

Crisis24



Transit Guidelines: Passages off the Coast of Somalia, the Arabian Sea, Gulf of Aden and Red Sea Piracy Areas

Prepared for

V Ships

Date:

December 2022

Submitted by:

Crisis24's Operations Support Team (OST)

Company Headquarters

Two, London Bridge

London, UK

SE1 9RA

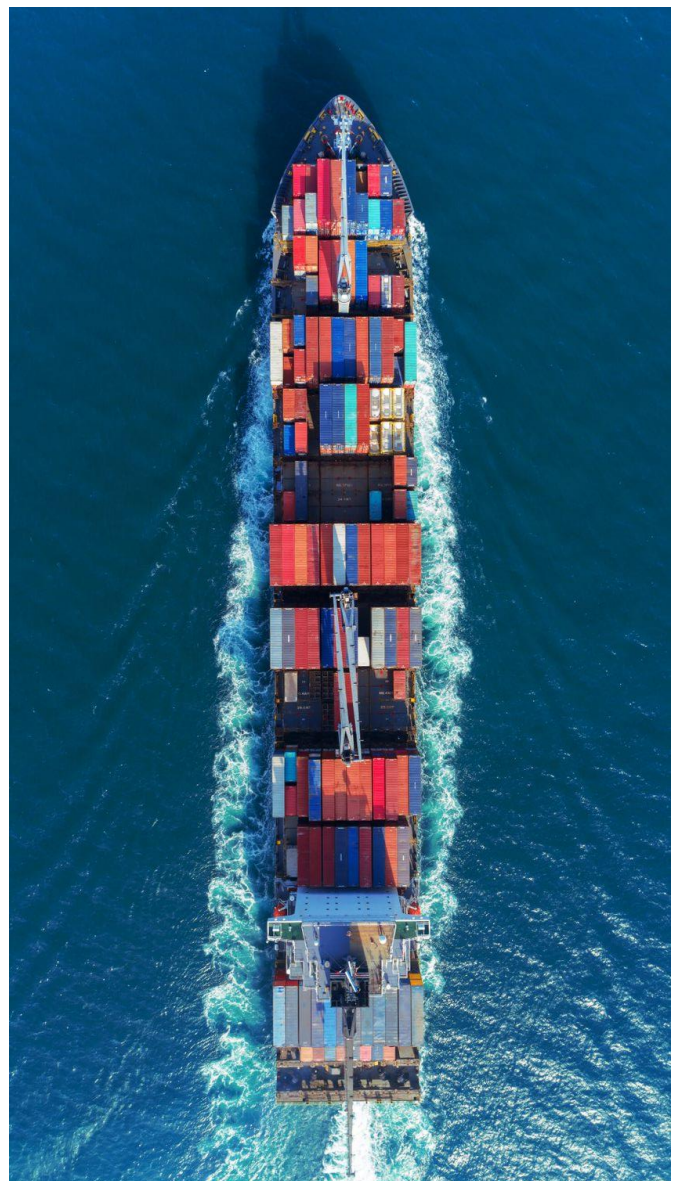


Table of Contents

Part 1	Summary of Guidance	4
1.1	Executive Summary	4
1.2	Summary of Guidance	4
Part 2	Piracy Guidance – Actions Required for Safety and Security	6
2.1	Safety and Security specific to Indian Ocean, Gulf of Aden and Red Sea region	6
2.1.1	Declassification of the BMP Indian Ocean HRA	6
2.1.2	Prior to Entering HRA	6
2.1.3	On Entering the HRA	7
2.2	Safety and security specific to Gulf of Oman & Strait of Hormuz region	8
2.2.1	Prior to Entering Area	8
2.2.2	Procedures in Port	9
2.2.3	Use of Armed Security Teams	10
2.2.4	If Hailed by Non-Coalition Forces	10
2.2.5	Reporting	11
2.2	Actions in the Event of an Attack/Attempted Attack: Stop – Think - Act	11
2.4	Actions in the Event of a Boarding	12
2.5	Actions in the Event the Vessel is Taken	12
2.6	Captivity Considerations	12
2.7	In the Event of Military Intervention	13
2.8	Drone Procedures	13
Part 3	Background Data and Analysis (2022)	15
3.1	High Risk Area	15
3.2	Pirate Areas of Operation	16
3.3	Maritime Security Transit Corridor (MSTC)	18
3.4	Attack Profiles	19
3.5	Crew Kidnapping	21
Part 4	Geopolitical Tensions	23
4.1	Iran/US Relations and Hostilities between Iran/Israel	23



4.2 Iran-aligned Al-Houthis in Yemen	24
Part 5 – Annexes	25
5.1. Risk Assessment and Personnel Protection Considerations	25
5.2. Ship Protection Measures (Guidelines)	28
5.3. Citadels and Safe Muster Points	34
5.4. CSO Procedures	43
Annex A Threat Terminology	44
Limitation	45

Part 1 Summary of Guidance

1.1 Executive Summary

- 16 piracy/maritime security incidents were recorded for 2022; these were primarily concentrated in the Bab-el-Mandeb Strait
- Mitigation measures implemented by vessels and international naval forces have deterred pirates and prevented successful attacks, particularly off Somalia, since 2011. This has resulted in the decision to remove the Indian Ocean High Risk Area (HRA) zone, effective from 00:01UTC on 1 January 2023
- However, as threats to shipping remain high in the JWC HRA, Best Management Practices (BMP5) mitigation measures should continue to be implemented while navigating the area
- Piracy elements from Yemen and Iran remain active within the Bab-el-Mandeb Strait and wider Indian Ocean, with ongoing instability in the region continuing to drive maritime criminal and militant activity across the various gulfs
- Furthermore, tensions remain high between Iran, the US and its allies (particularly Israel) translating into a high threat to associated commercial vessels operating through the Strait of Hormuz, Gulf of Aden and Red Sea

1.2 Summary of Guidance

DETER:

- Transit into the area only when necessary, making use of the established Maritime Security Transit Corridor (MSTC) which includes the Internationally Recommended Transit Corridor (IRTC), and requesting support from regular naval convoys when needed
- Crew alertness and awareness should be of the highest standard. Conduct regular and rigorous training prior to entry into the region
- V.Ships policy for transiting the HRAs is to fully comply with the latest edition of the industry's Best Management Practice (BMP5). This is as per the vessel's Ship Security Plan (SSP), which is approved by the vessel's Flag Administration
- Each transit is to be subjected to a risk assessment. Completed RAs are to be copied to piracy@vships.com. Details are found in this document in Part 5 - Annexes
- For vessel routing, the CSO will discuss routing with the Master and provide them with the latest information. The final decision on safe navigation of the vessel rests with the Master

DETECT:

- Accurate and timely situational intelligence is vital to any safe and secure transit throughout the region. Exterior factors such as poor weather should never subtract from stringent watches and

awareness

DELAY:

- Any access points across the stern, decks and anchor chains should be properly defended with physical security deterrents. A vessel underway is not sufficient enough to deter piracy
- Correct use of citadels and safe muster points have assisted in a marked decrease in crew kidnappings, however proper training and evacuation exercises are vital to their success
- Activate all protective measures, increase speed and alter course as appropriate
- Onboard Armed Security Teams (AST) have proven highly effective in deterring suspicious crafts from continuing their pursuit of the subject vessel, particularly in the Gulf of Aden area

RESPOND:

- Have a clear decision-making process, ensure all crew understand what to do during an attack or attempted attack
- Methods of communication during an attack must be clear in all areas and easily understood
- When necessary enact rehearsed procedures for evacuation to citadel
- Compliance / submission to attackers is essential once vessels are taken and / if citadel is breached

Part 2 Piracy Guidance – Actions Required for Safety and Security

2.1 Safety and Security specific to Indian Ocean, Gulf of Aden and Red Sea region

2.1.1 Declassification of the BMP Indian Ocean HRA

- As of 1 January 2023, the Indian Ocean High Risk Area (HRA) will be declassified, this point is expanded on further in section 3.1
- Although this is so, BIMCO, the International Chamber of Shipping, and other bodies recommend that vessels and seafarers passing through the area after the declassification continue to adhere to security measures currently in place
- Consequently, it is recommended that the safety and security measures provided below for entering into the HRA are followed

2.1.2 Prior to Entering HRA

- It is important that the vessel's CSO is notified immediately after reception of voyage orders which involve passage of the HRA and is provided with all relevant details. See Annex 5.4 for further details
- The Master is to liaise with the CSO on routing to be followed in the Arabian Sea. The CSO will review the latest information available on pirate activity and advise the Master accordingly who will factor this into the risk assessment. Should the route result in deviating from the standard route then the Master **MUST** discuss with the CSO. Vessels proceeding to the Gulf of Aden (GoA) from the Far East normally stay close to the Indian coast until clear of 23 N. See Annex 5.4 for further details
- If for any reason the Master needs to contact the CSO he should do so regardless of the time. Should he not be able to contact the CSO then he should make contact with the alternate CSO
- All vessels must carry out a risk assessment before entering the HRA. The risk assessment is to be carried out in accordance with BMP guidance and the Shipboard Security Plan (SSP) 6.2. See Annex 5.1 for further details
- Well before entering the HRA, the Master / SSO shall hold a security meeting with all crewmembers to discuss the Ship's Security Plan requirements including piracy attack alarm signals, all-clear signals, and actions to be taken for each signal
- Ensure a contingency plan is available with contact details and prepare messages for emergency use
- Vessels shall follow the requirements of all in force RSQ circulars relating to GoA security. The Master should obtain the latest information from the MSCHOA, UKMTO and NATO

Shipping Centre before planning the voyage

- Prior to entering the HRA the vessel should increase the onboard security measures as if operating at level 2. However, vessels should officially maintain the security level as required by the respective Flag State
- The ship protection measures (SPM) appropriate and applicable to your vessel will be identified in the risk assessment, which is to be agreed and signed off by the CSO. The SPM described in BMP are the most basic and likely to be effective. It is stressed that armed guards (AST) are an addition to BMP SPM, not an alternative. See Annex 5.3 for further details
- The use, or not, of armed Private Maritime Security Contractors (PMSC) on board merchant vessels is a matter for individual vessel operators to decide following their own voyage risk assessment and approval of respective Flag States. This advice does not constitute a recommendation or endorsement of the general use of armed PMSCs

2.1.3 On Entering the HRA

- The five fundamental requirements of BMP are listed as:
 - Submit ship reports
 - Monitor latest threat information
 - Ensure all access points are limited and controlled
 - Avoid drifting, waiting, anchoring and slow steaming, particularly in the MSTC
 - Minimise use of Marine VHF and use email or a secure satellite telephone instead. Where possible only answer known or legitimate callers on VHF channels, bearing in mind that impostors are possible
- The CSO should register the vessel for access to the MSCHOA.org website, monitor all piracy related websites for specific threats and advise the Master as necessary. Contingency and communications plans shall be developed and agreed with the CSO. See Annex 5.4 for further details
- All potential access points (doors, portholes, vents, etc.) should be secured or defended. Access to the bridge, engine room, steering gear room, and all internal spaces should be controlled. Access should be reduced to a single point of entry when transiting the HRA. Any measures employed should not obstruct an emergency exit. See Annex 5.3 for further details
- Each vessel transiting the GoA area must use the MSTC as established. Westbound vessels should navigate in the northern portion of the corridor, and eastbound vessels in the southern portion
- If available and identified as being required by the risk assessment, vessels shall join a convoy or group transit through the MSTC. However, reducing speed or stopping to await a convoy increases the risk posed to the vessel and this is to be factored into the risk assessment. Vessels must not stop or drift in the HRA except in an emergency
- The vessel shall transit the HRA at normal voyage speed. In the event of sighting suspicious vessels or if under attack maximum speed must be utilised

