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| **Risk Management** | | | | | | | | | |
| Operation / Work activity being assessed: |  | | | | | | | | |
|  | Routine | |  | Non-routine | | | | |
| Generated by: Vessel  (record the name) | | | | | | Office | | | |
| Code number (to be assigned by the Office): | | |  | | | Version: |  | Date: |  |

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| **FREQUENCY CATEGORY** | | |  | **CONSEQUENCE CATEGORY** | | | | |  | **RISK MATRIX** | | | | | | |
| **5** | Frequent - Possibility of repeated incidents | More often than once per voyage |  | **4** | Human losses / fatalities | Major pollution /  Full scale response | Excessive / high-cost damage  > $1000000 | Major national & international impact |  |  | | **FREQUENCY** | | | | |
| **4** | Probable - Possibility of isolated incidents | Once per year |  | **3** | Serious injury to personnel | Moderate pollution/  Significant resources commitment | Moderate cost or damage  ($100000 –$1000000) | Considerable impact |  |
| **1** | **2** | **3** | **4** | **5** |
| **3** | Occasional- Possibility of occurring sometime | Once per 5 years |  | **2** | Number of minor injuries / Medical treatment for personnel | Little pollution /  Limited response of short duration | Little cost or damage  ($10000 – $100000) | Slight impact |  | **CONSEQUENCE** | **1** | **L**(1) | **L**(2) | **L**(3) | **M**(4) | **M**(5) |
| **2** | **L**(2) | **M**(4) | **M**(6) | **M**(8) | **H**(10) |
| **2** | Remote- Not likely to occur | Once per 10 years |  | **1** | Few minor injuries | Minimum pollution / Little or no response needed | Minimum cost / damage  < $10000 | Zero impact |  | **3** | **L**(3) | **M**(6) | **M**(9) | **H**(12) | **H**(15) |
| **1** | Very unlikely- Practically impossible | Once per 30 years or more |  |  | **4** | **M**(4) | **M**(8) | **H**(12) | **H**(16) | **H**(20) |
|  |  |  |  |  |  |  |  |  |  | **High**=Intolerable Risk **Medium**=Tolerable Risk **Low**=Negligible Risk | | | | | | |

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| **Risk Assessment** | | | | | | | | | | |
|  | **Risk Identification** | | **Risk Analysis** | **Initial risk evaluation** | | | | | | |
| **No** | **Hazard** | **Potential**  **hazardous event** | **Existing control measures** | **F** | | **C** | | **R** | | |
| 1 | During navigation without Pilot on board in Malacca Straits Master and Company must assess whether the vessel should proceed with the planned course or not.  Lack of “real time” information on local dangers. | Moderate cost or damage | * UMMS chapter 7.2.2.4 Performing the Navigation watch and lookout * UMMS chapter 7.2.4.30 VHF Bridge radio   UMMS chapter 7.2.4.31 Safety watch keeping on GMDSS | 1 | | 3 | | 3 | | |
| 2 | Lack of navigation guidance & cooperation to avoid hazards. | Moderate cost or damage | * UMMS chapter 7.2.2.4 Performing the Navigation watch and lookout * UMMS chapter 7.2.4.30 VHF Bridge radio * UMMS chapter 7.2.4.31 Safety watch keeping on GMDSS * UMMS chapter 7.2.1.7.2 Ship’s position fixing * UMMS chapter 7.2.1.7.6 Standby Engines * UMMS chapter 8 Emergency preparedness * UMMS chapter 7.2.4.3 Echo sounder * UMMS chapter 7.2.4.1 Radar / Arpa * UMMS chapter 7.2.4.5 Gyro compasses and Magnetic compasses * UMMS chapter 7.2.2.10 Bridge watch conditions * UMMS chapter 7.2.1.7.11 UKC * UMMS chapter 7.2.10 Books, ENC’S and E-publications   Consideration must be given to the possible applicability of the below given controls in reaching such a decision:   * Up-to-date Navigational Charts Scale for the inland / port waters * Other relevant Nautical Publications * Caution Notes such as Navarea messages, NAVTEX warnings, etc. * Quality / nature of the seabed * Sea State (calm or rough) * Adaptation of safe transit speed (to minimize squat) * Accuracy of the ship’s draught * Transit of confined area during high tide * Manoeuvrability of the vessel * Any other operational constraints that may be applicable due to vessel’s UKC * General and expected movement of trafﬁc in the area. * Prevailing weather conditions | | 1 | | 3 | | 3 |
| 3 | Lack of knowledge of accurate ship’s position. | * Moderate cost or damage * Serious injury to personnel | 1 | | 3 | | 3 |
| 4 | Lack of engine readiness. | 1 | | 3 | | 3 |
| 5 | Lack of timely emergency response. | Moderate cost or damage | 1 | | 3 | | 3 |
| 6 | Lack of knowledge of water depth. | * Moderate cost or damage * Serious injury to personnel | 1 | | 3 | | 3 |
| 7 | Lack of traffic knowledge | 1 | | 3 | | 3 |
| 8 | Lack of knowledge of actual heading | Moderate cost or damage | 1 | | 3 | | 3 |
| 9 | Lack of manpower. | Serious injury to personnel | 1 | | 3 | | 3 |
| 10 | Planned course passes from an area with ZOC categorization “D” or “U”. | Grounding / Pollution / Damage | 3 | | 4 | | 12 |
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| Note F: Frequency, C: Consequence, R: Risk | | | | | | | | | | |

