime traffic in the region during the last two centuries. Evidence for this is reflected in the development of the port since the nineteenth century, but also in the physical remains of historic ships and associated material that are currently deposited in the greater Durban area.

Part of this associated material falls under the category 'Anchorage debris' and consists of anchors that were lost and equipment and parts of cargoes that fell overboard or that were jettisoned on purpose. It is expected that this type of material can be found virtually everywhere in the current harbour area and beyond. For the purpose of this study, however, only material of historical significance is of relevance and the majority of this was deposited in the old anchorage and those areas that posed a danger to navigation.³¹ Both the old anchorage and those areas that were

³⁰ Werz 2003. *Strategic Environmental Assessment (SEA) for the Port of Cape Town and Environmental Impact Assessment (EIA)*; idem 2006. *Environmental Impact Assessment (EIA) for the proposed deepening of the Ben Schoeman Basin*.

³¹ It is important to indicate that occasionally overlaps can be discerned between historical and contemporary material. The terms 'historical' and 'contemporary' or 'modern' cannot properly be defined and depend in part on the questions that can be answered by studying specific subjects for research. Thus, a relatively recent shipwreck may provide information that is relevant to maritime historical-archaeological studies. An indication for a cut-off point is given by the National Heritage Resources Bill, which under the heading 'archaeological' states: "...wrecks (...) and any cargo, debris or

dangerous to shipping traffic are situated outside the area of the Maydon Wharf precinct. It is therefore assumed that this specific location will not reveal anchorage debris that is of historical or cultural importance.

The desk top study included a survey of references to shipwrecks in available literature and relevant shipwreck data bases. Lists of shipwrecks have been published by R.F. Kennedy and in the *South African Shipping News and Fishing Industry Review*, while an extensive unpublished wreck data base is maintained by the South African Library.³² The current shipwreck data base at the SAHRA is for the greater part based on the data base from the South African Library, but has been updated in recent years. In addition, use was made of two identical lists in other specialist reports.³³ The combined information from these various sources was analysed for the specific purpose of this study.

Analysis of the different shipwreck data bases indicated that a minimum of some 102 vessels were lost in and around Durban. Although basic archival information is available on most of these wrecks, a significant shortcoming is presented by the absence of exact positions for the majority of these archaeological resources. Although a few of the data bases indicate geographical coordinates for some wrecks, it became clear that these were copied from an unreliable source and were therefore not taken into consideration for this study.³⁴ Thus, only the approximate place where most vessels went down is known and this presents problems for an accurate planning of development activities, in order to avoid disturbance of such sites. Nevertheless, general concentration areas could be identified. In addition, it is a fact that many historical shipping incidents occurred close to the coast and that most wrecks are therefore in relatively shallow waters.³⁵ In the case of Durban, a substantial percentage of shipping incidents was caused by natural conditions. The historic records indicate that especially strong winds played a role of major importance. As a result, many vessels parted their anchors and were pushed onto natural obstructions outside the current harbour area, such as the Bar and the Lee / Annabella Bank, to end up on adjacent beaches, such as Back Beach. In many instances, the wrecks of these ships were found to be unsuitable to be re-floated and were therefore dismantled and destroyed. Other vessels could be towed off and, when condemned, were

artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation ...". *National Heritage Resources Act*, No. 25 of 1999, 2 (ii) (c).

³² Kennedy 1955, *Shipwrecks on and off the coasts of southern Africa*; South African Shipping News and Fishing Industry Review 1982, *Marine casualties in southern African waters, 1552 to 1913*; *idem* 1983, *Marine casualties in southern African waters, 1914 to 1945*; *idem* 1984, *Marine casualties in southern African waters, 1946 to 1984*; South African Library 1990, *List of shipwrecks along the South African coast*.

³³ Maitland 2012a. *Underwater Heritage Impact Assessment*; *Idem* 2012b. *Underwater Heritage Impact Assessment... offshore sand winning areas*; National Monuments Council 1996, *Historical database for shipwrecks*; South African Heritage Resources Agency 2010, *Historical database for shipwrecks*; South African Library 1990, *List of shipwrecks along the South African coast*.

³⁴ South African Heritage Resources Agency 2010, *Historical database*; Maitland 2012a. *Underwater Heritage Impact Assessment*; *idem* 2012b. *Underwater Heritage Impact Assessment ... sand winning areas*. Both the lists produced by the SAHRA as well as by Maitland contain coordinates taken from treasure hunter Malcolm Turner's book *Shipwrecks and salvage in South Africa, 1505 to the present*. C. Struik, Cape Town 1988. As it has been proven that Turner's information is highly inaccurate, his information has not been taken into consideration for this specific study. *Cfr.* Werz 1999, *Diving up the Human Past*, p. 83.

³⁵ Gemeente Rotterdam 1986. *Vooronderzoek archeologie*, p. 5.

scuttled offshore at some distance from the port, to avoid becoming a danger to navigation. At least thirteen of such incidents have been recorded.

An attempt to itemize the potential of shipwrecks that can be found in the greater Durban area is met with some problems. The most obvious of these is related to the incompleteness and sometimes in-correctness of available historical sources that was already referred to above. In addition, not all available archival material -be it locally or internationally- could possibly be checked for this purpose. Nevertheless, by making use of updated information taken from various sources, a good impression can be gained of the nature of the shipwrecks around Durban, their countries of origin, years of foundering, types and places of deposition. In order to classify relevant information, each entry pertaining to individual shipwrecks in the Durban region was scrutinised and the data tabulated, resulting in a breakdown into different categories. The first of the tables presented below (Table 5.1.) reflects the various nationalities of wrecks.

Table 5.1. *Recorded shipwrecks around Durban for the period 1685-1991 classified according to nationality*

Nationalities	Wrecks	Nationalities	Wrecks
British	46	Portuguese	2
German	6	Austro / Hungarian	1
South African	5	Irish	1
American	4	Italian	1
French	4	Swedish	1
Norwegian	3	Swedish or German	1
Dutch	2	Nationality not specified	25
TOTAL	102		

It can be observed that ships of at least 12 different nations met their demise around Durban. This partly reflects the great diversity which is characteristic for the research potential represented by South African wrecks as a whole. Of these, the number of British shipwrecks is predominant. Two main explanations can be given for this. Firstly, many local vessels were registered under the British flag as South Africa used to be a British colony during the greater part of the nineteenth and the beginning of the twentieth century. Secondly, during the nineteenth century, Britain occupied a dominant position with regards to international maritime traffic and commerce.