- When transiting MSTC the speed shall be adjusted according to the speed of the chosen Group Transit or dedicated naval escort. If a vessel can proceed at 15 knots or greater, this substantially reduces risk. Zigzagging should be a last resort only
- Under SOLAS V/19, vessels fitted with automatic identification systems (AIS) shall maintain AIS in operation at all times except where international agreements, rules or standards provide for the protection of navigational information
- IMO Resolution A.917(22) allows for AIS to be switched off if the Master believes that continued operation might compromise the security of the vessel. However, both EUNAVFOR and NATO advised in 2011 that AIS should be left on at all times to help mitigate risks. Data shared should be restricted to the vessel's identity, position, course, speed, navigational status and safety-related information. The decision on AIS policy remains at the discretion of the Master; however, it should be activated **immediately** at the time of an attack
- Vessels should avoid entering Yemeni Territorial Waters (TTWs) while on transit due to the on-going conflict in the country and the threat posed by militant elements operating off Yemen's coastline
- A decision to divert the vessel away from the more direct route due to piracy concerns should have the owner's and commercial operator's full agreement confirmed in writing. Any disagreement is to be escalated to SMO senior management for discussion with the client
- The Master shall carry out War Risk reporting as per Fleet Operating Procedures 8.3 and continue to make any additional notifications to the Charterers as required by them

2.2 Safety and security specific to Gulf of Oman & Strait of Hormuz region

2.2.1 Prior to Entering Area

Vessels are advised to remain alert, adhere to BMP5 recommendations and follow the below guidelines while operating in the Gulf of Oman and Strait of Hormuz areas:

- All vessels within the Gulf of Oman N of 25N and W of 58E to adopt security measures **equivalent** to ISPS Security Level 2. ISPS access control measures are to be put in place
- This does not require that vessels formally rise to ISPS Security Level 2 or notify their Administration. Vessels should officially maintain the security level as required by the respective Flag State
- In partnership with the CSO:
 - Undertake a ship and voyage risk assessment prior to entering the region
 - Review the Ship Security Plan after the risk assessment
 - Review section 2 of BMP5
- In consultation with vessel owners and management, adopt the alternative routing:
 - INBOUND: Direct through Kuh TSS, 290NM. Adjust route to remain on the UAE side, approximately 302NM. Maintain a distance of 12NM from the east or west departure

- port, more if voyaging to Pakistan or West India
- When approaching the Hormuz TSS, you will encounter crossing traffic using the Kuh TSS
- OUTBOUND: Keep to the UAE side. Maintain an additional distance of approximately 11NM
- Strictly observe any promulgated exclusion zones or guidance issues by coastal states
- Where safe and manoeuvrable, consider transit at higher speed through straits and near Iranian territorial waters
- Determine whether a day or night transit is appropriate to the threat posed
- If navigationally safe, consider implementing unmanned machinery spaces (UMS) through confined straits
- Enhance watchkeeping with the following measures:
 - Deploy additional (unarmed) personnel to maintain watch for suspicious small craft. These can be deployed in addition to any contracted security personnel the vessel has hired for HRA transits
 - Maintain strict communications watch and establish communication with all vessels coming close. Monitor relevant VHF and other communication channels
 - Keep the Automatic Information System (AIS) active. There is no need to complete the field stating the last or next port of call
 - Ensure Long-Range Identification and Tracking (LRIT) systems are switched on and functional
 - Rig outboard lighting, where possible, provided they do not interfere with keeping a safe lookout, with emphasis placed on the stern and rig. Use searchlights where available
 - Ensure all firefighting equipment is available for immediate use. Ensure that the emergency fire pump is available. Keep fire mains charged
- Tankers in ballast conditions should purge cargo tanks of hydrocarbons prior to entering the region in order to reduce the risk of explosion

2.2.2 Procedures in Port

- While in ports in the region:
 - Ensure strict boarding controls are in place as per SSP
 - Lower accommodation gangways or ladders only when necessary
- While at anchorages in the region, agree measures with CSO such as:
 - Rotate the propeller continuously or at short, irregular intervals
 - Operate bow and stern thrusters at 0 thrust
 - Turn the rudder frequently
- Comply with the UKMTO Voluntary Reporting requirements, as stated on chart Q6099 and Q6111
- Conduct Security Training / Drills or Exercises prior to entering at risk navigation areas

- Ensure watch officers are trained to save Voyage Data Recorder (VDR / SVDR) data in the event of an attack or suspicious event
- Ensure watertight integrity between engineering spaces are secured while operating in the area, whether underway or at anchor
- While in port, conduct a visual check of the hull:
 - Undertake a visual search from the deck, all around the vessel to check for anything attached to the hull of the vessel. Priority is given to sections of the hull on the waterline
 - Post a lookout on the forecastle to watch for suspicious craft or objects in the water
 - Conduct regular rounds of the deck

2.2.3 Use of Armed Security Teams

- It is strictly recommended that vessels avoid the use of ASTs as a defensive measure while in the Gulf of Oman or Strait of Hormuz
- The use of force against threats within this region carries extreme risk and is likely to escalate existing security situations, endangering the vessel and crew
- Vessels are however approved to utilise unarmed maritime advisors to assist with security and watchkeeping
- According to the most recent report from the Oil Companies International Marine Forum (OCIMF) published in October 2021, if Private Maritime Security Contractors (PMSCs) are utilised, a providing company should only be considered "...following completion of a detailed risk assessment process and completion of a robust and clearly documented pre-selection due-diligence (screening) process, both of which should be stewarded by a detailed Management of Change and reflected in the Ship Security Plan (SSP)".¹

2.2.4 If Hailed by Non-Coalition Forces

- If hailed by non-coalition forces, vessels should provide vessel name, flag state, and affirm that they are proceeding in accordance with international law as reflected in the Law of the Sea Convention. The master should immediately inform UKMTO and the US Fifth Fleet Battle Watch
- If non-coalition forces seek to board a vessel navigating these waters, the Master should, if the safety of the vessel and crew would not be compromised, decline permission to board, noting that the vessel is proceeding in accordance with international law, and immediately inform UKMTO and the US Fifth Fleet Battle Watch
- If non-coalition forces board a vessel, the vessel should immediately contact UKMTO and the US Fifth Fleet Battle Watch. The crew should not forcibly resist the boarding party. Refraining from forcible resistance does not imply consent or agreement to that boarding

¹ Oil Companies International Marine Forum (OCIMF), *Guidance for the Employment of Private Maritime Security Companies*, October 2021, p. 16

2.2.5 Reporting

- Vessels operating in these areas are advised to report any incidents or suspicious activities to US or Coalition naval vessels on VHF Channel 16
- They are also to take the following steps:
 - Register with UKMTO and US Fifth Fleet Naval Cooperation and Guidance for Shipping (NCAGS) Watch when entering the Indian Ocean VRA by emailing them the Initial Report from Annex D of BMP5
 - Establish contact with both UKMTO and US NCAGS Watch, include both on all update or incident report emails
 - Provide transit plans for the Strait of Hormuz and Persian Gulf to UKMTO and US Fifth Fleet NCAGS Watch via email, including the time of entry / exit for the Strait of Hormuz Traffic Separation Scheme, an outline of the navigation plan for operating in the Strait of Hormuz and Persian Gulf, and speed restrictions or other constraints
 - In the event of any incident or suspicious activity, call UKMTO or the US Fifth Fleet Battle Watch and activate the Ship Security Alert System immediately
 - Answer all VHF calls from coalition navies
 - Utilise other reports included in Annex D of BMP5 as necessary, including both UKMTO and Fifth Fleet NCAGS on each of the reports
 - All vessels should note that coalition naval forces may conduct maritime awareness calls, queries, and approaches to ensure the safety of vessels transiting the Persian Gulf, Strait of Hormuz, Gulf of Oman, and Arabian Sea. If an RMI flagged vessel suspects it is being hailed from a source falsely claiming to be a US or coalition naval vessel, the US Fifth Fleet Battle Watch should be immediately informed
 - Vessels bound for the Strait of Hormuz in either direction are advised to contact the US Navy 5th Fleet NCAGS Battle Watch at least two days prior to transit at cusnc.ncags_bw@me.navy.mil, or +973 3904 9583

2.2 Actions in the Event of an Attack/Attempted Attack: Stop – Think - Act

- If the pirates close to within 600m, initiate the pre-prepared ship emergency procedures and activate the emergency communication plan
- Activate the Ship Security Alert System (SSAS), alerting your CSO and flag state. Broadcast a mayday call on VHF Ch.16 (156.8 MHz) and a distress message via the Digital Selective Calling system (DSC) and Inmarsat-C (if applicable)
- Sound the emergency alarm and whistle / foghorn, alerting crew and demonstrating to attackers that the vessel is alert, aware and reacting to their attack
- If not already at full speed, remain on a straight bearing and increase to full ahead to open CPA. If time permits, attempt small alterations in course (if sea conditions allow), exposing attacking skiffs to winds / wash. Avoid excessive manoeuvres that will impede speed. When combined with the SPMs the vessel will be less attractive to the pirates and potentially persuade them to abort the

attack

- All non-essential bridge and engine room crew should muster at the CSO pre-designated safe muster point or citadel. See Annex 5.3 for further details
- Report the attack immediately to **UKMTO (+442392222060)** by telephone
- Ensure AIS is switched **ON**
- Check Vessel Data Recorder (VDR) is recording

2.4 Actions in the Event of a Boarding

- Broadcast final mayday and conduct final activation check on SSAS and AIS, ensuring both are on
- Ensure that engine is stopped; all crew should proceed to safe muster point with hands visible
- Each situation is different and the final decision rests with the Master on whether or not to retreat to the citadel
- If citadel is available, all crew should be present before sealing; any crew left outside immediately renders the concept lost. See Annex 5.3 for further details
- Establish communications from the citadel with UKMTO and your company
- A password for opening of the citadel shall be agreed with the company. In case of a military intervention, the password will be given to the military. The password must not be broadcasted over VHF as the pirates can intercept this information

2.5 Actions in the Event the Vessel is Taken

- Compliance / submission to attackers is essential if a vessel has been taken
- Remember to leave any CCTV or audio recording devices running
- Try to remain calm. Weapons may be brandished. To date, such actions are designed to intimidate the crew into submission, and not with the intention of actual violence. If your vessel is pirated, a calm cooperative approach to the pirates will assist in reducing the level of violence, and potential for accidents
- Immediately after a successful attack, the pirates may be concerned that military forces might attempt to retake the vessel. They will be keen to establish their authority and will reinforce their numbers as quickly as possible. It is important at this stage that you do not cause any increase in tension with the pirates, as this may result in injury or harm to yourself or another crewmember
- Reassure the pirates that you will not be a cause of concern against them

2.6 Captivity Considerations

- Seek to maintain the best possible living conditions on board – negotiate this if necessary with the pirates. They will take living spaces; however, by being reasonable you can maintain good conditions for yourself and your crewmates
- Formulate a positive physical and mental exercise routine. Try to maintain a regular sleep pattern
- Do not get involved in disputes between your captors. Remember the pirates may have fears about

other pirate groups, such tensions or fears may result in squabbles or fights between the pirates

- Cooperate with pirate demands. Negotiations will be ongoing while you are in captivity; the pirates may stage violence or acts of intimidation, to try and bolster their demands. They may also demand you pose for photographs, or muster on deck in clear view. This can often be to prove you are still alive and well. You should not resist. Try to maintain a positive mental attitude and be as good humoured as possible. You are less likely to be the subject of abuse or violence if you are “liked” by your captors

2.7 In the Event of Military Intervention

- The vessel’s crew should have been briefed on how to cooperate fully during any military action onboard
- The crew should do the following:
 - Keep low to the deck and cover head with both hands
 - Keep hands visible
 - Be prepared to be challenged on their identity
 - Cooperate fully with military forces

2.8 Drone Procedures

Unmanned Aerial Vehicles (UAVs)

- Iranian Islamic Revolutionary Guard Corps (IRGC) forces maintain an established precedent of deploying UAVs to survey and follow vessels operating within the Strait of Hormuz. Although IRGC-operated UAVs more commonly target US and US coalition naval vessels and are unlikely to target commercial vessel. Pirates and other criminal groups are unlikely to possess the technical abilities and understanding to effectively operate sophisticated UAVs. UAVs operating in airspace over deep sea areas far from the coastline are most likely to be high-capability UAVs belonging to national security forces. As has occurred in years previous, commercial vessels with flags/ownership affiliated with countries at high tensions with Iran, particularly Israel, have come under attack by suicide/kamikaze and/or weaponised drones. This was most recently the case on 15 November 2022 when a weaponised drone attack was reported on an oil tanker approximately 130NM east of the coast of Oman. The drone was believed Iranian-made and the tanker which was attacked was managed by Eastern Pacific Shipping, a firm controlled by Israeli billionaire Idan Ofer.
- Since the end of the truce in Yemen in October 2022, there has been an increase in the use of drones by the Al-Houthi movement for use in aerial attacks specifically targeting oil ports and oil tankers. The Houthi’s have justified these actions by claiming the vessel operators are illegally obtaining Yemeni natural resources. Two of these attacks occurred at the Al-Dhabba Export Terminal, approximately 20km from the port of Ash Shihr; one taking place on 21 October and the second on the 21 November. Tensions between the Houthi movement and the internationally recognised Yemeni leadership are highly likely to persist into 2023, enabling the possibility of further

UAV-driven attacks. Due care and consideration should be taken by any operator looking to transit in and out of Yemeni ports and terminals.

