



United Nations
Educational, Scientific and
Cultural Organization



The Protection of the
Underwater Cultural Heritage

APPENDIX E

Author Martijn. R. Manders

Management Plan

Wreck and Sites

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BZN 10



Type : Pinas
Period : 1640-1675 AD
Location : Waddenzee, The Netherlands

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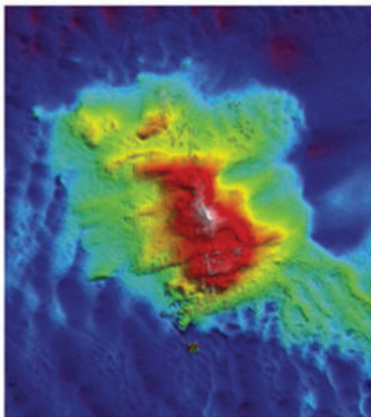


type: All

name: b

- * Batavia
- * Blackfriars
- * Burgzand M
- * BZN 04
- * BZN 3 De R
- * Bremer Co
- * Balitung
- * Binh Thuan
- * Bangkaja
- * B&W2
- * **BZN 10**
- * Bosch
- * Batumandi
- * Buiten Rate

Management plan of shipwreck site Burgzand Noord 10



NISA 2004



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APPENDIX E

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APPENDIX E

Author Martijn R. Manders

Management Plan

Part I: Format of the Management Plan

Title

Management Plan of the [Name], Shipwreck site

0 Administrative details

0.1 Date

0.2 Client

(The name of the sponsor, e.g. private client or State)

0.3 Executed by (contractor)

(The name of the team facilitating the project)

0.4 Approved authorities

(The name of the authority responsible for the site)

0.5 Central registration number

(The registration number/database for the site)

0.6 Location research area

(Description of where it is, for example province, district, place, etc.)

0.7 Coordinates coordinated from Global Positioning System (GPS)

0.8 Environmental context

0.8.1 Coastal geology

0.8.2 Climate

0.8.3 Flora and fauna

0.8.4 Human impact

0.9 Size of research area

(Total area measurement in square metres)

0.10 Depth

(Depth in metres taking into account tidal differences)

0.11 Owner terrain

(The owner of the area the site is situated in, e.g. the State)

0.12 Reported by

(The name of the individual who first reported the site)

0.13 Periods of research

(Dates of fieldwork)

0.14 Site definition

(Short description of what the site is)

0.15 Deposition of archives

(Where are they deposited)

0.16 Legal status

(Protected or non-protected site)

0.17 Recognized threats

(Short summary of major threats)

0.18 Date of re-assessment/re-evaluation

(To be confirmed once the research is complete)

1 Introduction

1.1 Previous studies

(Note any previous studies)

1.2 Historical context

(Note any significant historical context)

2. Assessment of the site

2.1 Description of research assignment

(Summary of why the research is being undertaken)

2.1.1 Reference to working standards

(Outline working standards, e.g. national standards)

2.1.2 Research objectives

(Summary of primary objectives)

2.1.3 Expected results

(Summary of expected outcomes)

2.1.4 Aims/wishes of the client

(Note any specific wishes or aims of the client)

2.1.5 Imposed research conditions

(Note any limitations or guidelines that need to be followed)

2.1.6 Evaluations in between

(Note the evaluation dates during fieldwork)

2.2 Working procedure

2.2.1 Research methods

(Overview of proposed research methods)

2.2.2 Imposed work conditions

(Note any constricting limitations or guidelines)

2.2.3 Modus operandi

(Density or perception of the grid. Note any limitations of observation due to any environmental factors)

2.2.4 Natural sciences, applied sciences and other research

(Note any other related field of study that can be incorporated in order to complete the investigation)

2.3 Research results

2.3.1 Environmental research

2.3.2 Physical condition

2.3.2.1 Finds visible on surface

2.3.2.2 Completeness

(Note how much the site resembles its original state, e.g. quantity)