Table 5.2. *Recorded shipwrecks around Durban for the period 1685-1991 classified according to period of foundering*

1681 - 1690	1	1891 – 1900	4
		1900 – 1910	2
1821 - 1830	4	1911 – 1920	1
1831 - 1840	3	1921 – 1930	1
1841 - 1850	7	1931 – 1940	8
1851 - 1860	2	1941 – 1950	6
1861 - 1870	11	1991 – 2000	1
1871 - 1880	31	‘Pre-1939’	1
1881 - 1890	18	Period unknown	1
TOTAL	102		

From Table 5.2., a marked increase of shipping incidents during the decades from 1861 to 1890 can be observed. This may partly be a result of socio-economic and political processes in the area, such as increased shipping traffic as a result of expansion of the colony or conflict in the region. Also new technical developments, such as changed ship’s designs, may have played a role in this. Although falling outside the scope of this report, further research into these aspects is required.

Table 5.3. *Recorded shipwrecks around Durban for the period 1685-1991 classified according to vessel types*

Vessel type	Wrecks	Vessel types	Wrecks
Barque	34	Tug	2
Brig	10	Fish factory / fishing vessel	2
Schooner	9	Brigantine	1
Lighter	7	Dredger	1
Wooden sailing ship	4	Ketch	1
Cargo vessel	2	Sloop	1
Coaster	2	Submarine	1
Patrol vessel	2	Vessel type not specified	23
TOTAL	102		

Table 5.3. reflects the various types of wrecks that amount to at least 15 different types in total. It is also clear that considerably more sailing vessels foundered than engine-driven ships. This already indicates to a certain extent that many shipping disasters around Durban were not so much caused by human failure, but more to natural conditions and the level of technology at certain periods.

An attempt to indicate the exact places of deposition for all of the 102 identified shipwrecks around Durban is not possible due to the earlier acknowledged incompleteness or inaccuracy of available records. Nevertheless, the approximate place of foundering of most vessels is stated. Of the places that are indicated, the majority can be found near Back Beach where at least 37 vessels, or 36.3 per cent of the recorded total, beached. Other high incident regions are the Bar or the Bar Ridge, with 12 incidents, and the Lee / Annabella Bank with six recorded casualties. Some 13 wrecks have been reported some distance from Durban, most of which were scuttled.

Table 5.4. *Recorded shipwrecks around Durban for the period 1685-1991 classified according to place of foundering*

	Place of foundering	Number of wrecks	Reference numbers in Appendix
1	Back Beach	37	1-5-8-9-10-12-18-19-24-28-30-32-33-34-40-42-43-49-55-56-57-58-60-73-74-75-79-81-

			84-86-89-93-95-96-100-101-102
2	Some distance from Durban / offshore	13	6-14-17-37-39-45-47-63-68-83-87-91-99
3	The Bar / Bar Ridge	12	7-13-16-36-38-48-59-70-72-78-82-97
4	Lee / Annabella Bank	6	4-21-27-41-77-80
5	Durban (not specified)	4	23-26-46-64
6	(Near) Umgeni River mouth	4	2-85-94-98
7	Anchorage / Outer anchorage	3	22-50-61
8	North Pier	3	53-66-90
9	Bluff Rocks / south of harbour entrance	2	29-65
10	Harbour (?)	2	11-15
11	Harbour entrance	2	3-25
12	The Bar inside	2	31-54
13	The Bar outside	2	51-88
14	Addington Beach / north of breakwater	1	20
15	Beach near the Point Offices	1	92
16	Durban Beach	1	71
17	Harbour channel	1	52
18	Near the Point	1	35
19	Opposite signal station	1	76
20	Point of the Bluff	1	62
21	Shipping channel outside the harbour	1	44
22	South Beach	1	69
23	South Pier	1	67
	TOTAL	102	

For the purpose of this study, only those vessels that found an untimely end in the vicinity of the Maydon Wharf precinct are of importance. Potentially, this concerns nine ships. Of these, four were recorded as having foundered somewhere in the Durban area, but their place of wrecking was not specified. It concerns the *Elizabeth Anne*, the *Fleur de Maurice*, the *Kayle* and the *Northwester*.³⁶ As the available information on these ships is extremely limited, it cannot even be stated with certainty if they sank or were re-floated at a later date. The harbour is mentioned specifically as the place where two incidents took place. These concerned the *Burnham* and the *Congune*. It was however reported that the wreck of the *Congune* was removed.³⁷ The *Ann* and the *F. Todenskjold* were reported as having sunk in the harbour entrance, whereas the *Lily* foundered in the harbour channel.³⁸ These locations are close to the Maydon Wharf area and the possibility that one or more wrecks were deposited nearby must thus be taken into consideration.

It can be concluded that the potential of shipwrecks in and around Durban is considerable. A minimum of 102 such sites was identified from information provided by historical records and various shipwreck data bases. The first recorded incident took place on 17 May 1685 when the English ketch *Good Hope* was driven ashore and wrecked. The vessel was dismantled and with the salvaged parts a new boat constructed that left for a slaving expedition to Madagascar. The most recent incident that has been recorded occurred in 1991. In that year, a vessel named *Sweetie Sandra* supposedly ran aground but it is not certain if this resulted in wreck or that it was re-floated.³⁹

³⁶ For more details on these vessels, see the Appendix under the following reference numbers: 23, 26, 46 and 64.

³⁷ Appendix, reference numbers 11 and 15.

³⁸ Appendix, reference numbers 3, 25 and 52.

³⁹ This reference only occurs in the list of shipwrecks in Maitland 2012a and 2012b. It is not mentioned in the SAHRA shipwreck data base or any other source. It is also noteworthy that no further details, such as vessel type and nationality are recorded here. It is therefore quite possible that this incident did not result in the vessel being wrecked.

6. Assessment and recommendations

6.1. Assessment of the potential presence and value of maritime archaeological material

In this study, the following possible impacts on heritage resources potentially present in the area of the Maydon Wharf precinct were identified:

- dredging;
- re-deposition of dredged deposits in places; and
- repair / upgrading of berths

The potential consequences of these activities are:

- exposure of heritage resources;
- displacement;
- destruction of contextual information; and
- damage to or destruction of finds.