- In the majority of cases, UAVs should be assessed as passive unless intelligence states otherwise. UAVs are most commonly used by state agencies for environmental monitoring and intelligence purposes. Overall, vessels remain highly unlikely to be subject to targeting by a hostile UAV.
- There are currently no international guidelines or procedures for vessels encountering UAVs; however, vessels are advised to adopt the below practices upon sighting of a UAV:
 - Upon identification of a drone, vessel masters are advised to note the time, date and UAV activity in the vessel's log and report it to vessel owners and shoreline authorities.
 - Crew are advised to not attempt to disable, shoot down or engage the drone upon sighting.
 - If possible, it is advised that crewmembers are aware of different UAV classifications, types, and capabilities to be able to identify the level of potential threat.

Water-Borne Drones

- Yemen's Houthi rebel movement has an established precedent of deploying water-borne drones, typically using remote-controlled semi-submerged smaller craft filled with explosives (Waterborne Improvised Explosive Devices – WBIED), to target Saudi coalition affiliated vessels operating within the Red Sea. A steady number of incidents were evident between 2020 – 2021, however, these operations have remained rare over the course of 2022, likely due to the truce in place for the majority of the year. Regardless, the Houthis have previously shown their ability to use such tactics in the past which has resulted in a continued underlying threat to commercial shipping operations in the Gulf of Aden. Crew are advised to adopt the following procedures upon sighting of a water-borne drone:
 - Any identification of a water-borne drone should be assessed as hostile
 - In the event of a sighting of a water-borne drone bearing towards the vessel, immediately initiate vessel lockdown. Crew should evacuate any position on the open deck. Dispatch an immediate alert on VHF 16

Part 3 Background Data and Analysis (2022)

3.1 High Risk Area

Previously there have been two main HRAs within the region, inclusive of the BMP5 Indian Ocean HRA and the JWC HRA. From 1 January 2023, the JWC HRA will be the only demarcation in the area, with the Indian Ocean HRA being declassified. Further information on each is provided below, with a map to visually depict the areas.

- **BMP5 Indian Ocean HRA:** On 1 May 2019 the Round Table of International Shipping, consisting of BIMCO, the International Chamber of Shipping and other bodies, reduced the size of the BMP5 Indian Ocean HRA to reflect changes in piracy activity within the region. Following this, on 22 August 2022, key maritime industry bodies forwarded the notification of their declassification of the Indian Ocean HRA effective from 00:01UTC on 1 January 2023. The industry bodies came to this decision as a result of the 15 years of successful counter-piracy operations by international stakeholders. Although this is so, it is recommended that vessels and seafarers passing through the area after the declassification continue to follow through with the security measures that are currently required
- **JWC HRA:** On 04 April 2022, the Joint War Committee (JWC) reviewed and amended its summary of listed areas (JWLA – 030). It is notable that all areas have remained unchanged from the previous review on 26 April 2021, apart from the removal of Oman, which previously noted that the Musandam Governate was an HRA. The waters and their demarcations include:

Indian Ocean, Gulf of Aden and Southern Red Sea

- On the north-west, by the Red Sea, south of Latitude 15° N
- On the northeast, from the Yemen border at 16°38.5'N, 53°6.5'E to high seas point 14°55'N, 53°50'E
- On the east, by a line from high seas point 14°55'N, 53°50'E to high seas point 10°48'N, 60°15'E, thence to high seas point 6°45'S, 48°45'E
- On the southwest, by the Somalia border at 1°40'S, 41°34'E, to high seas point 6°45'S, 48°45'E
- Excepting coastal waters of adjoining territories up to 12 nautical miles offshore unless otherwise provided.

Persian or Arabian Gulf

- Persian or Arabian Gulf and adjacent waters including the Gulf of Oman and waters west of the line from Oman's territorial limit off Cape al-Hadd at 22°42.5'N, 59°54.5'E northeast to the Iran-Pakistan border at 25°10.5'N, 61°37.5'E
- Excepting coastal waters of adjoining territories up to 12 nautical miles offshore unless otherwise provided.



Image 1: High Risk Areas (HRA) and Voluntary Reporting Areas (VRA) East Africa and Indian Ocean (present)
Source: Crisis24

3.2 Pirate Areas of Operation

- It is notable that most of the regional incidents in 2022 took place within the maritime area between the Bab-el-Mandeb Strait and the Gulf of Aden, this depicted by eight of the 16 incidents (50%) being recorded in that year. These findings are in line with 2020 and 2021, whereby the same regional area was seen to be particularly targeted. It is possible that most of these incidents were attributed to the conflict in Yemen from 2020 – 2021. Due to the end of the truce in Yemen in October 2022, there is a significant possibility for the increase of maritime incidents related to the conflict in 2023
- Between 2017 - 2022, the furthest offshore incident occurred on 5 February 2018 when pirates pursued a container vessel approximately 858NM off the eastern Somali coast. During the year 2022, the farthest maritime related incident was located 420 NM SSE of Salalah, Oman on 5 May 2022. It was recorded as a suspicious incident whereby a motor vessel was approached by two small crafts; the motor vessel increased its speed, and the two crafts left the area. The furthest incident that took place this past year, not taking into consideration suspicious approaches, was an oil tanker that was struck by a weaponised drone on 16 November 130NM East of the coast of Oman. This incident came amid heightened tensions between Iran and US and its regional allies

- The most southern incident, in the same time period of 2017 - 2022, occurred on the inside edge of the MSCHOA VRA on 24 January 2020, when a suspicious fishing vessel pursued a transiting cargo vessel for approximately four hours 240NM NE of Seychelles. 2022 saw no incidents far south of the region
- A single incident involving an attack against a bulk carrier 13NM NNE of Adale, Somalia on 13 August 2022 was the first such potential case in the Indian Ocean since August 2021, in which armed men aboard a skiff apparently approached and fired upon a bulk carrier with heavy machine gun and RPG fire. Given the proximity to the coastline, it is more than likely this was related to on-land criminal/militant activity, and not a traditional piracy incident
- Indian Ocean, Gulf of Aden and Southern Red Sea JWC HRA Zone: Within the stated Indian Ocean, Gulf of Aden and Southern Red Sea JWC HRA, 10 of the 16 incidents (63%) for the entire regional area were recorded. Of these incidents within the JWC HRA, five (50%) were as a result of attacks, four (40%) were recorded as suspicious approaches and one (10%) was a boarding. Most of these recorded incidents took place close to shore, with the furthest incident from shore within the stated HRA being a suspicious approach 85NM N of Berbera, Somaliland.
- Persian and Arabian Gulf JWC HRA Zone: two of the 16 (13%) incidents for the larger regional area were recorded in the stated JWC HRA. Both of these being suspicious approaches. There was 1 incident recorded further southeast of the stated HRA whereby an attack occurred likely initiated as a result of the tensions between Iran and the US and its regional allies.

BMP5 states the UKMTO Voluntary Reporting Area (VRA) and HRA are identified on maritime security charts UKHO Q6099 and Q6111. Vessel registration and daily reporting are recommended. All vessel movements should be registered with MSCHOA and daily reports should be sent to UKMTO, even if the vessel does not enter the modified HRA. A vessel is only required to register once with MSCHOA.

Monsoons

Monsoons are to be considered when reviewing the incidents within a region as they impact the operations of attackers. Due to the poor weather conditions as a result of the NE Monsoon (between December and February / March) and the SW Monsoon (June to August) piracy activity is hampered across all of the regional area as prevailing weather and sea state conditions greatly influence attackers' operational abilities, with PAG skiffs struggling to operate in sea state 3 and above. Wind strengths in excess of 18 knots and wave heights above 2m are considered sufficient to provide protection for all but the most vulnerable vessels, particularly where Masters are taking full account of BMPs.

Incidents

- There were 16 incidents of piracy that occurred over 2022, with eight out of 16 (50%) of the incidents being suspicious approaches. Following suspicious approaches, six of the incidents (38%) were attributable to attacks, one of the incidents (6%) was a boarding and one (6%) was recorded as a hijack.

- The incidents that occurred were spread across the region. There was a concentration of suspicious approaches recorded throughout the Bab el-Mandeb Strait in 2022, as aligned with the reporting in 2021. Of the incidents, exclusive of the suspicious approaches, that occurred in the region, the majority occurred off the coast of Yemen. Two of the three taking place outside the time of Yemen's truce and were conducted by the Houthi forces. An increase of such incidents is likely into 2023 as the truce has come to an end and regional tensions have increased.
- Three of the four attacks (75%) that were recorded off the coast of Yemen were attributable to UAVs. With UAVs being highly effective weapons as a result of their precision, lethality and situational awareness, the use of UAVs has seen to be a trend in Houthi attacks since the end of the Yemen truce in October this year.
- As in 2020 and 2021, one incident involving a vessel occurred in waters off Somalia's eastern coastline (13NM NE of Adale, Somalia), with reports of a four-person skiff opening fire on a bulk carrier, utilising machine guns and RPG fire on 13 August 2022. No further details concerning the vessel and those onboard were provided but as previously stated, it was likely related to on-land militant activity. Despite this single incident over the past year off Somalia's coast, the situation remains stable, the deactivation of the HRA for the area being testament to this.
- Two suspicious approaches were recorded for this past year in the Strait of Hormuz, from the Persian Gulf and the Gulf of Oman. Over and above these, there was one attack that was recorded on 15 November 130NM East of the coast of Oman whereby an explosive-laden drone struck an oil tanker off the coast of Oman. This specific incident was seen to come amid heightened tensions between Iran and the US and its regional allies, particularly Israel.

3.3 Maritime Security Transit Corridor (MSTC)

The Maritime Security Transit Corridor (MSTC) is a military established corridor which naval forces focus their surveillance efforts and presence. It is shown on the Q6099 maritime security chart and consists of the following:

- The Internationally Recommended Transit Corridor (IRTC), which is an established transit corridor in the Gulf of Aden where naval forces focus their counter piracy patrols and not a Traffic Separation Scheme (TSS). In the IRTC, group transits and national convoys may be offered.
- The TSS West and the BAM TTS of the Hanish Island
- A two-way route directedly connecting the IRTC and the BAM TTS.