2.3.2.2.1 Completeness of wreck parts

2.3.2.2.2 Stratigraphy intact

2.3.2.2.3 Mobile artefacts in situ

(Note any artefacts that can be moved in or near the wreck itself)

2.3.2.2.4 Relation between mobile artefacts and wreck parts

2.3.2.2.5 Relation between mobile artefacts

(Note any relationship between the artefacts and how it can be distinguished)

2.3.2.2.6 Stability natural environment

2.3.3 State of preservation

2.3.3.1 Organic wreck parts

(Either indication or scientific analyses)

2.3.3.2 Metal wreck parts

(Either indication or scientific analyses)

2.3.3.3 Organic mobilia

(Either indication or scientific analyses)

2.3.3.4 Metal mobilia

(Either indication or scientific analyses)

2.3.4 Cultural-historic and archaeological data

2.3.4.1 Identification

2.3.4.1.1 Cultural context

(A specific period or culture with which the site can be associated)

2.3.4.1.2 Century

(The century from which the ship dates)

2.3.4.1.3 Exact dating

(The year and/or date that the ship set sail or sank, e.g. 1465, 15 December 1783)

2.3.4.1.4 Function

(The function of the ship, e.g. trader or warship).

2.3.4.1.5 Type

(The type of ship, e.g. yacht or galleon)

2.3.4.1.6 Operating area

(The area in which the ship sailed)

2.3.4.1.7 Propulsion

(The method of propulsion, e.g. sail or motor)

2.3.4.1.8 Size

(Size of the ship in metres)

2.3.4.1.9 Material

(Construction materials, e.g. wood, iron or paper)

2.3.4.1.10 Building tradition

(The building tradition, e.g. Asian, Thai or European)

2.3.4.1.11 Inventory

(The artefacts found belonging to the ship)

2.3.4.1.12 Cargo

(The cargo carried by the ship)

2.3.4.1.13 Personal belongings

(Note any personal belongings aboard the ship).

2.3.4.2 Constructional features

(Note any specific construction elements specific to the ship)

2.4 Risk assessment

2.4.1 Natural impact

(Note any natural risks to the site)

2.4.2 Human impact

(Note any human risks/threats to the site)

3 Cultural valuation of the [Name] shipwreck

3.1 Experience aspects (quality)

3.1.1 Aesthetic values

3.1.1.1 Visible

3.1.1.1.1 Visible as landscape element

(Note if the site is visible in the landscape and, therefore, can be enjoyed by others)

3.1.1.1.2 Visible as exhibition element

(Note if the wreck site has the potential to be used as an underwater trail or museum)

3.1.2 Memory value

3.1.2.1 Historic value

(Note any 'collective' memory that the site holds for people)

3.2 Physical quality

3.2.1 Structural integrity

3.2.1.1 Presence of ship construction

(Note approximately how much of the ship remains)

3.2.1.2 Completeness of the wreck parts

(Note which of parts of the wreck are missing or still intact)

3.2.1.3 Stratigraphical conditions

(Note the stratigraphic conditions, e.g. mixed sediments)

3.2.1.4 *In situ* portable antiquities

(Note the presence and quality of artefacts)

3.2.1.4.1 Relation between portable objects and ship parts

(Note any clear relation between the objects and the place where they are lying)

3.2.1.4.2 Relation between portable objects

Note any clear relation between the different objects
(Note any clear relation between the different objects)

3.2.1.5 Stability of the natural environment

(Note the stability of the natural environment)

3.2.2 State of preservation

3.2.2.1 Wreck parts

3.2.2.1.1 Metal

3.2.2.1.2 Composite

(Note any parts of the wreck that comprise of different materials, such as iron and wood)

3.2.2.2 Artefacts

3.2.2.2.1 Organic material

3.2.2.2.2 Inorganic

3.2.2.2.3 Composite

(Note any parts of the wreck that comprise of different materials, such as iron and wood)