The Phase 1 desk top study that was undertaken initially identified five possible categories of sites of potential archaeological, historical and / or heritage value. During further research, two of these: 'Prehistoric material under water and on shore' and 'Historical occupation sites on shore' could be eliminated. Examples of the category 'Historical harbour works' are definitely present in the study area. They comprise berths 5 to 11 and 15. Nevertheless, the oldest berth, berth 15, was constructed in 1923 and berth 8 as recent as 1985. The majority of the other berths date to the 1960s. No indication has been found that these structures are in any way unique or have special historical, technological, or aesthetic value. Besides that, their technical details have been documented. In addition, the current condition of most berths is acceptable and there does not seem to be a need to remove, destroy, and replace them. At berth 8, damage to the cut-of wall has been noticed. Severe corrosion is present at berth 11 and berth 15 has local damage that is not specified.⁴⁰ It may be assumed that these defects can be remedied without seriously affecting the berth structures. The documentation provided by the TNPA also refers to planned repair and refurbishment activities only.

Two additional site categories that are potentially present in the area concern 'Anchorage debris' and 'Shipwrecks'. Nevertheless, as both the old anchorage and those areas that were dangerous to shipping traffic in the past are situated outside the Maydon Wharf precinct, it is assumed that this specific location will not reveal anchorage debris that is of historical or cultural importance. In addition, it can be stated that potential displacement through dredging, resulting in the destruction of contextual information, is of less importance for this category as in each case it concerns a once-off, isolated event. Although dredging and construction would have a more damaging effect on

⁴⁰ See: table Details of berths 5 to 11 and 15, p. 16 *supra*; TNPA 2023. *The feasibility design for the upgrade and deepening of Maydon Wharf berths 5-11 and 15 in the Port of Durban*. Compulsory Tender Clarification Meeting, 31 March 2023. Part C4, p. 8.

shipwrecks, the available historical information indicates that only a few vessels foundered in the vicinity of the Maydon Wharf precinct, whereas no specific reference was found of any wreck at that specific location.

The potential nature of impact for the three site types consists of exposure, damage, loss, and / or displacement but the probability factor, or the likelihood of impact occurring, is low or minimal. The extent of impact is limited to the location where development will take place and can be described as local. The duration of impact, however, is permanent but this will have no consequences for, or impact on the environment.⁴¹ The potential consequences of the impact do not warrant modification of the work that is being planned. The only exception to this would be when an archaeological site is discovered that can be classified as extremely important. Examples of this would be an Acheulean occupation site or a well-preserved shipwreck. The chances of finding such sites during the course of the proposed development are nevertheless minimal, as the Phase 1 survey indicated. Should this happen, however, mitigating measures must be applied.

6.2. Mitigating measures

Although the probability of uncovering and disturbing maritime archaeological and / or submerged heritage resources of significance in the Maydon Wharf precinct is minimal, mitigating measures must be introduced. These should include the following.

1. Before any development takes place, a baseline study must be undertaken to assess the maritime archaeological potential of the area. This requirement has been met and Phase 1 of the Maritime Archaeological Impact Assessment specialist study has been completed.
2. The results of this study must be taken into consideration when more detailed work plans are being designed.
3. Proper lines of communication between the developer (i.e. TNPA, Port of Durban), the consultants (i.e. WSP), the SAHRA, and the specialist for maritime archaeology must be maintained at the project planning and execution stages.
4. Any work in designated areas must take the potential presence, general importance, and sensitivity of marine / maritime archaeological sites into consideration. Personnel involved must be briefed accordingly.
5. In case any cultural / archaeological material is uncovered, work must cease immediately and the find reported. Further disturbance, damage, or removal must be prevented. Personnel must be informed that it is a legal requirement to report any find immediately and that under the NHRA, fines or imprisonment or both can be imposed on offenders. [Section 51 of the National Heritage Resources Act, No. 25 of 1999.]
6. A site supervisor should be appointed who will be personally responsible for reporting any finds.

⁴¹ Werz 2003b, *Strategic Environmental Assessment (SEA) for the Port of Cape Town and Environmental Impact Assessment (EIA) for the expansion of the container terminal stacking area*, pp. 23-24, 28.

7. Potential future surveys and excavation must be done by suitably trained and qualified personnel. Neither a Phase 2 non-intrusive diver survey nor a Phase 3 survey was undertaken as part of this specialist study, but will become necessary should any archaeological material be found.

8. In that case, (partial) excavation may be undertaken to save as much information as is reasonably possible.

9. Any material recovered during such operations must be adequately stored and preserved, and must remain accessible for further study. Excavation and recovery can only be done after a license from the Department of Customs and Excise has been issued and a permit from the SAHRA has been granted.

10. The various stages of any archaeological survey and all information gained must be properly documented, curated, and made accessible.

Conclusions

This Maritime Archaeological Impact Assessment Report reflects the results of a Phase 1 specialist study for the Port of Durban. It was commissioned by Transnet National Ports Authority and guided by WSP. The main objective was to identify the presence of potential heritage resources and specifically maritime archaeological resources in the Maydon Wharf precinct, Port of Durban. This site is going to be further developed in the near future. Key elements in this development will be dredging and the refurbishment and upgrading of the existing berths 5 to 11 and 15.

The specialist study is based on a variety of data acquired from a survey of relevant literature, available historical source material, shipwreck data bases, reports, and correspondence. The desk top study indicates that the probability of significant heritage resources being present in the area of interest is low. Historical harbour works, specifically berths, are present. As most of these are over 60 years old, they automatically fall under the protection of the *National Heritage Resources Act* of 1999. Nevertheless, the oldest berth, berth 15, was constructed in 1923 and berth 8 as recent as 1985. The majority of the other berths date to the 1960s. No indication has been found that these structures are in any way unique or have special historical, technological, or aesthetic value. Besides that, their technical details have been documented. For these reasons it seems that the current need to refurbish these berths outweighs any potential tendency to preserve them as is.

Two other types of maritime archaeological sites that may potentially be present in the area are anchorage debris and shipwrecks. Nevertheless, no direct indications have been found that such sites are indeed present in the Maydon Wharf precinct. The possibility remains, however, that such resources may be encountered during future development activities. By introducing mitigating measures as described in this report, negative impacts on these resources will be reduced significantly. It can thus be concluded that the potential consequences of the impact on heritage i.e. maritime archaeological resources do not warrant modification or postponement of the construction work that is being planned, and that development may continue.