It is recommended that vessels use the MSTC to benefit from the focused military presence along the designated routes. The MSTC should be considered as a supplement to carrying out risk assessments for each voyage through the GoA and the Red Sea in addition to following guidance from BMP5 as closely as possible.

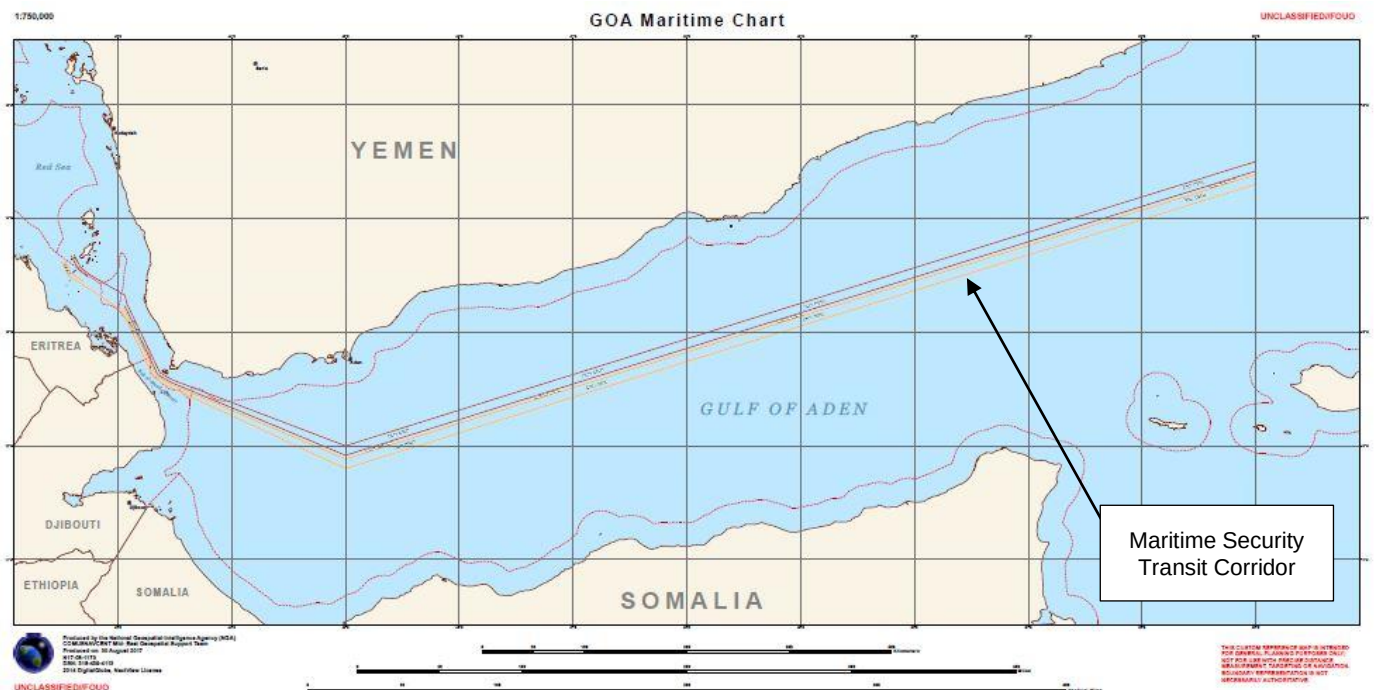


Image 2: Maritime Security Transit Corridor (MSTC)
Source: BMP5

3.4 Attack Profiles

- PAGs are known to operate in groups of multiple small craft with the objective of swarming targets before attempting to overpower defences through identifying weak points in ship security
- PAGs have operated using motherships to coordinate approaches, increase offshore capabilities, time spent at sea and to disguise intent

Analysis of previously successful attacks indicates that pirates have exploited the following common vulnerabilities:

- Inadequate planning and procedures
- Visibly low state of alert and / or no evident ship protective measures (SPM)
- Low speed (no reported boardings on vessels travelling over 18 knots)
- Low freeboard (under 8m)
- Lack of armed guards
- Where a slow response by the vessel is evident

In recent years, sightings of suspicious vessels reported by transiting commercial vessels differed depending on the area of occurrence. For example, in the approach and exit from the Bab-el-Mandeb Strait, incidents have involved between one and 20 small craft. In a majority of these cases, reports have mentioned four or more persons on board each skiff and their demonstrated willingness to approach vessels

– several cases noting approaches to within one or two cables. In the majority of these cases, the reporting vessel's Armed Security Team (AST) was activated, and warning shots were fired. As a result of this action, the suspicious crafts aborted their approach. The likely culprit in each of these cases is the Houthi movement's self-styled 'Yemeni Coast Guard', which operates out of bases along the country's western coastline. The Houthi's maritime units are known to harass transiting commercial vessels and are particularly hostile to those believed to be flagged by Houthi-designated enemy states, namely Saudi Arabia and the UAE. Although the Yemen truce likely contributed to a decrease in such incidents over the past year, an increase is predicted for 2023 as the stated truce has come to an end and tensions are seen to be increasing. This assessment is bolstered by an incident on 21 October, just over two weeks since the truce ended, when a tanker was targeted by two suicide drones while at the port of Ash Shihr in Yemen. The attack was claimed by the Houthi movement as a warning to vessels involved in exporting Yemeni oil. No casualties were reported, and the vessel was undamaged. This was followed by two similar such incidents at the same port on 21 and 22 November.

Suspicious approaches between the Gulf of Oman and Persian Gulf are predominantly attributed to Iran's Revolutionary Guard Corps Navy (IRGC/N) which have far superior capabilities to those of Yemen's Houthis. Unlike off the coast of Yemen, an AST is unlikely to deter approaching suspicious skiffs and is more likely to escalate the immediate situation, elevating the threat to both AST personnel and vessel crewmembers. Instead, vessels must report suspicious approaches immediately to the relevant regional authorities and, if boarded, comply with the demands of the boarding party.

Motherships

The use of pirate "motherships", capable of carrying personnel, equipment, supplies and smaller attack craft, has enabled pirates to operate at a greater range from the shore. Motherships are larger vessels capable of extended periods in deep waters and are predominantly dhows, former fishing boats and trawlers that have often been stolen or hijacked for pirate purposes. However, the use of hijacked dhows as motherships has become a rarity due to the targeted, collaborative work of regional states and international naval forces. Although there is little evidence to suggest the trend had continued between 2020 - 2022, reports from 2018-2019 noted regional PAGs had begun to camouflage skiffs onboard motherships as opposed to towing them behind, likely to mitigate against suspicion from maritime security forces and vigilant watch keepers on board commercial vessels. Since this was a method utilised in the past and perpetrators have depicted capacity in conducting attacks utilising this method, there is still a risk of it going forward into 2023.

Small arms fire, as well as several cases involving rocket propelled grenade (RPG) launchers, have been reported previously, likely in efforts to intimidate Masters of vessels to reduce speed to facilitate boarding. However, maintaining full sea speed has proven effective in such circumstances. It is recommended that consideration be given to ballistic protection to crew who remain on the bridge during a pirate attack; often fire is directed at the superstructure and bridge in an effort to force the vessel to stop. Onboard Security Teams have also proven effective in the Indian Ocean in deterring would-be pursuers from attempted boardings, as was demonstrated off the Somali coast on 13 August 2022 when the PMSC on-board a bulk carrier was able to respond to heavy machine gun and RPG fire when being attacked.

Size of Piracy

Over the course of 2022, MarTrack™ recorded a total of 16 piracy/maritime security incidents in the region, this being an increase of 33% from the 12 incidents recorded for 2021. Although there was a slight increase over the past year, in comparing the number of incidents in 2020, there has been a decrease of 41% from the 27 recorded for the stated year. The incidents recorded for this past year included one hijack, whereby the Houthi forces seized a vessel in the Red Sea; six attacks, five involving UAVs; one boarding and eight suspicious approaches.

Although a year-on-year increase in the number of incidents within the Gulf of Aden and Bab el-Mandeb Strait has been recorded from 2019 – 2021, 2022 differs from this trend in that a 20% decrease in the number of incidents in the area was recorded in comparison to the previous year.

As stated, the hijacking recorded was related to detentions, with the motive behind the operations not piracy in its traditional sense and instead related to geopolitical tensions and ongoing regional conflicts. No successful hijack activity has been conducted by Somali PAGs over the last five years, pointing to the effectiveness of the multiple international maritime security operations in the region. The one attack that was recorded off East Africa in 2022, the same number as in 2021, one more than in 2020, and remaining lower than the three incidents of vessels being fired upon in the region in 2019.

Pirate action groups (PAGs) are fully aware of enhanced vessel security measures, ASTs, and presence of international counter-piracy forces, yet are still willing to probe vessels' security and alertness. Over the last several years, PAGs have generally refrained from full-force attacks, opting for a more patient approach in which they first monitor and probe suitable vessels. After selecting a target, pirates have attempted to launch boarding parties, using additional fast-moving skiffs to surround the vessel. This approach contrasts with earlier strategies characterised by an objective of hijacking a vessel at all costs. Although contemporary incidents remain low, the piracy threat remains significant in the JWA HRA. As such, mitigation measures must be implemented at all times while navigating in the area.

Security Measures

The application of BMP5 measures and the swift reaction of ASTs have proven effective in countering pirate attacks, however the risk to commercial shipping operations from pirate activity is still present. This is largely due to endemic political instability, widespread insecurity and a chronic lack of viable economic opportunities across both Somalia and Yemen. BMP5 provides structured guidance for threat/risk identification, and the effective implementation of antipiracy measures.

3.5 Crew Kidnapping

- The majority of attempted hijacks in the region over the past several years have been successfully repelled by vessel crews that have planned and trained in advance and employed passive counter measures to good effect
- Although numbers of recorded incidents have largely fallen year-on-year, those PAGs that remain operational in the area continue to target foreign-flagged fishing vessels and merchant vessels encountering mechanical issues whilst transiting near the Somali and Yemeni coastline. This was seen on 2 January 2022 when the Houthi movement detained a UAE-flagged cargo vessel 23NM NW of Ras Isa Marine Terminal.

Violence Against Crew

- Pirate gangs operating in the East African HRA are known to use AK-47 assault rifles as their weapon of choice but have also used rocket-propelled grenades (RPGs) in previous incidents

Part 4 Geopolitical Tensions

4.1 Iran/US Relations and Hostilities between Iran/Israel

Tensions between the US, its regional and international allies and Iran have remained since May 2018, after the US government withdrew from the Joint Comprehensive Plan of Action (JCPOA) signed between the two states, in addition to China, France, Russia, the UK, and Germany. Since then, the threat to maritime operations escalated in mid-2019, spiking between May – July of that year with suspected Iranian assets launching a series of attacks against commercial maritime operations in the region.

Tensions increased following the 3 January 2020 US drone strike assassination of Qassim Soleimani, the head of the IRGC's Al Quds division, and members of both the IRGC and Iran-backed Iraqi Popular Mobilisation Forces (PMF) in Baghdad, Iraq. The assassination resulted in a sequence of retaliatory missile and drone strikes across the Middle East, although commercial shipping operations in the region were not disproportionately targeted. Although tensions remained high between Iran and the US, the election of President Joe Biden in November 2020 worked to lessen hostility between the two sides, with a decrease in piracy incidents in the region over the 2021. The negotiations to restore the 2015 JCPOA Agreement were ongoing into 2022 with negotiations concerning the stipulated nuclear deal attempted. As a result of Russia's invasion of Ukraine and the wave of women-led protests in Iran during 2022, the nuclear talks were indefinitely stalled. The possibility for continuation of tensions between the two countries is highly likely into 2023, with increased impact on the maritime shipping in the region.

