

Documented Risk Management Process

Record of risk management 'process' to be carried out in accordance with the *Workplace Health & Safety Regulation 1997*

Date of assessment:

.....

Date/times of work

.....

Work to be undertaken for:

.....

.....

Work to be undertaken on:

.....

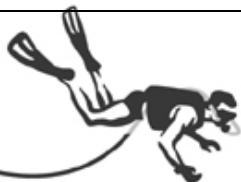
Site location:

.....

| Name of person conducting risk assessment process | Competency determined by |
|---|--------------------------|
| | |

| Names of divers participating in underwater diving work | Competency determined by |
|---|--------------------------|
| 1 | |
| 2 | |
| 3 | |

| Name of all other persons involved in the work | Role |
|--|------|
| 1 | |
| 2 | |
| 3 | |



Assessment of Consequences

| LEVEL | DESCRIPTION | EXAMPLE |
|-------|----------------------|--|
| 1 | <i>Major</i> | Extensive or life threatening injuries, emergency protocols enacted, loss of production capability, emergency services required. |
| 2 | <i>Moderate</i> | Medical Treatment required, emergency services required, person is not able to continue work. |
| 3 | <i>Minor</i> | First aid required, person may / may not be able to continue work. |
| 4 | <i>Insignificant</i> | No injuries, person able to continue work. |

Assessment of Likelihood

| LEVEL | DESCRIPTION | EXAMPLE |
|-------|-----------------------|--|
| A | <i>Almost Certain</i> | Is expected to occur in most circumstances. |
| B | <i>Likely</i> | Will probably occur in most circumstances. |
| C | <i>Possible</i> | Might occur at same time. |
| D | <i>Unlikely</i> | Could occur at same time. |
| E | <i>Rare</i> | May occur only in exceptional circumstances. |

Risk Analysis Matrix

| LIKELIHOOD | CONSEQUENCE | | | |
|---------------------|-------------|---------------|------------|--------------------|
| | Major 1 | Moderate 2 | Minor 3 | Insignificant 4 |
| A Almost Certain | E | E | H | H |
| B Likely | E | H | H | M |
| C Possible | E | H | M | L |
| D Unlikely | H | M | L | L |
| E Rare | H | M | L | L |

Risk Score

| Symbol | Risk | Pre Dive | During Dive |
|--------|------------------------|---|---|
| E | Extreme Risk | Dive must not commence | Urgent action required |
| H | High Risk | Dive must not commence | Action required at the earliest possible moment |
| M | Moderate Risk | Dive must not commence | Action required |
| L | Low Risk | Diving may commence / Manage with routine practices | Continue managing with routine practices |
| CR | Controlled Risk | Diving may commence with controls in place | Diving may commence with new controls in place |

Important Note:

Diving operations should only commence or continue when the risk score is either L or CR.

Should the risk score change during diving operations then actions above should be taken to reduce the risk to L or CR.



Risk Assessment and Control Measures

| LEVEL OF DIVER COMPETENCE | | | | | |
|---------------------------|----------------------|---------------------|---------------|--------------|-----------------------------|
| Identified Hazard | Assessed Consequence | Assessed Likelihood | Assessed Risk | Risk Control | Assessed Risk After Control |
| | | | | | |
| | | | | | |

| ENVIRONMENTAL CONDITIONS | | | | | |
|---|----------------------|---------------------|---------------|--------------|-----------------------------|
| Identified Hazard | Assessed Consequence | Assessed Likelihood | Assessed Risk | Risk Control | Assessed Risk After Control |
| Strength and direction of wind (consider emergency response) | | | | | |
| Current and tide | | | | | |
| Underwater Visibility | | | | | |
| Entrapment Hazard | | | | | |
| Depth of Worksite | | | | | |
| Water Temperature | | | | | |
| Time of Day | | | | | |
| Underwater Terrain | | | | | |
| Atmospheric Temperature and Humidity | | | | | |
| Contaminants | | | | | |
| Isolation of Dive Site | | | | | |