Potential impacts on heritage resources	<ul style="list-style-type: none"> - dredging - re-deposition of dredged deposits - repair / upgrading of berths
Potential consequences of impacts	<ul style="list-style-type: none"> - exposure of heritage resources - displacement - destruction of contextual information - damage to or destruction of finds
Significance of potential impacts	<p>Anchorage debris - low</p> <p>Berth structures - low</p> <p>Shipwrecks - medium</p>
Intensity of potential impacts	High
Probability factor, or the likelihood of impacts occurring	Low / minimal
Extent of impacts	Local
Duration of impacts	Long term / permanent
Confidence based on reliability of available information and predictability	High

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Appendix. List of recorded shipping incidents resulting in wreck in and around the Port of Durban

The following appendix provides an inventory of historical shipwrecks that have been recorded in a variety of archival documents and other references. Presentation of relevant basic information, where available, is in the following format.

VESSEL NAME	REFERENCE NUMBER
NATIONALITY	PLACE OF FOUNDERING
VESSEL TYPE	DATE OF FOUNDERING
PORT OF DEPARTURE	TONNAGE
PORT OF DESTINATION	CARGO
PEOPLE ON BOARD	GOODS SALVAGED AT THE TIME
CIRCUMSTANCES OF FOUNDERING	

ADELAIDE	1
BRITISH	DURBAN, BACK BEACH (?)
BARQUE	1866-2-3 OR 1866-2-8
MADRAS	640 OR 775
	INDIAN IMMIGRANT PASSENGERS
STRANDED AND WRECKED. HULL SOLD. SEVERAL MEN DROWNED. OTHER SOURCES INDICATE THAT NO LIVES WERE LOST	

AFRICAN ADVENTURE	2
PORTUGUESE	DURBAN, NEAR UMGENI RIVER MOUTH
SLOOP	1830 JANUARY
	120
	SLAVES
SLOOP LOST COURSE AND WAS WITHOUT FOOD AND WATER. A NUMBER OF SLAVES DIED AND THESE AND OTHERS WERE THROWN OVERBOARD. OF 160 SLAVES, ONLY 30 LANDED WHEN THE	

VESSEL WAS RUN ASHORE

ANN	3
BRITISH	DURBAN, HARBOUR ENTRANCE
	1826
WRECKED	

ANNABELLA	4
BRITISH	DURBAN, ON THE LEE / ANNABELLA BANK
BARQUE	1856-1-21
	199 OR 200
	GENERAL CARGO
STRUCK THE BAR, DRIFTED ONTO LEE BANK AND BECAME A TOTAL WRECK. HULL SOLD BY AUCTION. NO LIVES LOST. LEE BANK RENAMED ANNABELLA BANK	

ARIOSTO	5
AMERICAN	DURBAN, BACK BEACH AT END OF SMITH STREET
BARQUE	1854-7-30 OR 1854-7-31
SUMATRA	
BOSTON	PEPPER
	100 TONS OF PEPPER SALVAGED AND SOLD
RUN AGROUND AND WRECKED. NO LIVES LOST. WRECK WAS POSSIBLY REMOVED IN 1936	

BLINK	6
	DURBAN, 6KM FROM DURBAN
	1940-1-22
SCUTTLED. MAYBE THE SAME AS THE COOPER LIGHT WRECK	

BORDEAUX PACKET	7
FRENCH	DURBAN, ON THE BAR
BARQUE	1847 MAY
	233
STUCK ON THE BAR WHEN LEAVING PORT NATAL. NO LIVES LOST	

BREIDABLIK	8
NORWEGIAN	DURBAN, BACK BEACH AT FOOT OF WEST STREET
SCHOONER	1872-7-31
GOTHENBURG	147
	TIMBER
DRIVEN AGROUND. HULL WAS SOLD. MAITLAND 2012 MENTIONS THAT VESSEL MAY HAVE BEEN REPAIRED AND REFLOATED, BUT NO FURTHER REFERENCES TO THIS	

BRIDGETOWN	9
BRITISH	DURBAN, BACK BEACH. NORTH OF VETCH'S PIER
BARQUE	1882-6-28
	369 OR 370
	COAL

RAN AGROUND ON BAR RIDGE. DRIFTED ASHORE AND BEACHED. CREW LANDED BY LIFEBOAT. NO LIVES LOST	

BRITISH TAR	10
BRITISH	DURBAN, BACK BEACH.
BARQUE	1850-9-21 OR 1850-9-29
	282 OR 310
	IMMIGRANTS, GENERAL CARGO
CABLES PARTED AND WRECKED. NO LIVES LOST	

BURNHAM	11
BRITISH	DURBAN, HARBOUR (?)
SCHOONER	1840-5-29
	84
	GRAIN
	PART OF THE CARGO SALVAGED
PARTED CABLE AT THE PORT. WENT AGROUND AND WRECKED.	
NO LIVES LOST	

CHARLES JACKSON	12
BRITISH	DURBAN, BACK BEACH
BARQUE	1884-8-26
LIVERPOOL	327
	GENERAL CARGO
WENT ASHORE AND BECAME A TOTAL WRECK. NO LIVES LOST	

CITY OF LIMA	13
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BRITISH	DURBAN. BAR RIDGE, 1KM FROM SHORE
BARQUE	1883-7-21
GARSTON	352 OR 353
	COAL
RAN AGROUND, CAPSIZED AND SANK. CREW SAVED BY LIFEBOAT. NO LIVES LOST	

COLOMBO	14
DUTCH	OFF DURBAN
	1822-9-24
FOUNDERED, WRECKED	

CONGUNE	15
	DURBAN, HARBOUR (?)
SCHOONER	1872-10-16
EAST LONDON	SUGAR
SANK WHILE AT ANCHOR. NO LIVES LOST. WRECK SOLD. DECLARED HAZARD TO NAVIGATION AND REMOVED	

COURIER	16
BRITAIN	DURBAN, THE BAR
BARQUE	1846-8-27
DURBAN	187
MAURITIUS	CATTLE

STRUCK THE BAR WHILE LEAVING PORT. WRECKED. NO LIVES LOST	

DORA P.	17
	DURBAN, OFFSHORE
	1950-4-18
BURNED 160KM OFF DURBAN. CREW TAKEN OFF. GUTTED VESSEL TAKEN TO PORT. LATER SCUTTLED OFFSHORE BY GUNFIRE FROM SA NAVY SHIP	

DRAGA	18
AUSTRO-HUNGARIAN	DURBAN, BACK BEACH
BRIGANTINE	1880-11-1
BOSTON	320
	FLOUR, OATS
RUN ASHORE AFTER SPRINGING A LEAK. TOTAL WRECK. NO LIVES LOST	