Since 2019, Israel and Iran have been following through with attacks on each other's cargo vessel, this was initially publicised after the breakdown of an Iranian oil tanker in the Red Sea in May 2019. In 2021 specifically there were a number of high-profile incidents which were recorded, including that of a suicide drone attack. In 2022 hostilities between Iran and Israel have continued. Although the impact that it had on the maritime shipping industry was not seen as extensive as the previous year, the incident on November 2022 whereby an Iranian-made drone hit a vessel managed by a shipping company owned by an Israeli national 130NM east of the coast of Oman is testament to retained Iranian capabilities.

It is likely that Iran-aligned forces in the region will continue to periodically demonstrate their willingness and capabilities to disrupt commercial maritime operations. Based on incidents from previous years and the capabilities utilised, it is of necessity to consider the following points:

- Attacks are unlikely to be constrained to Iranian waters. As demonstrated by the seizure of the STENA IMPERO in September 2019, IRGC forces will continue to target vessels transiting in close proximity to Iran's TTW as well as within Omani or Emirati waters, in addition to any other waters within operational range of the Iranian coastline
- Limpet mine attacks are most likely to be conducted at night, with mines commonly being placed on target vessels by personnel on board speedboats or other smaller vessels
- Direct attacks against crew remain unlikely; however, detention of vessels along with crewmembers

is a likely *modus operandi* of IRGC units within the region. Countries believed to be direct rivals of Iran, such as the US, Saudi Arabia, Israel, UK etc. are the most likely targets for vessel detention or attack. As previously stated, Israeli affiliated vessels are at a heightened risk in the region, as demonstrated in the attack on the MERCER STREET in July 2021

- Vessels associated with countries in more neutral diplomatic standing with Iran remain at risk, particularly if that country has favourable relations with the US

4.2 Iran-aligned Al-Houthis in Yemen

In 2022, Yemen entered into a truce, which lasted up to six months from April – October 2022. The stated truce allowed for the longest amount of peace in the country's war over the past eight years. However, since the end of the truce, the Al-Houthis have strengthened their position in northern Yemen, including the city of Sana'a, administrative authority has transferred from legitimate government institutions to *de facto* ministerial departments operating in Houthi controlled regions. Reports indicate Houthi *de facto* ministerial departments have ordered foreign shipping companies to stop transporting oil and minerals from government-controlled regions. Since these reports were published, several commercial vessels operating in Yemen have been targeted by Houthi attacks. Three such incidents, conducted by suspected Houthi forces were recorded in the vicinity of Ash Shihr Port, within two months of the end of the truce. It is notable that all the stipulated attacks were conducted using aerial weapons, two of them making use of drones and the third making use of a missile. Looking into 2023, the continuation of such attacks and the continued employment of such weapon systems is expected to continue, with the targeting of oil ports and vessels. The internationally recognised Yemeni government in conflict with the Houthi movement have continued to reassure international operators that they are in control of the situation and oil/gas shipping should not be disrupted by Houthi threats.

Part 5 – Annexes

5.1. Risk Assessment and Personnel Protection Considerations

All vessels must carry out a risk assessment before entering the HRA. The risk assessment is to be carried out in accordance with BMP guidance and the Shipboard Security Plan (SSP) 6.2. Form S23 in the Ship Security Plan is to be used for this purpose. It is to be forwarded to the office, and agreed with CSO prior leaving last port before transit of the High Risk Area and shall include as a minimum:

Maximum Information	Additional factors to be considered
• High Risk Areas to be transited and intended route. • Identify whether the vessel is high risk; all vessels with less than 8 metres freeboard are deemed high risk. • Identify whether a convoy is recommended; identifying the convoy and advise Owners accordingly. • Full details of Ship Protection Measures and any additional equipment required. If armed guards onboard.	• Vessel Type • LoA / breadth Freeboard • Loaded or in ballast Cargo • Full speed • M/E attain > 90% MCR? Nos. of crew • Nos. of supernumerary • Nos. of cadets • Nos. of females • Reduce to non-essential staff? • M/E confirmed OK? • A/E confirmed OK? • Boiler confirmed OK? • Steering gear confirmed OK? • Test of main fire pumps & emergency fire pump confirmed OK? • Relevant drills performed on board? • Master and officers of the watch have been familiarized with the impact of zigzag manoeuvres onboard and in particular the impact that these manoeuvres can have upon reducing the speed of the vessel? • Engine room to be manned during the transit? SSAS test confirmed OK? • North / South bound East / West bound • Latest update of instructions on board? • Latest edition of Best Management Practices to Deter Piracy (BMP) on board? • SAT-C set to the "Indian Ocean Region"? • Latest intelligence regarding piracy attacks and activity on board? • Both citadel and safe muster point confirmed OK (if applies)? • Communication (satellite phone and VHF) in citadel tested and confirmed OK? • All anti-piracy equipment on board (SPM)?

All irregularities to above points shall be reported immediately to the Company. If any irregularities are observed the vessel must not proceed into the special precautionary area without agreement of the Company.

The overall aim of the risk assessment is to minimise the risk of attack and successful hijack. This is achieved through a combination of passage planning, Ship Protection Measures, a prepared crew and good communications between vessel and shore.

Risk assessments to be copied to piracy@vships.com

Personnel Protection

The Transit Guidance includes the recommendation to carry the following minimum equipment:

- 3 x Steel helmets
- 3 x Kevlar jackets
- 3 x Safety glasses

We do not expect the crew to participate in a fire fight with pirates, nor do we expect them to stand on the exposed bridge wings in broad view during an attack. It is our recommendation that in order to comply with the minimum protection equipment requirements stated above, Level III Helmets and Level IIIA Jackets should be supplied.

Typical costs for this body armour range between USD500 - 700 but will depend on the area of purchase, as will lead time due to import / export restrictions in some countries. Due to import restrictions, Djibouti is easier to supply than locations such as Salalah.

Body Armour Standards as diagram below

There are different national and international standards of body armour, including European EN 1063, German DIN 52290 Parte 2, and the US NIJ 0101.06 (copied below as an example).



Table 4. NIJ Standard - 0101.06 P-BFS performance test summary

Armor Type	Weapon Type	Test Round	Test Bullet	Bullet Mass	Conditioned Armor Test Velocity*	New Armor Test Velocity*	Hits Per Panel at 0 Angle	Maximum BFS Depth	Hits Per Panel at 30° or 45° Angle	Shots Per Panel	Panel Size	Panel Condition	Shots Required	Total Shots Required
IIA		1	9mm FMJ RN	8.0g (124gr)	355m/s (1165ft/s)	373m/s (1225ft/s)	4	44mm (1.73in)	2	6	Large Small	New Conditioned	4 2 24 24 24 12	144
		2	.40 S&W FMJ	11.7g (180gr)	325m/s (1065ft/s)	352m/s (1155ft/s)	4	44mm (1.73in)	2	6	Large Small	New Conditioned	4 2 24 24 24 12	
II		1	9mm FMJ RN	8.0g (124gr)	379m/s (1245ft/s)	398m/s (1305ft/s)	4	44mm (1.73in)	2	6	Large Small	New Conditioned	4 2 24 24 24 12	144
		2	.357 Magnum JSP	10.2g (158gr)	408m/s (1340ft/s)	436m/s (1430ft/s)	4	44mm (1.73in)	2	6	Large Small	New Conditioned	4 2 24 24 24 12	
IIIA		1	.357 SIG FMJ FN	8.1g (125gr)	430m/s (1410ft/s)	448m/s (1470ft/s)	4	44mm (1.73in)	2	6	Large Small	New Conditioned	4 2 24 24 24 12	144
		2	.44 Magnum SJHP	15.6g (240gr)	408m/s (1340ft/s)	436m/s (1430ft/s)	4	44mm (1.73in)	2	6	Large Small	New Conditioned	4 2 24 24 24 12	
III		1	7.62mm NATO FMJ	9.6g (147gr)	847m/s (2780ft/s)	-	6	44mm (1.73in)	0	6	All	Conditioned	4	24
IV		1	.30Caliber M2 AP	10.8g (166gr)	878m/s (2880ft/s)	-	1 to 6	44mm (1.73in)	0	1to6	All	Conditioned	4 to 24	24
Special		-	Each test threat to be specific by armor manufacturer or procuring organization.				Armor performance and shot requirements shall depend on armor type.							

5.2. Ship Protection Measures (Guidelines)

Different vessels have different requirements, and the overall aim is to achieve the best solution for the individual vessel and transit. This will be identified pre-transit during the risk assessment phase. Before entering the High Risk Area, all anti-piracy measures and equipment shall be implemented and rigged. These anti-piracy measures must be applied throughout the transit of the High Risk Area. The vessel shall not depart the last port of call or anchorage prior to passage of the High Risk Area without agreement on Ship Protection Measures to be implemented.

Equipment	Detail
Sandbags 150 bags with sand (approx. 15kg each)	The sandbags shall be used for a protective shelter in each of the bridge wings.
Protection 3 x Steel helmets 3 x Kevlar jackets 3 x Safety Glasses	The helmets and Kevlar jackets shall be used times by the watch keeping bridge team whenever suspicious vessels are sighted.
Additional hoses 16 x hoses 30 m - x foam applicators with eductors 16 x 25 litres foam liquid 8 x fire main Y-pieces	Fire hoses and applicators shall be rigged, fixed and ready for immediate use throughout the High Risk Area. The foam is a supplement to the already rigged water curtain as per BMP5 section p. 14. On vessels with separate foam line and foam pump this can be used instead of the main fire line and main fire pumps. It is important that the fire hoses cover midship sections of the vessel as well as vessel's quarters and stern.
Razor wire and protective gloves - Sufficient concertina razor wire for two layers covering the full perimeter of the vessel (See diagram). - Sufficient razor wire for rigging in strategic points around the accommodation - Clips/wire ties for rigging above 12 x heavy duty gloves 2 x heavy duty wire cutters - Silk wire or steel wire with a diameter of 3 – 4 mm	It is important that the razor wire is rigged in such a way that it covers the opening between the fish plate and the railing thus preventing any attackers from passing below the razor wire. One layer of razor wire shall be rigged in a highly visible position outside the accommodation i.e. along the railing so it can be seen from small skiffs or boats. This layer of razor wire will have a deterrent effect on pirates (razor wire should not obstruct access to life rafts or lifeboat(s)). The silk wire or steel wire shall run through the centre of the coils of razor wire rigged in two layers covering the entire perimeter of the vessel from fore to aft. The silk wire or steel wire must run behind some of the railings vertical posts at regular intervals.
Trailing Lines 4 coils of cross braded floating PPP line, diameter 6 mm and length 220 meters	Trailing lines can be deployed from the stern of the vessel and forced down to the surface by attaching two 20 litres plastic cans to each line (see diagram).

Night vision binoculars	
• 2 x pairs	
Dummies / artificial lookouts	Ref BMP5 section p. 11 well-constructed dummies / artificial lookouts must be made and placed at strategic locations around the vessel giving the impression of greater numbers of people on watch.

Use of Foam

- In addition to the effects of a standard hose, the use of a foam or dye mix has the following effects:
 - Ox blood or urine additives used to produce foam are particularly unpleasant for anyone who is covered by the foam – foul smell, sticky, irritant to eyes and respiratory systems. The use of dye markers could assist in subsequent prosecutions. Where an attack has been unsuccessful, but a subsequent boarding of a suspected pirate skiff takes place, the naval forces could possibly link the pirates to the attack if they detect the presence of non-soluble dye markers
 - A small skiff will become unmanageable more quickly if it is filled or swamped with foam rather than just water
 - A pirate covered in foam will find it significantly more difficult to climb a ladder to board a vessel

Warning on Use of Active Measures

Advice on the use of active counter piracy measures, including use-of-force should be sought from company management and the Flag State authorities.