3.3 Quality of archaeological information

3.3.1 Representative value

(Note how representative the information is for the period or culture)

3.3.1.1 Chronological

(Note how representative the information is for the time period and/or how much can it add to the understanding of the era)

3.3.1.2 Regional

(Note how representative the site is for the region or how much can it add to the understanding of it)

3.3.2 Significance of information

(See Unit 6: Significance Assessment)

3.3.2.1 Geographical significance

3.3.2.2 Historical or archaeological significance

3.4 Conclusion

4 Site management

4.1 Cost-benefit analysis and general conclusion

(Summary of the estimated costs associated with the management of the site (*in situ* preservation/(part) excavation/monitoring, etc.). Note the importance or significance of the site.)

4.2 Site management agenda Summary of planned activities in the (near) future

(Summary of planned activities in the (near) future.)

4.2.1 Safeguarding

4.2.1.1 Legal

(Note what kind of legal actions are going to be taken)

4.2.1.2 Physical

(Note what kind of physical protection methods are going to be taken.)

4.2.2 Monitoring

(Outline how often, when, by whom and with what, the site is going to be monitored in the future. Note planned actions.)

4.2.3 Visualizing

(Outline how the site is going to be visualized, by whom and when. Note planned actions.)

4.2.4 Finance

(Summarize what budget is available, the costs associated with planned actions, the amount of budget spent so far, etc.)

4.3 Date of re-assessments/re-evaluation

(Note the date of the next re-assessment/re-evaluation, taking into account if time and money spent allow for it and if actions taken are effective.)

Attachments

- 1 Map of research area
- 2 Planning
- 3 Dive logs
- 4 First sketch of all team members
- 5 Measuring plan
- 6 All the individual sketches
- 7 A site plan
- 8 Photographs

This format has been originally developed under the MoSS-Project (2002-2004), sponsored by the European Union.

For more information, see: Manders, M. 2004.

Safeguarding a Site: The Master Management Plan. MoSS Newsletter, 3/2004, pp. 16-19.

APPENDIX E

Management Plan

Part II: Example Management Plan

Prepared by Team B *(alphabetically ordered by last names):*
AN Sothea (Cambodia), Sheldon Clyde B. JAGO-ON (Philippines),
Palitha Weerasingha Kalu Dewalage (Sri Lanka), Nandadasa Samaraweera
(Sri Lanka), Cyril Santos (Philippines), Thoam Sam Ol (Cambodia)

Title

Management Plan of the Mannok Shipwreck Site, the Gulf of Thailand, Rayong Province, Thailand

0 Administrative details

0.1 Date

1st March 2011

0.2 Client

Underwater Archaeology Division, Fine Arts Department of Thailand

0.3 Executed by (contractor)

UNESCO regional trainees participating in the Third Foundation Course, Chanthaburi province, Thailand

0.4 Approved authorities

Underwater Archaeology Division, Fine Arts Department of Thailand

0.5 Central registration number

No registration number yet

0.6 Location research area

Province: Rayong, Thailand; District: Kram, Klaeng;
Place: Mannok Island; Site Name: Mannok Shipwreck

0.7 Coordinates

N12 30 20.2 E101 42 2X.X (WGS 84)

0.8 Environmental context

The Mannok shipwreck lies at a depth of approximately 20 metres on the seabed, surrounded by sand and silt. There is obvious evidence of environmental impacts, such as physical decay especially on the upper part of the ship's structure.

0.8.1 Coastal geology

The Mannok Island has a low promontory, with beaches along its coasts, some of which have resorts. The interior sediments maybe composed of clays rich with iron.

0.8.2 Climate

N/A

0.8.3 Flora and fauna

The Mannok shipwreck site is rich with flora and fauna. Various species of fish can be seen in the area, such as groupers, eels, crabs, urchin, barracuda, stone fish and sea worms.