EARL OF HARDWICK/ EARL OF HARDWICKE	19
BRITISH	DURBAN, BACK BEACH. ABOUT A MILE NORTH-EAST OF THE POINT
WOODEN SAILING SHIP	1863-9-26 OR 1863-9-27
MADRAS	898 OR 903
	INDIAN IMMIGRANT PASSENGERS
PARTED ANCHORS, DRIVEN ASHORE AND WRECKED. SOLD. NO LIVES LOST	

EASTERN STAR	20
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BRITISH	DURBAN. NORTH SIDE OF BREAKWATER / ADDINGTON BEACH
WOODEN BRIG	1880-8-25
LONDON	209
	GENERAL CARGO
CABLES PARTED, WENT AGROUND AND WRECKED. NO LIVES LOST	

ELEANOR	21
	DURBAN, INNER BANK, LEE / ANNABELLA BANK
SCHOONER	1839-7-28
RAN AGROUND AND WRECKED. NO LIVES LOST	

ELIZABETH	22
	DURBAN, ANCHORAGE
CARGO BOAT	1878-1-11
TOOK IN WATER AND SANK	

ELIZABETH ANNE	23
	DURBAN
	1863-10-?

WRECKED

ENFANTS NANTAIS	24
FRENCH	DURBAN, BACK BEACH, 1KM ABOVE WEST STREET
BARQUE	1876-9-14
ADELAIDE	316
	FLOUR
CABLES PARTED, CAME ASHORE. WRECKED. NO LIVES LOST	

F. TODENSKJOLD	25
SOUTH AFRICAN	DURBAN, HARBOUR ENTRANCE
	1915-5-30
SANK	

FLEUR DE MAURICE	26
BRITISH	DURBAN
	1894-4-?
RAN AGROUND	

FORERUNNER	27
	DURBAN, LEE / ANNABELLA BANK, MILNE'S PIER EXTENSION

TUG	1883-7-21
	54
GROUNDED ON LEE / ANNABELLA BANK. STRANDED ALONGSIDE MILNE'S PIER EXTENSION. MAITLAND 2012 MENTIONS THAT THE VESSEL WAS REFLOATED, BUT NO FURTHER REFERENCES TO THIS	

FRATELLI ARECCO	28
ITALIAN	DURBAN, BACK BEACH AT THE FOOT OF WEST STREET, ABREAST OF THE ROCKET HOUSE
WOODEN BARQUE	1883-8-22
AKYAB, BURMA	951 OR 953
	RICE
CABLES PARTED AND WRECKED. WRECK SOLD. CREW SAVED BY ROCKET APPARATUS. NO LIVES LOST	

FUSILIER	29
BRITISH	DURBAN. WRECKED ON BLUFF ROCKS, SOUTH OF HARBOUR ENTRANCE
SHIP	1865-5-25
CALCUTTA	1,088
DEMERARA, BRITISH GUIANA	INDIAN LABOURERS
PARTED CABLES, CAME ASHORE AND WRECKED. 5 OR 20 LIVES LOST	

GAZELLE	30
AMERICAN	DURBAN, ON BAR RIDGE AND BACK BEACH
BRIG	1879-3-13
CAPE TOWN	226
	RICE, MAIZE

	600 BAGS OF MAIZE
STRANDED, SOLD AND BECAME A TOTAL WRECK. NO LIVES LOST	

GOOD HOPE	31
BRITISH	DURBAN, POINT OF THE BAY, INSIDE THE BAR
KETCH	1685-5-17
GRAVESEND	50
DRIVEN ASHORE AND WRECKED. THE CREW BUILT A BOAT FROM THE WRECKAGE IN WHICH 10 OF THE COMPLEMENT OF 24 LEFT FOR A SLAVING EXPEDITION TO MADAGASCAR	

GRACE PEILE	32
BRITISH	DURBAN, BACK BEACH OPPOSITE WEST STREET
WOODEN BARQUE	1872-7-30
	321
	MULES
	78 MULES
PARTED CABLES AND DRIVEN ASHORE WITH 3 OTHER VESSELS. CONDEMNED AND ABANDONED. HULL AUCTIONED OFF. NO LIVES LOST	

GRAF WEDELL	33
SWEDISH / GERMAN	DURBAN, BAR RIDGE / BACK BEACH / DURBAN BEACH
BRIG	1880-10-24
GOTHENBURG	290 OR 298
	TIMBER
PARTED CABLES, RAN AGROUND AND WRECKED. 4 LIVES LOST	

H.D. STORER / H.D. STOVER	34
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AMERICAN	DURBAN, BACK BEACH
BARQUE	1878-8-2 OR 1878-8-4
NEW YORK	381
	GENERAL CARGO
PARTED CABLES AND RAN AGROUND. ALL CREW SAVED WITH ROCKET APPARATUS. WRECK AUCTIONED	

HAWTHORN	35
BRITISH	DURBAN. BETWEEN THE POINT AND THE ROCKET HOUSE, 200M SOUTH OF WEST STREET
WOODEN BARQUE	1889-8-19
NEW YORK	621
	GENERAL CARGO
PARTED CABLES AND DRIVEN ASHORE. NO LIVES LOST. CREW SAVED BY ROCKET APPARATUS	

HERO	36
	DURBAN, ON THE BAR
	1843-11-17
CABLES PARTED, RAN AGROUND AND WRECKED. CONDEMNED, SOLD AND SCRAPPED	

HOGNI	37
	DURBAN, OFFSHORE ?
	1936-9-8

SCUTTLED	

HYDRA	38
GERMAN	DURBAN, ON THE BAR
BRIG	1867-12-13
ALGOA BAY	178
CABLES PARTED, RAN AGROUND AND WRECKED. WRECK WAS AUCTIONED OFF. 7 OR 8 CREW DIED	

ISTAR	39
	DURBAN, 7KM OFF THE HARBOUR
YACHT, FLOATING FISH FACTORY	1931-3-28
SOLD FOR SCRAP AND SCUTTLED	

JAMES GADDARN / JAMES GODDERN	40
BRITISH	DURBAN, BACK BEACH
WOODEN BARQUE	1882-1-27
MOBILE, ALABAMA	378 OR 379
	TIMBER. CARGO OFFLOADED BEFORE WRECKING
PARTED CABLES, WENT ASHORE AND BECAME TOTAL WRECK.	
NO LIVES LOST	