A ship Master may be subject to legal proceedings following the use-of-force causing harm to a pirate. Using active measures against pirates may cause injury or harm pirates and may result in an escalation of violence against the vessel. If an attack is successful, the pirates may later take revenge against the crew for any injuries caused during the attack. Care must be exercised when weighing up all options especially when considering the use of force against pirates, before and during an attack. Any force used must be appropriate to the threat, reasonable in the circumstances and justifiable in a court of law at a later time.

Water Curtain / Flooding of Main Deck by Ballast Water Pumps or Main Fire Pumps

Ref. BMP5 p. 14, a water curtain should be established using a ballast pump. On vessels with separate foam line and foam pump fire hoses, main fire pumps can be used as well. It is important that the fire hoses cover midship sections of the vessel as well as vessel's quarters and stern. Foam is to be used as a final deterrent on deck. Only the extra foam supplied as part of SPM kit is to be used.

Manoeuvring Practice

Ref. BMP5 p. 12 "Manoeuvring Practice" the Master and officers of the watch shall be fully familiar with the impact of zigzag manoeuvres onboard and in particular the impact that these manoeuvres can have upon reducing the speed of the vessel.

If the vessel comes under attack, evasive manoeuvres such as turning the vessel into the wind, provided they do not significantly slow the vessel, should be considered. Forcing the skiffs into the wind and swell has proven effective in hampering attacks.

LRIT Policy

The LRIT shall remain in operation at all times.

SAT-C

The SAT-C must be on "Indian Ocean Region" to ensure the vessel receives urgent piracy alerts and warnings.

Navigation Lights

At night, navigation lights shall be exhibited in accordance with the COLREGS. All deck lights and searchlights shall be utilised when an attack is evident.

Training

A training module entitled "Anti Piracy Awareness" has recently been sent to all vessels. All crewmembers must view this as part of preparation for entering High Risk Area. Drills must be held prior to entering the High Risk Area.

Gas Cylinders

Pressurized cylinders, including any spare medical oxygen cylinders from the hospital, shall be placed in the purpose build locker. Excess gas bottles and flammable materials shall be landed prior transit. Lockers can be protected with sand bags.

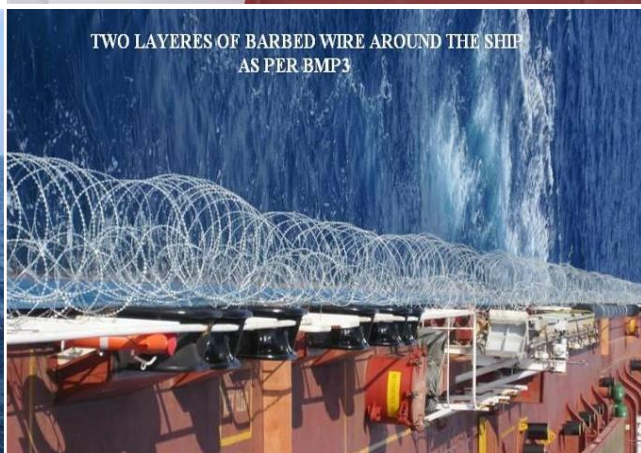
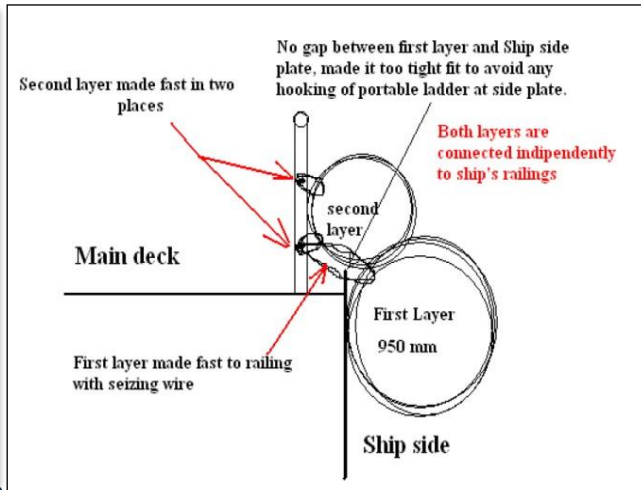
Guidelines for Fitting Razor Wire

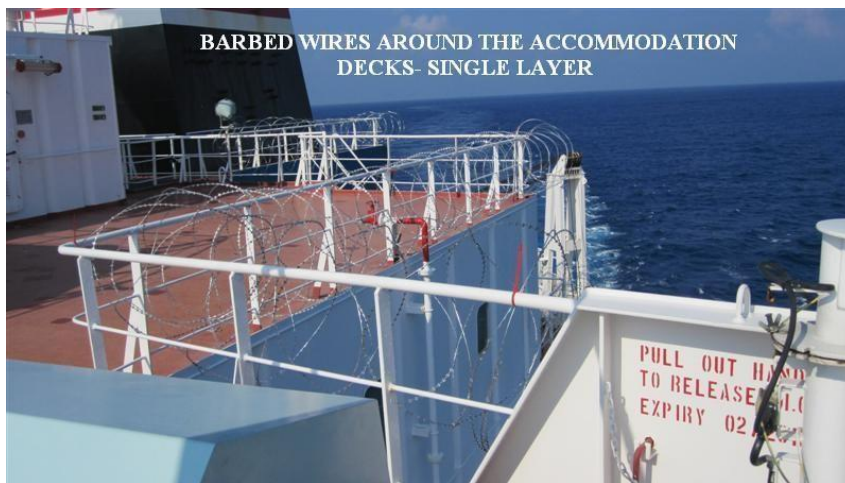
This guideline is intended to assist the vessel's crew in fitting razor wire efficiently, safely, and durably. When fitting the razor wire it is important that the crew is wearing helmet, safety goggles, safety shoes, and heavy duty gloves (e.g. welding gloves).

The razor wire must be attached to the railing pipes by 3mm galvanized wire or heavy-duty cable ties (with steel). Distance between each attachment point should not exceed 50 cm.

It is recommended to fit two layers (see below) with the first layer being the Concertina razor wire. Thereby the vessel is still secured even if the first coil is ripped down. It has been reported that pirates in a few incidents have succeeded in ripping down the razor wire by hooks – therefore care must be taken when attaching.

The wire must be detached as soon as vessel has left the High Risk Area. After dismantling the wire must be washed thoroughly in fresh water and stowed sheltered on hangers or similar.

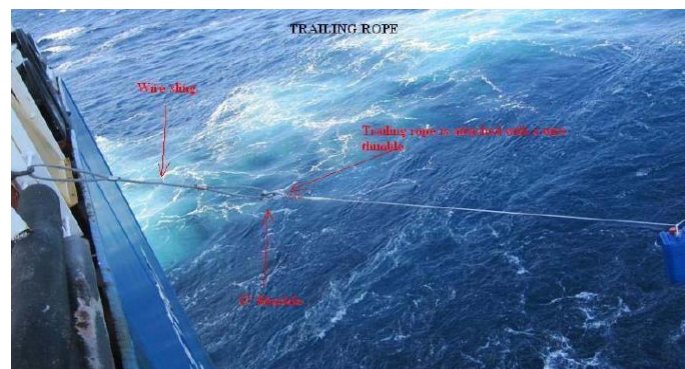
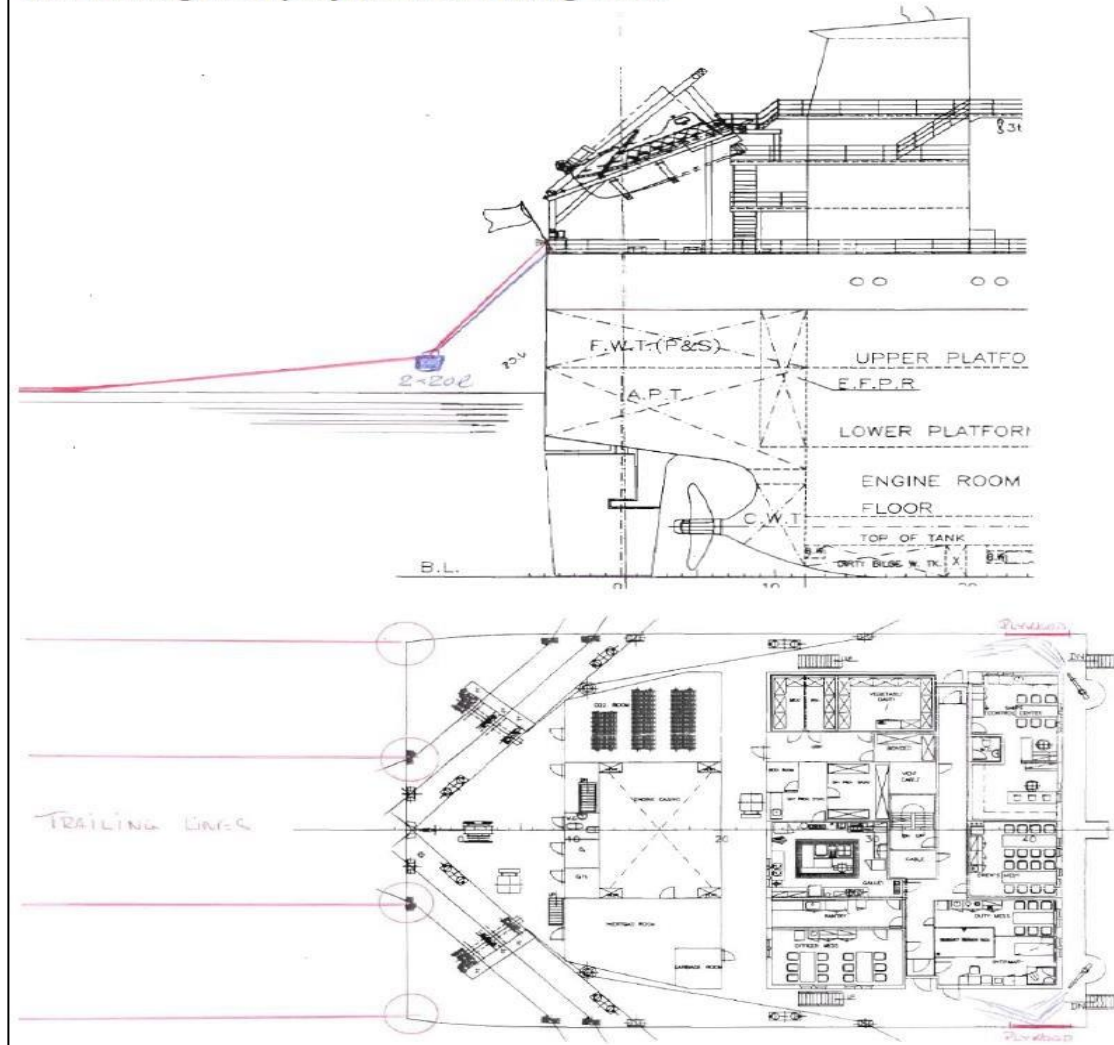




It is important that the silk wire or steel wire run through the centre of the coils of razor wire and that it is positioned behind some of the railing's vertical posts at regular intervals. The combination of the attachment points and the silk or steel wires make it very difficult to tear down the wire even if grappling hooks attached to ropes are being used.

Guidelines for Trailing Lines

1.8 Drawing of deployment of trailing lines



5.3. Citadels and Safe Muster Points

Citadels are complementary to the other ship protection measures set out in BMP. It is the responsibility of owners, operators and masters to decide and implement their policy in relation to the use of citadels. The CSO will advise the Master on owner's policy.

Safe Muster Points

Muster Point: a safe area within the accommodation that all crew should muster to in the event of an approach by a suspicious craft. In many cases the bottom of the central stairwell appears to be the best option but, in any event, would have to be carefully considered on a case by case basis.