0.8.4 Human impact

There is widespread commercial fishing activity in the area. As a result of these activities fishing paraphernalia, such as fishing nets, stone sinkers, hooks and fish traps can be seen on and around the site.

0.9 Size of research area

The designated research area is approximately 50 x 20 square metres and encompasses the shipwreck and its close vicinity.

0.10 Depth

19 to 20 metres

0.11 Owner terrain

Government of Thailand

0.12 Reported by

Mr Vichien Singmatorthone

0.13 Periods of research

14 day field work period from 28 February to 13 March 2011

0.14 Site definition

Medium size (42 m x 6.5 m) iron steam shipwreck, around 15 per cent of the wreck remains are preserved on the sea bed. Total length of the wreck is approximately 42 metres from bow to stern. The width of the amidships is approximately 6.5 metres. The shipwreck lies in a North South direction. The site is located 1 nautical mile southwest of Mannok Island and approximately 10 nautical miles from the port of Rayong.

0.15 Deposition of archives

No archival data of the Mannok shipwreck has yet been found. The Mannok shipwreck is situated in the territorial waters of Thailand and as such, is protected by the law of 'Ancient Monuments, Antiques Objects of Arts and National Museums, B.E. 2504 (1961)'

0.16 Legal status

N/A

0.17 Recognized threats

N/A

0.18 Date of re-assessment/re-evaluation

28 February to 13 March 2011. This research will determine when the next monitoring of the site will be.

1 Introduction

1.1 Previous studies

Previously used as the training site during the First and Second Foundation Courses on Underwater Cultural Heritage.

1.2 Historical context

Thai, South-East Asian, French Indo-China

2. Assessment of the site

2.1 Description of research assignment

To complete a non-intrusive survey and photo documentation as part of the Third Foundation Course on Underwater Cultural Heritage.

2.1.1 Reference to working standards

All research is carried out under the guidelines of the 2001 UNESCO Convention and Underwater Archaeological Division of the Fine Arts Department of Thailand.

2.1.2 Research objectives

The training serves as a practical application of techniques (offsets and other measurement methods, using Site Recorder, planning frames) for surveying an underwater archaeological site. The aim of the training is for students to produce a management plan for the Mannok shipwreck site, alongside identifying the threats and the possible mitigating measures required to conserve the site.

2.1.3 Expected results

- A. A site survey and a management plan
- B. A series of storyboards to be used for a public exhibition

2.1.4 Aims/wishes of the client

To enable South-East Asian underwater archaeologists to survey and make a management plan according to the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage.

2.1.5 Imposed research conditions

Non-intrusive survey techniques

2.1.6 Evaluations in between

During the two weeks diving on the site, each night the research group will come together to discuss and evaluate the work done

2.2 Working procedure

2.2.1 Research methods

Non-disturbing survey using ties (tri-lateration), offsets, and grids or frames.

2.2.2 Imposed work conditions

Safety is the priority. Safety measures are enforced by the UAD.

2.2.3 Modus operandi

N/A

2.2.4 Natural sciences, applied sciences and other research

Marine biologists can study marine animals and organisms that live on the wreck site. Geologists can assess the dynamics of sedimentation on the seabed and make predictions regarding possible future impacts to the site.

2.3 Research results

2.3.1 Environmental research

Attention was given to identifying the immediate environmental conditions and factors that could be directly affecting the site, as well as the threats from fishing communities and recreational divers.

2.3.2 Physical condition

Approximately 10 to 15 per cent of the shipwreck is visible. The ship is constructed from iron, has one boiler and some parts of the hull is missing. The hull was reinforced with concrete and some wood portions that form part of the deck construction were also documented.

2.3.2.1 Finds visible on surface

Large metal parts, ceramics, bricks, charcoal, pipes and glass bottles

2.3.2.2 Completeness

Approximately 10 to 15 per cent of the shipwreck is visible. Stern and bow and some parts of the boiler in the amidships area is clearly intact.

2.3.2.2.1 Completeness of wreck parts

Upper structure, deck and other parts are missing.