JESSIE	41
BRITISH	DURBAN, LEE / ANNABELLA BANK

	1880-9-14
WENT ASHORE	

JUST	42
BRITISH	DURBAN, BACK BEACH
LIGHTER	1882-10-24
	123
PARTED CABLES AND WENT ASHORE WHILE NOBODY WAS ON BOARD. NO LIVES LOST	

KAFIR CHIEF	43
BRITISH	DURBAN, ON THE BAR / BACK BEACH AT FOOT OF WEST STREET.
BARQUE	1876-1-7
	316
PARTED CABLES AND RAN AGROUND. BECAME A TOTAL WRECK. PART OF WRECK WASHED UP ON BACK BEACH AT FOOT OF WEST STREET. HULL AUCTIONED OFF. NO LIVES LOST	

KARIN	44
SOUTH AFRICAN	DURBAN, SHIPPING CHANNEL OUTSIDE HARBOUR
	1927-11-10

LOAD SHIFTED AND SANK IN 18M OF WATER. ATTEMPT TO REFLOAT UNSUCCESSFUL. WRECK FLATTENED WITH EXPLOSIVES. MOST WRECKAGE REMOVED IN 2009 AS PART OF HARBOUR WIDENING ACTIVITIES	

KATE	45
SOUTH AFRICAN	DURBAN, 5KM FROM HARBOUR
DREDGER / RECONDITIONED AS COASTER	1931-3-18
SCUTTLED IN OVER 100M WATERDEPTH	

KAYLE	46
	DURBAN ?. NO FURTHER INFORMATION AVAILABLE

LADY MAY	47
	DURBAN, OFF SHORE ?
	BEFORE 1939
SCUTTLED	

LE PAQUEBOT BORDELAIS	48
FRENCH	DURBAN, ON THE BAR
BARQUE	1847-6-28
PORT NATAL/DURBAN	233
REUNION	CATTLE
DRIFTED ONTO THE BAR AND WRECKED. NO LIVES LOST	

LIBA	49
BRITISH	DURBAN, BAR RIDGE / BACK BEACH
BARQUE	1879-3-13
	425
WRECKED. NO LIVES LOST	

LICENSED LIGHTER NO. 18	50
	DURBAN, OUTER ANCHORAGE
LIGHTER	1889-7-18
SPRANG A LEAK AND FOUNDERED	

LIGHTER NO. 8	51
	DURBAN, OUTSIDE THE BAR
LIGHTER	1899-11-20

BULKHEADS BURSTED, TOOK IN WATER AND FOUNDERED. NO LIVES LOST

LILY	52
	DURBAN, HARBOUR CHANNEL
	1879-5-15
OLD AND HEAVILY LADEN VESSEL. KEELED OVER AND SANK. NO LIVES LOST	

LION	53
BRITISH	DURBAN, NORTH PIER
TUG	1904-7-21
FOUNDERED ON CONCRETE BLOCKS OF NORTH PIER WHILE ATTEMPTING TO CROSS THE BAR. 7 LIVES LOST. WRECKAGE DREDGED UP IN 2009 MAY BE FROM THIS VESSEL	

LITTLE BESS	54
	DURBAN, INSIDE THE BAR
LIGHTER	1884-11-13
GROUNDED WHILE BEING TOWED BY TUG 'LION', CAPSIZED AND SANK	

LOLA	55
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SWEDISH	DURBAN, BACK BEACH 300M TO THE POINT SIDE OF WEST STREET
BARQUE	1879-3-30
GOTHENBURG	326
	DEALS, TIMBER
PARTED CABLES AND WRECKED. NO LIVES LOST	

LORD GEORGE BENTINCK	56
BRITISH	DURBAN, BACK BEACH
WOODEN BARQUE	1861-1-3
MADRAS	592 OR 593
	INDIAN IMMIGRANT PASSENGERS / LABOURERS
PARTED CABLES AND STRUCK THE BAR. DRIFTED OFF AND WRECKED ON BACK BEACH. NO LIVES LOST. WRECK WAS AUCTIONED OFF	

LUNA	57
BRITISH	DURBAN, BACK BEACH
BRIG	1880-9-2
LONDON	184
	GENERAL CARGO
CABLES PARTED AND WRECKED. CREW SAVED BY ROCKET APPARATUS. NO LIVES LOST	

MABEL	58
BRITISH	DURBAN, BACK BEACH AT FOOT OF WEST STREET
WOODEN BARQUE	1877-10-26
GLASGOW	299 OR 300
	GENERAL CARGO
	PART OF RIGGING, EQUIPMENT AND CARGO

	SALVAGED
PARTED CABLES, WENT ASHORE AND WRECKED. 4 OR 5 LIVES LOST, INCLUDING THE MASTER. PART OF CONTENTS OF WRECK SOLD	

MARY	59
BRITISH	DURBAN, ON THE BAR / THE POINT
BRIG	1825-10-1
BRITAIN	
WRECKED WHILE TRYING TO CROSS THE BAR. NO LIVES LOST. VESSEL 'CHAKA' BUILT FROM WRECKAGE	

MARY EMILY	60
GERMAN	DURBAN, BACK BEACH, OPPOSITE THE ROCKET STATION, NEAR FOOT OF WEST STREET IN 12M OF WATER / NEAR VETCH'S PIER
WOODEN BARQUE	1889-8-29
CARDIFF	461
	COAL
CABLES PARTED AND WRECKED. ALL 10 CREW LOST	

MEDWAY	61
BRITISH	DURBAN, OUTER ANCHORAGE
IRON LIGHTER	1883-10-15
STRUCK THE BAR WHILE UNDER TOW. TAKEN TO OUTER ANCHORAGE WHERE IT SANK. NO LIVES LOST	

MINERVA	62
BRITISH	DURBAN, POINT OF THE BLUFF
WOODEN SHIP	1850-7-4
	987
DURBAN	SETTLERS, GENERAL CARGO
PARTED ANCHORS OUTSIDE THE BAR AND DRIFTED ONTO THE ROCKS.	
NO LIVES LOST	

NAMAQUA	63
	DURBAN, 6.4KM EAST-SOUTH-EAST OF DURBAN
COASTER	1932-11-11
SCUTTLED. ACCORDING TO MAITLAND 2012 THIS WRECK IS CLOSE TO THE WRECKS OF 'KATE' (1931), 'ISTAR' (1931), 'EMMA' AND 'GARTHFORCE', BUT NO FURTHER REFERENCES TO THE LAST TWO WRECKS FOUND	

NORTH-WESTER / NORTHWESTER	64
	DURBAN
	1839-5-31
NO LIVES LOST	

NORTHERN ISLES	65
	DURBAN, BLUFF ROCKS
TRAWLER / PATROL VESSEL	1945-1-19

RAN AGROUND, TOTAL WRECK.	