Citadel: A designated pre-planned area purpose built into the vessel where, in the event of imminent boarding by pirates, all crew will seek protection. A citadel is designed and constructed to resist a determined pirate trying to gain entry for a fixed period of time.

Introduction

Although the citadel may be considered the final safe haven, and should protect against determined intrusion, including a limited ballistic attack, the citadel rationale should be part of a layered level of security, where approaches to the citadel are effectively protected. The predetermined time period will be determined by a risk assessment, dependent upon the vessels trading patterns, construction, and needs.

Aim

Should the vessel owner /operator, following a thorough risk assessment, and having exhausted all other measures of self-protection as detailed in BMP5, conclude that a citadel is required, this guidance describes the construction and use of a citadel, in order to provide effective protection against determined intrusion.

These Guidelines do not attempt to recommend or endorse the construction/use of a Citadel but aim to present the relevant facts to enable the vessel owner/operator to reach a reasoned conclusion as to whether or not to utilise a citadel.

Experience to Date

Although the number of cases of citadel use is limited, experience to date has revealed the following important information on their use:

- Once the pirates manage to board a vessel they will generally try to make their way directly to the Bridge – usually accommodation doors are locked and the external stairways offer an easier route. Any delaying tactics by blocking access is useful since it will give the vessels crew more time to secure the Citadel and its approaches

- Once access to the Bridge has been gained, the pirates will then systematically search through each cabin and locked compartment gaining access by utilising small arms fire or any other equipment that they may find on board such as crowbars, fire axes etc.
- Attempts have been made to smoke out the crew from a Citadel, by setting fire to the Bridge and/or accommodation
- Pirates have been known to force hinges, and to use mechanical tools such as disk cutters (if found on board), to breach compartments. They have also attempted to pull off doors
- Pirates have been known in the past to use ruse and trickery in an attempt to coerce the crew into voluntarily exiting the citadel

Risk Assessment Determining Whether to Utilise a Citadel

Any decision to utilise a citadel should be based upon a thorough Risk Assessment, which should be conducted on a ship-by-ship basis. There should be clear guidance and advice given by Management to Masters and senior officers carrying out the Risk Assessment on the location, construction, and other necessary requirements of a citadel.

The Risk Assessment should consider but is not limited to;

- Physical size, speed, and vulnerability of the vessel
- The ability to meet the Citadel criteria (as set out below)
- Geographical trading area including consideration that the Naval/Military forces may not be able to offer assistance
- That all other avenues of self-protection based upon Best Management Practices have been effectively implemented
- The potential consequences of an escalation of the situation

Citadel Criteria

If the Risk Assessment determines that a citadel is required, consideration should now be given to the following;

- Location of the citadel
- Time frame for citadel survivability
- Construction of the citadel
- Use and operation of the citadel
- Naval/Military forces response / assistance

Citadel Location

Vessels differ greatly in size and construction; therefore, it is not possible to consider all potential locations of a citadel within this document. However, the following factors should be considered:

- The location should be difficult for pirates to locate. It is also helpful if the entrance to the citadel is camouflaged
- The compartment should be able to be fully secured from all entrances including hatches and vents
- It is important that all six sides of the compartment are taken into account when considering the security and potential vulnerability of a space
- As a minimum the compartment must have the ability to deny the pirates access to the vessel's propulsion. Ideally, full control of the propulsion and the vessels essential systems, together with the ability to navigate, should be possible from the compartment
- Accessibility to the compartment, and time taken in order for it to be effectively secured
- In some cases the construction of the vessel may dictate that the citadel requires a means of escape. If so, then this should be well concealed and the vessel should have detailed procedures as to its intended use in a citadel scenario
- Habitability of the compartment being suitable for the vessels crew, including size and ventilation
- The thickness and the fire retarding nature of the six sides of the citadel should be kept in mind while determining the location of the citadel including, if necessary, the ability to easily reinforce this

Citadel Construction

Factors to consider for the construction of the citadel include:

- Ensuring that all access to the citadel and the approaches are secure against a sustained physical attack. This includes doors, locks, hatches, portholes / windows and ventilation grilles
- Pirates have been known to attempt to gain access to citadels by forcing locks, by removal of hinges and by pulling off a door utilising ships tools. Hinges to any door should be internal, and the door itself should provide a smooth external surface in order to prevent the pirates from taking the opportunity to attach any tools to pull the door off. This may have the added advantage of offering a camouflaged entrance
- In light of the pirates having been known in the past to try and smoke out the crew, ventilation of the compartment should be considered. In this respect the ventilation should be from a stand-alone power supply, and should provide adequate ventilation for the vessel entire crew particularly if citadel procedures involve the vessel "blacking out". The inlet for this ventilation should, where possible, be concealed
- Where a compartment is not watertight, and may be susceptible to accelerants such as gasoline, the use of a simple plastic sealant may negate this threat
- A means of fire suppression within the citadel is considered as essential to protect the crew
- Portable extinguishers may offer the simplest solution but there must be sufficient available to deal with the assessed threat
- Dependent upon the actual location of the citadel, if the compartment is protected by a toxic fixed firefighting system, then it may be advisable to have a means in place to temporarily isolate the system from the citadel itself. Another consideration might be to ensure that the citadel has the ability to activate a fixed firefighting system, such as a water fog fire suppression system, to protect both the Engine Room

and the accommodation

- Doors, bulkheads, and glazing may be given additional protection against an attack with weapons. The materials used should be “ballistic resistant” to an internationally recognised standard. The more common ballistic standards are discussed in the Annex to this document

Materials

The type and thickness of the materials used in a citadel or its approaches will very much depend upon the level of protection that is required and if it's required to be ballistic resistant or not, for which specialist advice would be required. The advice here should mention that the thickness of the material will be such as to defeat a typically AK47, utilising 7.62mm ammunition. It should be noted that non- ballistic materials will generally be thicker, and thus heavier, although will likely be far cheaper. On the other hand, a ballistic solution will be lighter, much thinner and in some cases portable – however costs will inevitably be higher for ballistic grade materials. Thus, in discussions with specialist advisers, the requirements for the citadel materials should be as specific as possible.

- *Ballistic resistant doors* - These are specifically designed to provide ballistic protection, may be supplied in either wood or steel, and usually come as a complete unit consisting of both door and door frame. It can be seen therefore that careful consideration is required as to fitting a complete unit, since strength of the adjacent bulkhead structure needs to be taken into consideration
- *Ballistic resistant panels* - Ballistic resistant panels may be straight steel plate, a composite type consisting of an aggregate between two steel plates, a ceramic composite, or a fibreglass composite material. In general the steel panels will be cheaper but weigh considerably more than other options. They are also more cumbersome to fit, but both composites and fibreglass, although thicker, are easier to work with and may be cut to size in situ, thus offering a realistic option for existing vessels to modify a compartment to their requirements. As with glazing and doors, the panels should be certified to a certain ballistic standard, this being dependent upon identified needs for the Citadel
- *Bullet resistant glazing* - There are several types of bullet-resistant glazing, the most common being Laminated Glass, Acrylic, Polycarbonate, and Glass Clad Polycarbonate. It should be noted that Acrylic and Polycarbonate are only suitable for indoor use. Where this is not possible due to size, then reinforcement of the glazing with steel plate may afford an effective solution

Citadel Equipment

Consideration should be given to installation of the following equipment for use within a citadel;

- *Communications* - The provision of communications is essential to the citadel; without guaranteed communications there can be no consideration of military intervention. The Master must be able to communicate to the outside world that he and all of the vessel's crew and personnel on board are safe. A two-way satellite communications system is recommended, powered from an independent source on board with the ability to provide communications for at least three days on an open line, as a minimum. Pirates have been known to target antenna in order to disrupt communications and therefore it is preferable to keep cabling and the antenna concealed where possible. The effectiveness of the communications should be thoroughly tested particularly with a concealed

antenna arrangement

- *Contact list* - An up-to-date list of key contact numbers should be prepared and left within the citadel space. This should include UKMTO, MSCHOA, Company Owners, Managers, Operators and Charterers. There should be procedures in place ensuring that the list is regularly reviewed / updated as required
- *CCTV* – The use of CCTV monitoring equipment serves several purposes. Primarily it can give the vessel's crew knowledge of the whereabouts and activity of pirates on board and can be used as
- evidence for any future prosecutions. The CCTV should have the ability to operate via a stand-alone power supply
- *Navigational aids* - In order to provide the ability to navigate towards a Military/Naval force, the routing of a GPS or even a slave radar feed to the citadel may be beneficial (e.g. a feed from the VDR to a computer)
- *Medical supplies* – Additional medical supplies over and above standard medical equipment carried on board should be considered, together with an emergency trauma kit to assist with ballistic wounds
- *Other considerations*
 - Food and water - Sufficient supplies of long life food and water – the standard is often stated to be sufficient for a minimum of five days, though this varies
 - Crew list – It is recommended that a copy of the vessel's up to date crew list and all personnel on board is kept within the citadel - this will ensure that all personnel and crew are fully accounted for in the event of a Citadel retreat being ordered by the master
 - Grab bag – This may be made available with sundry essentials such as torches, spare batteries, and portable VHF Radios
 - Toilet - For a prolonged period in a citadel, toilet facilities become a consideration - a portable chemical toilet may be installed where no standard WC is available.
 - Bedding material - Blankets or sleeping bags should be provided, which in addition to their primary purpose, will provide some comfort against a metal deck.

Use of Citadels

The intended use of the citadel should be considered during the Risk Assessment and planning phase – the following points might be considered;

- The intended use of the citadel may differ in varying geographic locations, for example, is the citadel intended for use in the GoA/MSTC area, in the wider Indian Ocean/Somali Basin, or both?
- Both the company and the vessel should have procedures regarding the use of the Citadel in place that are fully understood by all parties. The exact time that the citadel is to be utilised should also be carefully considered, bearing in mind that all defensive measures must prevent the pirates boarding. The time to utilise the citadel could for example be; once the pirates are on board, or once a ladder has been successfully deployed and there is no way that a boarding can be prevented. Procedures should be absolutely specific in determining this point, since in turn, this will determine how long it will take a vessel to secure an effective „lock down“
- As the citadel is being manned all other compartments should be locked, and all approaches to the

citadel secured

- Consideration will have to be taken as to the exact use of the citadel should the vessel have a Security Team on board. The citadel will only be effective if all crew, security teams and personnel onboard embarked for the passage are secured within the citadel
- The use of a password system whereby the master will only exit the citadel upon an agreed verbal signal is recommended. The agreed password should only be exchanged via secure communications, (satellite phone), and it is recommended that the password exchange is known by both the company and the vessel. This ensures that the Naval/Military forces can be made aware of the password(s) and equally importantly ensures that any misinformation by the pirates over the VHF can be ignored
- If a citadel is to be considered, then it is essential that the pirates are denied access to the vessel's propulsion in order to ensure that the vessel cannot be sailed off by the pirates themselves. While it may be impossible in the majority of existing vessels, it may also be considered advantageous to be able to safely manoeuvre and control the vessel from inside the citadel. In many cases involving use of a citadel, the vessel has simply stopped and "blacked" out with the crew safely gathered inside the citadel
- A complete lighting blackout (with the exception of the citadel) has also proven to be an effective delaying tactic
- The importance of training if a citadel has been utilised cannot be overestimated. The crew will need to drill exactly what to do, when to do it, and become fully familiar with their role, and the alarms / signals involved. The whole concept of a citadel is lost if any member of the crew is left outside before the citadel is secured
- There have been cases where the pirates have used hostages from a mothership and ordered them to attempt to gain access to the citadel of another vessel. Bearing in mind that the pirates may threaten the hostage with their life, the company is advised to have a specific procedure in place to allow for this eventuality, and the vessel should be instructed in the appropriate response
- The company should have procedures in place detailing a scenario where the Naval/Military forces are unable to respond, and the actions required of the crew in this situation. These may include the following:
 - If the pirates are on board, the length of time of a stand-off should be considered. The possibility that the pirates may become increasingly desperate should be taken into account
 - If there is reason to believe that the pirates have left the vessel, the length of time before the Citadel is opened, the number of personnel permitted to investigate, and further actions if it is discovered that the pirates are still on board, should all be considered. The use of CCTV where possible may prove to be invaluable