2.3.2.2.2 Stratigraphy intact

Only one type of sediment was documented on the seabed: silty-sand.

2.3.2.2.3 Mobile artefacts in situ

Ceramics, bottles, charcoal and stonewares.

2.3.2.2.4 Relation between mobile artefacts and wreck parts

The ceramics, bottles and stoneware may have been part of the ship's cargo or among the things used by the crew and/or passengers. The charcoal may have been the fuel to the boiler.

2.3.2.2.5 Relation between mobile artefacts

It is possible that most of the artefacts found were part of the cargo.

2.3.2.2.6 Stability natural environment

Presently, the natural environment looks stable.

2.3.3 State of preservation

2.3.3.1 Organic wreck parts

Deteriorating

2.3.3.2 Metal wreck parts

Corroding

2.3.3.3 Organic mobilia

Deteriorating

2.3.3.4 Metal mobilia

N/A

2.3.4 Cultural-historic and archaeological data

2.3.4.1 Identification

2.3.4.1.1 Cultural context

Available evidence reveals that this shipwreck dates back to early twentieth century, during the time of France's attempt to dominate Thailand. As a result, there is much value in the shipwreck's cultural context.

2.3.4.1.2 Century

Coins found on the wreck site were minted in 1917, dating the ship to the early twentieth century.

2.3.4.1.3 Exact dating

Sinking date is estimated to be some time after 1917.

2.3.4.1.4 Function

Most likely the wreck was a trade or passenger transport ship.

2.3.4.1.5 Type

Steam ship.

2.3.4.1.6 Operating area

Within the Gulf of Thailand.

2.3.4.1.7 Propulsion

Steam

2.3.4.1.8 Size

41 metres long and 6.5 metres wide.)

2.3.4.1.9 Material

Metal hull, probably wooden deck.

2.3.4.1.10 Building tradition

Mixed European and South Asian traditions.

2.3.4.1.11 Inventory

Metal objects, ceramics, wood and charcoal.

2.3.4.1.12 Cargo

Ceramics, glass bottles and possibly wood.

2.3.4.1.13 Personal belongings

Coins, ceramics, and wearing as buttons pocket watch have been found.

2.3.4.2 Constructional features

Metal hull (probably reinforced later with concrete), rudder and boiler.

2.4 Risk assessment

2.4.1 Natural impact

Saturated warm sea water and strong currents cause harm to the metal parts of the ship.

2.4.2 Human impact

Note any human risks/threats to the site

3 Cultural valuation of the [Name] shipwreck

3.1 Experience aspects (quality)

3.1.1 Aesthetic values

As some prominent parts of the wreck are still visible on the seabed, the wreck could be attractive to recreational divers.

3.1.1.1 Visible

3.1.1.1.1 Visible as landscape element

Yes. The Mannok site lies at a depth of 20 metres with parts of the ship still clearly visible.

3.1.1.1.2 Visible as exhibition element

The site is situated far from the shore, at 20 m depth and is therefore barely visible. Only recreational divers may be able to enjoy the site, but the state of the site will probably not allow it to be raised and put on display in an exhibition. The finds, however, can be well presented and are a fine illustration of coastal trade and human transport in early twentieth century Indo-China.

3.1.2 Memory value

3.1.2.1 Historic value

Collective memory may be obtained through research and survey.

3.2 Physical quality

3.2.1 Structural integrity

3.2.1.1 Presence of ship construction

Approximately 10 to 20 per cent of the total structure of the shipwreck is intact.

3.2.1.2 Completeness of the wreck parts

Approximately round 10 per cent is visible but the rest may be buried under the sediments.

3.2.1.3 Stratigraphical conditions

N/A

3.2.1.4 In situ portable antiquities

In situ mobilia, such as ceramics, bolts, nuts, lantern and rope coil are scattered over the shipwreck. Some of them are in fairly good condition and would be attractive to antique collectors.