ODD	66
	DURBAN, BETWEEN NORTH PIER AND VETCH'S PIER, ABOUT 20M NORTH OF NORTH PIER
	1949
RAN AGROUND AND WRECKED	

ONAWAY	67
BRITISH	DURBAN, SOUTH PIER UNDER LIGHTHOUSE, AGAINST SOUTH BREAKWATER
WOODEN BARQUE	1892-2-3
NEW YORK	441
DURBAN	GENERAL CARGO, PARAFFIN, MEDICATION
	CARGO WASHED ASHORE
RAN AGROUND AND WRECKED. NO LIVES LOST	

HMS OTIS	68
BRITISH	OFF DURBAN
SUBMARINE	1946-9-?
SCUTTLED OFF THE DURBAN COAST	

SS OVINGTON COURT	69
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BRITISH	DURBAN, SOUTH BEACH, WEST OF WEST STREET
STEEL CARGO VESSEL	1940-11-25
MAURITIUS	6, 095
	SUGAR
	CARGO SALVAGED
BLOWN ASHORE AND WRECKED. CARGO SAVED, 2 OR 4 LIVES LOST. IN 2010, WRECKAGE WAS STILL VISIBLE AT LOW TIDE	

PEUSAMENTO / PENSAMENTO	70
PORTUGUESE	DURBAN, THE BAR (?)
BRIG	1879-10-19 OR 1879-10-20
	279
MOZAMBIQUE	
	CARGO SALVAGED
HIT SHALLOWS, POSSIBLY SPRANG A LEAK, CONDEMNED AND BROKEN UP. CARGO SAVED, NO LIVES LOST	

PHARAMOUND	71
	DURBAN, DURBAN BEACH
	1863-1-10
REPORTED AS WRECKED ON DURBAN BEACH. ALTHOUGH THE NATAL HARBOUR BOARD REPORTED THE VESSEL AS WRECKED, ACCORDING TO MAITLAND 2012, THE PRESS REPORTED THAT THE VESSEL SUSTAINED LITTLE DAMAGE AND CONTINUED HER VOYAGE	

PHOEBE	72
BRITISH	DURBAN, ON THE BAR
LIGHTER	1880-9-14

STRUCK ON THE BAR AND WRECKED. NO LIVES LOST	

PIONEER	73
BRITISH	DURBAN, BACK BEACH, NEAR LEE / ANNABELLA BANK. BETWEEN NEW HARBOUR WORKS AND THE OLD STONE JETTY
BARQUE	1862-10-23
LONDON	453
DURBAN	TIMBER
CABLES PARTED, DRIFTED ONTO BACK BEACH BETWEEN NEW HARBOUR WORKS AND OLD STONE JETTY AND WRECKED. NO LIVES LOST	

QUEEN	74
BRITISH	DURBAN, BACK BEACH NEAR VETCH'S PIER
BRIG	1863-8-16
LONDON	198
PARTED CABLES AND WRECKED. NO LIVES LOST	

QUEEN OF CEYLON	75
BRITISH	DURBAN, BACK BEACH
BARQUE	1882-3-3
GRIMSBY	422
	COAL
PARTED CABLES AND WRECKED. NO LIVES LOST	

RIALTO	76
GERMAN	DURBAN, OPPOSITE THE SIGNAL STATION
	1904-2-2
COLLIDED WITH THE ANCHORED DREDGER 'NAUTILUS' AND WAS WRECKED	

RICHARD PEARCE / RICHARD PEARSE	77
BRITISH	DURBAN, LEE / ANNABELLA BANK (?)
BARQUE	1880 MARCH OR 1880-5-18
	367
ON TOW AND GROUNDED ON LEE / ANNABELLA BANK. REFLOATED AND TOWED INTO HARBOUR. ON 18 MAY 1880 IT WAS REPORTED THAT THE VESSEL STRANDED (AGAIN). REPORTS ARE UNCLEAR AND IT IS NOT KNOWN IF THIS REFERS TO THE EARLIER INCIDENT OR A LATER ONE. NO FURTHER REFERENCE TO THIS VESSEL FOR 1881 AND LATER	

ROE	78
	DURBAN, THE BAR
LIGHTER	1883-7-25
STRANDED ON THE BAR AND CAPSIZED. 8 OF THE CREW SAVED, 3 LIVES LOST	

SAINT CLARE	79
BRITISH	DURBAN, BACK BEACH
WOODEN BARQUE	1871-10-20

	316 OR 318
	GENERAL CARGO
	PART OF CARGO ALREADY OFFLOADED BEFORE WRECKING
CABLE PARTED AND RAN AGROUND. 1 LIFE LOST	

SARA SMITH / SARAH SMITH	80
BRITISH	DURBAN, LEE / ANNABELLA BANK
SCHOONER	1874-2-7
	193
	CARGO SALVAGED AND SOLD
DRIFTED ONTO THE LEE / ANNABELLA BANK AND STRANDED. REFLOATED BUT CONDEMNED AND SOLD BY AUCTION	

SEBASTIAN	81
BRITISH	DURBAN, BACK BEACH NEAR THE NORTH PIER
WOODEN BARQUE	1863-9-26
LONDON	364
	IMMIGRANTS, GENERAL CARGO
PARTED CABLES, DRIVEN ASHORE AND WRECKED. NO LIVES LOST	

SEENYMPHE	82
GERMAN	DURBAN, OUTER BAR RIDGE NORTH OF VETCH'S PIER
SCHOONER	1885-12-12
MOZAMBIQUE	191
	SALT, CORN
ANCHORS FAILED TO HOLD AND WRECKED. DISINTEGRATED WITHIN HOURS. NO LIVES LOST	

SIR GORDON	83
	DURBAN, OFFSHORE
ROCK BREAKER / GRAB DREDGER	1945
SCUTTLED	

SOUTHPORT	84
BRITISH	DURBAN, BACK BEACH
WOODEN BARQUE	1878-8-23
EAST LONDON	359
DAMAGED AND DROPPED ANCHOR IN EAST LONDON. DRIFTED OFF AND STRANDED ON BACK BEACH, DURBAN, WHERE SHE WAS WRECKED.	
NO LIVES LOST	