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| **Risk Treatment** | | | | | | | **Residual risk evaluation** | | | | | |
| **Hazard No.** | **Additional Risk Control Measures** | | | **Responsible** | | **Action Timeline** | **F** | | **C** | | **R** | |
|  | | Recalculation of passage plan for the specific part of the voyage with lower speed, in order the squat to be reduced. | Navig. Officer / Master | | Prior to passage | | |  | |  | |  |
|  | | Prevailing weather conditions (or conditions that will be expected) while the vessel is on passage, to be considered / monitored. | Navig. Officer / Master | | Prior to passage | | |  | |  | |  |
|  | | The Master’s and bridge team experience in this particular trading area to be considered. | Operations Manager | | Prior to passage | | |  | |  | |  |
|  | | Most recent deepest arrival / departure draft (arrival and safe berthing of vessels of similar size and draft establishes a degree of safety for the transit under prevailing environmental conditions) to be requested from the port authorities. Relevant information to be copied to the Operations Manager for review / instructions, as deemed necessary. | Master | | Prior to passage | | |  | |  | |  |
|  | | Local agents to be contacted in writing and requested the actual depth of port entry/berth/loading/discharging areas or SBM/CBM and the maximum permitted draft. These exchanges of information will be copied to the Operations Manager for review / instructions, as deemed necessary. | Master | | Prior to arrival at loading/ discharging port/passing area | | |  | |  | |  |
|  | | Additional information from port authorities, pilots, etc. regarding the local environmental conditions, traffic density at the time of the passage, seabed characteristics, etc. to be obtained. Relevant information to be copied to the Operations Manager for review / instructions, as deemed necessary. | Master | | Prior to passage | | |  | |  | |  |
|  | | During the passage, tugs to be stand-by. | Operations Manager in co-operation with local agent | | During passage | | |  | |  | |  |
|  | | In case of contingency situation: emergency response teams should be activated and company’s procedures for touching bottom / grounding, as described in ‘Emergency Response Plan’ and ‘SOPEP’ should be followed. | Master / Operations Manager | | In case of unplanned occurrence | | |  | |  | |  |
|  | |  |  | |  | | |  | |  | |  |
| Note F: Frequency, C: Consequence, R: Risk | | | | | | | | | | | | |

| **ALTERNATIVE WAYS TO CONDUCT THE WORK (a new RA should be conducted for the alternative way decided)** |
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| **Are any amendments to UMMS required (related to the above Additional Risk Control Measures)?** | | | |
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| **Yes** |  | Describe: |  |
| **No** |  | | |

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| **Contingency plans** (to facilitate safe management and recovery of the situation in case of any unplanned occurrences) | |
| Emergency case | Contingency Plans |
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| **Risk Management Team** | | | |
| Name | Rank / Title | Signature | Date |
|  |  |  |  |
|  |  |  |  |
| Remarks: | | | |

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| **Risk Assessment reviewed/approved by:** | | | |
| Name | Rank / Title | Signature | Date |
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| Remarks: | | | |