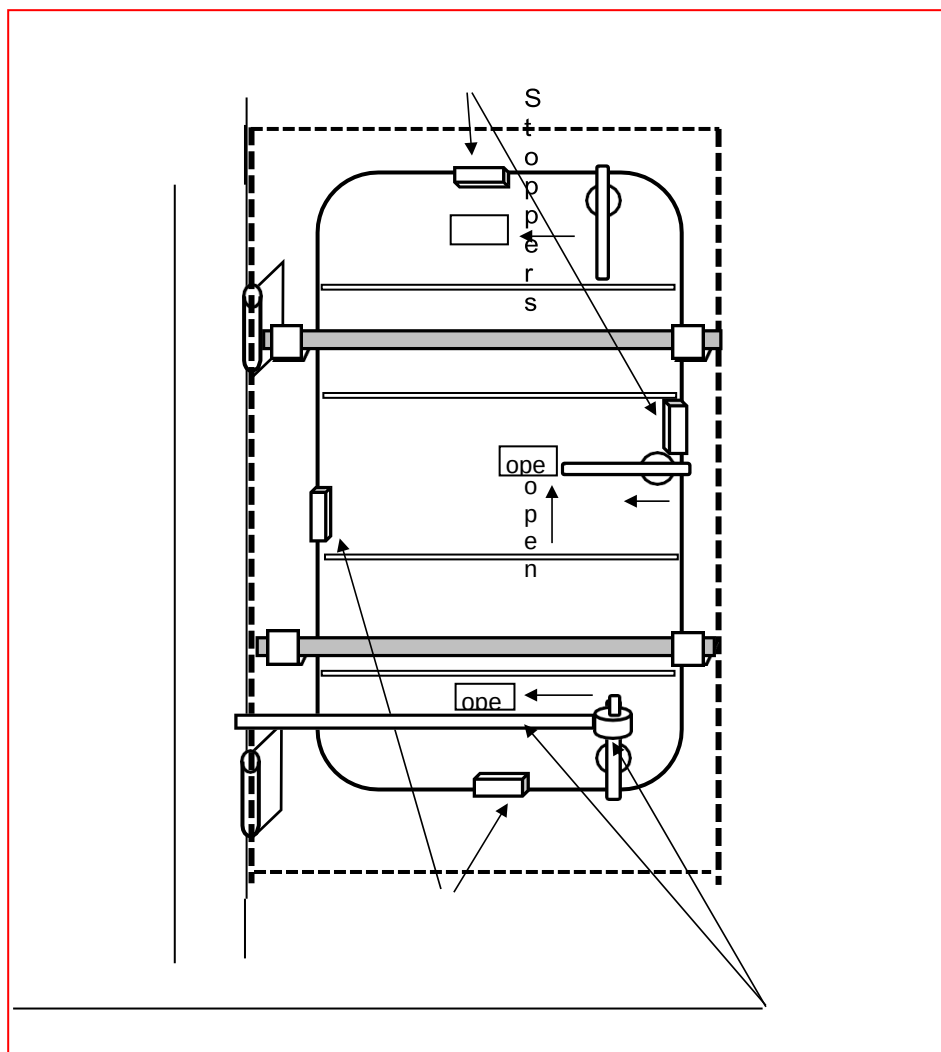
Military Considerations

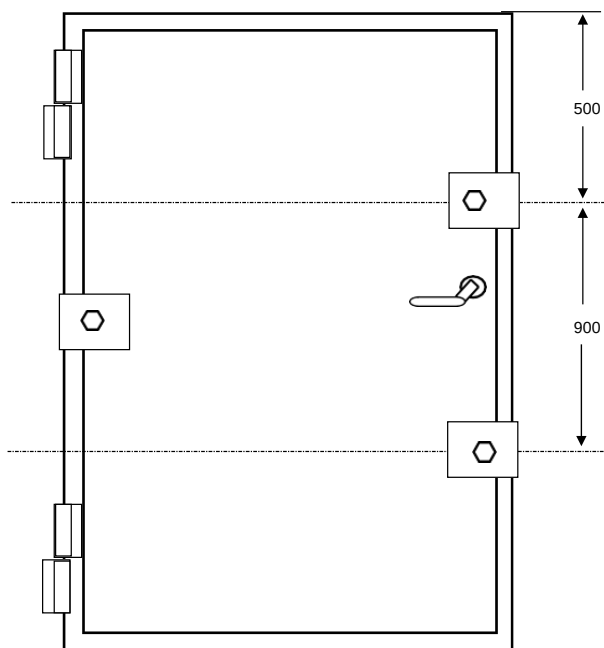
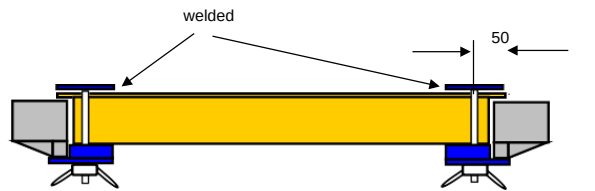
Having a citadel does not guarantee a Naval / Military force response. The following are current requirements prior to any Naval / Military force intervention. The latest guidance may be found on the MSCHOA website – www.mschoa.org and the NATO Shipping Centre web site www.shipping.nato.int

- All of crew, security teams and personnel on board embarked for passage must be secured in the

citadel

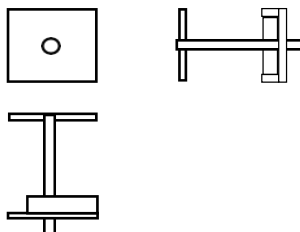
- The crew of the vessel must have self-contained, independent, two-way external communications. Sole reliance on VHF communications is insufficient
- The pirates must be denied access to propulsion
- The location of the vessel that has been boarded illegally in relation to the naval vessel. In addition to any geographic limitations between the two vessels, some naval assets have a strict area of operations which are imposed upon them – they are not permitted to use force outside of this area
- In many cases the Naval / Military force is required to have a specially trained team on board to enable an “opposed boarding” to be conducted
- The Naval / Military forces may have to obtain approval for an opposed boarding from the Flag State of the vessel to be boarded and from the foreign ministries of all nationalities on board
- Weather considerations may prohibit an opposed boarding
- Any opposed boarding takes time to plan and requires assistance from the Owners/Ship Operators
- Owners should have / keep ship plans available to send to the military in suitable electronic format



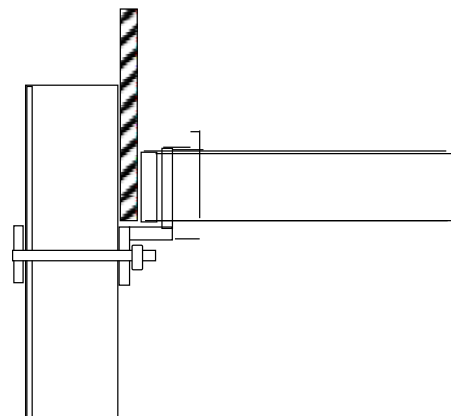


Solution 1

3pcs steel plate 100 x 100 x 4 mm
with 12mm diameter steel bolt 110mm length, 40mm threaded, welded on plate.



Solution 2





Extra strengthening on at risk doors before the citadel



As above – a further deterrent to access should the lock be broached (metal is preferred to wood)



Watertight door effectively secured

5.4. CSO Procedures

- It is company policy that each vessel transiting the GoA area should use the MSTC. The decision on whether or not to join an escorted company is to be made at the risk assessment stage and the CSO is to advise the Master regarding naval convoy schedules and group transit procedures
- Every transit must be planned individually and a risk assessment completed. Latest piracy reports should be reviewed and the areas of highest risk identified. Latest information can be found on UKMTO on following link: www.ukmto.org. Using this information, a voyage plan can be agreed. THIS MUST BE REVIEWED ON A REGULAR BASIS WHEN A CSO HAS VESSELS IN THE HIGH RISK AREA
- The CSO shall advise the Master regarding the company's POLICY FOR MANAGED VESSELS TRANSITING THE INDIAN OCEAN PIRACY RISK AREA and shall advise the Owners accordingly
- The CSO shall agree the adequacy of the vessel's risk assessment and communication plans
- The CSO shall co-ordinate with the vessel's Superintendent to ensure all equipment required to implement the ship protective measures within this policy are supplied to the vessel
- In the event that armed guards are to be carried the CSO is responsible for ensuring that Flag and other interested parties are notified. Some charterers do not currently permit armed guards
- The CSO will liaise with the Owner regarding policy on Citadels and advise the Master accordingly
- The CSO must ensure that insurance warranties are complied with and notifications made to insurers. He should be aware if K&R insurance is in place and the conditions of the policy
- CSO will register the vessel's transit through the GoA transit corridor and the Indian Ocean High Risk Area where applicable, via the MSCHOA website (www.mschoa.org). CSOs must be registered for access to this site and should have contact details in phone address bookpostmast. The process can also be done offline by requesting a form from postmaster@mschoa.org
- UKMTO e-mail address (watchkeepers@ukmto.com) shall be added to the SSAS security alert transmission for the period in the High Risk Area. Where considered necessary the Ship Security Reporting System www.ssrs.org shall be utilised
- The CSO shall appraise the vessel with transit guidance regularly, including security updates
- Any additional security equipment or personnel considered, especially for high risk vessels, should be agreed with owners
- The CSO shall call the vessel at regular pre-arranged times when within the MSTC to check on the vessel's status

Annex A Threat Terminology

The report's findings are predictive and estimative. To communicate these findings clearly and in order to accurately compare threat levels, the report uses a variation of terminology used by the UK Foreign and Commonwealth Office (FCO).

THREAT LEVEL	DESCRIPTION
Critical	The likelihood of an incident is certain
Severe	The likelihood of an incident is almost certain
Substantial	The likelihood of an incident is probable
Moderate	The likelihood of an incident is about even
Low	The likelihood of an incident is improbable

Piracy: NYA uses a modified version of the definition of piracy adopted by BMP5. For the purposes of this report, the term 'piracy' includes all violent and non-violent acts against vessels, her crew and cargo occurring either in internal waterways, territorial waters or deep offshore. Based on this definition, NYA classifies piracy incidents into six categories:

- **Hijacking:** Crew lost control of the vessel and / or pirates kidnapped at least one crewmember and / or passenger(s)
- **Boarding:** Pirates successfully board a vessel with the intent to hijack it but their attempt to take control of the vessel or kidnap crewmember(s) and / or passenger(s) failed
- **Attack:** Vessel was attacked with gunfire or RPG fire, no boarding was successfully completed
- **Pirate Action Group (PAG):** Sighting or reporting of firearms and boarding equipment on board a suspicious vessel or sighting of a confirmed pirate mothership
- **Criminal boarding:** Vessel boarded with criminal intent, theft does not have to occur
- **Suspicious approach:** Suspicious activity reported (i.e. a vessel was approached by unidentified skiff(s) with one or more persons on board)



Limitation

Our opinion and advice are given on the basis of the information given to us in our instructions and the surrounding circumstances known to us to exist at the time when those instructions are given. We do not accept responsibility for verifying the information or investigating beyond its limits. Subsequent changes to relevant information or to the surrounding circumstances may affect the reliability of our opinion and advice but we do not accept responsibility for that effect. We do not accept responsibility for the outcome of action taken or not taken as a result of our opinion and advice unless the possibility of that action being taken or not taken is set out in specific terms in our instructions.