STAR OF WALES	85
BRITISH	DURBAN, 2½KM SOUTH OF UMGENI RIVER
WOODEN BRIG	1874-12-7
ADELAIDE	184 OR 185
	FLOUR
PARTED FROM ANCHORS AND WRECKED. 3 LIVES LOST	

STOCKPORT	86
	DURBAN, BACK BEACH NEAR KENILWORTH TEAROOM
	1885

GROUNDED AND WRECKED	

STRATHCLYDE	87
SOUTH AFRICAN	DURBAN, OFFSHORE
AUXILIARY BARQUE / YACHT/ FISHING VESSEL	1933
DISMANTLED AND SUNK JULY-SEPTEMBER 1933	

SUFFREN	88
FRENCH	DURBAN, OUTSIDE THE BAR
BARQUE	1845-12-17
REUNION	293
	IN BALLAST / CATTLE
CABLES PARTED, DRIFTED AGROUND AND WRECKED. NO LIVES LOST	

SURPRISE	89
NORWEGIAN	DURBAN, BACK BEACH
BARQUE	1880-8-25
GOTHENBRUG	427
	TIMBER
	PARTS OF WRECK AND CONTENTS SOLD AT AUCTION
CABLES PARTED, GROUNDED AND WRECKED. NO LIVES LOST	

SWEETIE SANDRA	90
	DURBAN, NORTH PIER
	1991
AGROUND. THE REGISTER HELD BY THE SAHRA DOES NOT MENTION THIS VESSEL. REFERENCE TO THIS INCIDENT IS ONLY MADE IN MAITLAND 2012. VESSEL POSSIBLY REFLOATED ?	

HMSAS SYDOSTLANDET	91
SOUTH AFRICAN	DURBAN, APPROX. 8KM SOUTH OF UMHLANGA ROCKS / 11KM NORTHWEST OF THE UMGENI RIVER
PATROL VESSEL	1942-4-6
	259
	ONE 12 POUND CANNON AND SOME AUXILIARY MACHINERY
CAME ASHORE AND WRECKED. NO LIVES LOST	

TANCRED	92
BRITISH	DURBAN, BEACH NEAR THE POINT OFFICES
WOODEN BRIG / BRIGANTINE / BARQUENTINE	1879-5-2 OR 1879-7-2
LONDON	199
GROUNDED BETWEEN LEE / ANNABELLA BANK AND THE BAR WHILE ON TOW. FLOATED AGAIN AND DROVE ONTO THE BEACH NEAR THE POINT OFFICES. NO LIVES LOST. WRECK SOLD ON 6 AUGUST 1879	

THERESINA / THERESENA	93
BRITISH	DURBAN, BACK BEACH,

	POINT QUICKSAND
WOODEN BRIG / BRIGANTINE / BARQUE	1878-4-9 OR 1878-4-10
LONDON	279 OR 294
	GENERAL CARGO
PARTED CABLES AND CAME ASHORE. SETTLED IN QUICKSAND. CARGO COULD NOT BE SALVAGED. CREW SAVED BY ROCKET APPARATUS.	
NO LIVES LOST. WRECK UNCOVERED IN 1914 AND MAY HAVE BEEN DEMOLISHED / REMOVED IN 1936	

TRANSVAAL	94
BRITISH	DURBAN, 2½KM SOUTH OF UMGENI RIVER MOUTH
WOODEN BARQUE	1874-12-8
LONDON	370
	GENERAL CARGO
CABLES PARTED, WRECKED AND BROKE UP. PART OF WRECK WASHED UP. 12 LIVES LOST AND BURIED IN MASS GRAVE IN WEST STREET CEMETERY	

TUGELA	95
BRITISH	DURBAN, BACK BEACH BELOW / OPPOSITE WEST STREET, OFF SCOTSMAN'S POOL (?)
WOODEN SHIP	1868-2-3
	475
	IN BALLAST
PARTED ANCHOR AND DRIFTED, GROUNDED AND WRECKED.	
NO LIVES LOST	

VIGOR	96
NORWEGIAN	DURBAN, BACK BEACH, NORTH-WEST OF

	VETCH'S PIER
WOODEN BRIG	1884-6-9
DRAMMEN, NORWAY	179 OR 267
	TIMBER
ON TOW WHEN GROUNDED INSIDE THE BAR. DRIFTED ONTO LEE / ANNABELLA BANK, BEACHED AND WRECKED. CREW SAVED BY LIFEBOAT. NO LIVES LOST	

VIKING	97
BRITISH	DURBAN, THE BAR
	1898-2-25
CAPSIZED WHILE CROSSING THE BAR AND WRECKED. 8 LIVES LOST	

WAGRIEN	98
GERMAN	DURBAN, NEAR THE UMGENI RIVER MOUTH
SCHOONER	1874-12-8
LONDON	170
	GENERAL CARGO
FOUNDERED DURING A GALE. ALL CREW DIED. MAITLAND 2012 HOWEVER REFERS TO CONFLICTING REPORTS THAT MENTION THAT THE VESSEL SAILED ON TO ADELAIDE AFTER MINOR REPAIRS	

WALTER REICHEL	99
GERMAN	DURBAN, OFFSHORE
BARQUE	1933-12-29

SCUTTLED

ZAMBESI	100
DUTCH	DURBAN, BACK BEACH
WOODEN SCHOONER	1882-12-10
DELAGOA BAY / MAPUTO	130
	GENERAL CARGO
CABLES PARTED, DRIVEN AGROUND AND WRECKED. NO LIVES LOST	

ZENNIA	101
IRISH	DURBAN, LEE / ANNABELLA BANK THEN BACK BEACH
WOODEN BARQUE	1880-7-21
NEWCASTLE	315 OR 316
	COAL
PARTED CABLES AND RAN AGROUND ON LEE / ANNABELLA BANK. LATER DRIFTED ONTO BACK BEACH AND WRECKED. NO LIVES LOST	

ZIBA	102
AMERICAN	DURBAN, BACK BEACH NEAR MILNE'S GROUND. AT PRESENT PART OF NORTH PIER / WIDENED HARBOUR ENTRANCE
SCHOONER	1879-3-13
BUENOS AIRES	425
	MAIZE
PARTED CABLES AND DROVE ONTO BAR RIDGE. GOT OFF AND RAN AGROUND ON BACK BEACH WHERE THE VESSEL WRECKED. NO LIVES LOST	