3.2.1.4.1 Relation between portable objects and ship parts

The mobilia has a relationship with the functions of a ship. Ceramics are abundantly distributed in galley area.

3.2.1.4.2 Relation between portable objects Note any clear relation between the different objects

Part of the cargo or materials used in the ship by the crew or passengers.

3.2.1.5 Stability of the natural environment

Relatively stable at the moment.

3.2.2 State of preservation

3.2.2.1 Wreck parts

It is badly weathered; most of the strong hull parts are decayed.

3.2.2.1.1 Organic material

Some of the organic materials seen over the wreck, such as rope coil and wood planks charcoal, are in a highly fragile condition. Marine animals as marine bores and worms are actively damaging the materials.

3.2.2.1.2 Composite

Some parts of the structure of the ship are made of wood and connecting metal plates. Both wood and metal parts are in very fragile condition.

3.2.2.2 Artefacts

3.2.2.2.1 Organic material

There is little remaining of organic materials (wood and coil ropes) that made up rigging parts. Other organic materials that can be identified are in very bad condition.

3.2.2.2.2 Inorganic

Ceramics, bricks, and other inorganic artefacts seen on the wrecks site are in a fairly well preserved condition and some are still intact.

3.2.2.2.3 Composite

No composite objects were found during this research.

3.3 Quality of archaeological information

3.3.1 Representative value

The Mannok wreck site adds much value to the list of the shipwrecks in Thailand. As a steam ship with one boiler and a variety of artefacts, it provides an abundance of information regarding shipbuilding in the South Asia.

3.3.1.1 Chronological

Unique shipwreck for understanding technology of the constructed period.

3.3.1.2 Regional

The Mannok shipwreck is comparatively important among the other iron wrecks found in the region, belonging to the same period.

3.3.2 Significance of information

3.3.2.1 Geographical significance

The Mannok shipwreck has notable significance geographically, particularly for the information it provides regarding the shipbuilding technology of Thailand.

3.3.2.2 Historical or archaeological significance

The Mannok shipwreck is has high historical significance for Thailand. Given the historical backdrop, the sinking may have been caused by French forces who attempted to occupy Thailand. All these things if verified can add to its archaeological and historical significance.

3.4 Conclusion

The Mannok site is a fine example of coastal trade and human transport in early twentieth century Indo-China era. This early steamship is an interesting dive site that contains a lot of history. Objects may be raised for exhibition, but to raise the site itself will prove to be too difficult or expensive.

The site therefore has a high archaeological significance for its specific period of history in this area, which provides it with local, national and regional significance.

4 Site management

4.1 Cost-benefit analysis and general conclusion

Further research can provide additional information about the wreck which may contribute to its significance. Purposive excavation could be done to answer particular questions or alternatively the site can be protected *in situ*.

4.2 Site management agenda Summary of panned activities in the (near) future

4.2.1 Safeguarding

4.2.1.1 Legal

The wreck is lying on the seabed within Thai territorial waters and is protected under the law of 'Ancient monuments, Antiques, Objects of Arts and National Museums B.E.2504 (1961)'.

4.2.1.2 Physical

The Mannok wrecksite is vulnerable to natural environmental forces and human impacts.

4.2.2 Monitoring

Once identified, the first site survey was conducted in 2008. Subsequently in 2009 and 2010 the shipwreck became used as a training ground for South Asian underwater archaeologists under the UNESCO 2001 Convention. The site has been monitored at least once every six month, since being identified. [actions planned]

4.2.3 Visualizing

A scale map layout was prepared that covered the bow, amidships and stern, illustrated by both photographs and video. [actions planned]

4.2.4 Finance

N/A

4.3 Date of re-assessments/re-evaluation

To be confirmed.

Attachments

- 1 Map of research area
- 2 Planning
- 3 Dive logs
- 4 First sketch of all team members
- 5 Measuring plan
- 6 All the individual sketches
- 7 A site plan
- 8 Photographs