TASK RELATED CONDITIONS

| Identified Hazard (Consider Complexity, non-routine nature) | Assessed Consequence | Assessed Likelihood | Assessed Risk | Risk Control | Assessed Risk After Control |
|---|---------------------------------|--------------------------------|----------------------|---------------------|--|
| | | | | | |
| | | | | | |
| | | | | | |

HYPERBARIC / PHYSIOLOGICAL HAZARDS

| Identified Hazard | Assessed Consequence | Assessed Likelihood | Assessed Risk | Risk Control | Assessed Risk After Control |
|---|---------------------------------|--------------------------------|----------------------|---------------------|--|
| Frequency of diving, inc repeat diving, multi day diving. | | | | | |
| Depth of Dive | | | | | |
| Duration of Dive | | | | | |
| Breathing Gas | | | | | |
| Exertion Required to Reach Dive Site | | | | | |
| Exertion Required to Conduct Task | | | | | |
| Excessive Noise | | | | | |
| Immediate Pre Dive Fitness | | | | | |
| Altitude Exposure | | | | | |

| ASSOCIATED ACTIVITIES HAZARDS | | | | | | |
|-------------------------------|----------------------|---------------------|---------------|--------------|-----------------------------|--|
| Identified Hazard | Assessed Consequence | Assessed Likelihood | Assessed Risk | Risk Control | Assessed Risk After Control | |
| Manual Handling | | | | | | |
| Boat Handling | | | | | | |
| Dive Site Entry* | | | | | | |
| Dive Site Egress* | | | | | | |
| Crane / Winch Operations | | | | | | |
| Rigging | | | | | | |
| Topside Plant* | | | | | | |
| Dive Platform | | | | | | |
| | | | | | | |

OTHER HAZARDS

| Identified Hazard | Assessed Consequence | Assessed Likelihood | Assessed Risk | Risk Control | Assessed Risk After Control |
|--|-----------------------------|----------------------------|----------------------|---------------------|------------------------------------|
| Dangerous Marine Animals | | | | | |
| Non Associated Boat Traffic (Small Craft)* | | | | | |
| Shipping Movements | | | | | |
| Water Inlets | | | | | |
| Water Outfalls* | | | | | |
| Water Pressure Differentials* | | | | | |
| Use of Hazardous Substances | | | | | |
| Existing in Water Chemical Pollutants | | | | | |
| Existing in Water Biological Pollutants | | | | | |
| Explosives | | | | | |
| Hazards Peculiar to Dive Site | | | | | |

RISK CONTROL

In deciding on control measures, the hierarchy of control measures mentioned in AS/NZS 2299 part 1, appendix D3.2 must be taken into account:

1 General Control of risk is achieved by selecting from the hierarchy of control measures, one or more measures which individually or in combination achieve the required risk reduction.

2 Control measures Appropriate control measures should be applied to risks, using the hierarchy of controls in the following order:

- (a) *Elimination* – Where the level of risk cannot be controlled to an acceptable level, no diving should take place.
- (b) *Substitution* – Where the risk can be controlled by performing the task by using alternative methods of diving, consideration should be given to using these alternative methods.
- (c) *Design* – Plant and procedures should be designed to minimize risk.
- (d) *Isolation* – Persons should be isolated from the identified hazards.
- (e) *Administrative* – Every dive plan should seek to minimize the degree and duration of the divers exposure to risk.

NOTE: Almost every aspect of dive planning falls into this administrative category.

Administrative controls include:

- (i) training, supervision, experience and selection of employees, including staffing levels;
 - (ii) provision of an appropriate diving operations manual;
 - (iii) organization and planning before, during and after the dive;
 - (iv) selection of appropriate plant; and
 - (v) selection of the appropriate form and level of communication.
- (f) *Personal Protective Equipment* – Appropriately designed and sized personal protective equipment should be provided, used and maintained. The limitations of all equipment used should be identified as part of the risk assessment process. Information from manufacturers and from records of prior experience should be used to identify limitation

