

**SIA Initial Feasibility Report On The Conduct of A Maritime Archaeology
Assessment, Analyses of Data Obtained and Development of Options
for The Future Management of the Submarine HMAS AE 2**

List of Contents

Disclaimer.....	3
Executive Summary.....	3
Background.....	3
Programme.....	3
Costs.....	4
Timing of expenditure.....	5
Risks.....	5
Conclusions.....	5
Recommendations.....	6
Introduction.....	7
Background.....	7
The Objective.....	9
Near Term.....	9
The Long Term Plan.....	11
The Minimalist Option.....	11
The Outcomes Required to be Achieved in the MAA In Order to Facilitate a Joint Turkish/Australian Government Decision.....	12
Introduction.....	12
Data.....	12
Analysis.....	12
Peer Group Review.....	13
Joint Workshop to Derive Options and Recommendations.....	13
Outcomes From Phase II.....	13
Report Generation.....	13
Programme For Achieving The Joint Outcomes.....	14
The MAA Programme.....	14
The Impact of Slippage.....	14
Statement of Significance.....	15
Diver-based Photographic Recording of External Hull Condition.....	15
Corrosion Survey.....	17
Environmental Survey.....	19
Reports To Be Produced.....	19
Telling The AE 2 Story.....	20
Australian Geographic.....	20
The TV Documentary.....	20
Educational Material.....	20
Academic Publication.....	21
Promotional Programme.....	21
Managing The Risks.....	21
Risk Management Philosophy.....	21
Life Threatening Risks.....	22
Insurance.....	22
Rehearsal.....	22
Planning Visit to Turkey.....	23

MEDEVAC Plan.....	23
The Project Team.....	23
The Turkish Contribution.....	25
Costs	25
Spread of Expenditure.....	26
Funding.....	27
Government Grant – Preliminary (Feasibility) Phase.....	27
Government Grant – The Assessment Phase.....	27
Contingency.	28
Australian Sponsorship.	28
Turkish Sponsorship.....	28
The Australian Submarine HMAS AE 2 Memorial Fund Ltd.	29
Conclusions.....	29
Recommendations	30

List of Tables

- Table 1 – List of MAA Australian Team Members
- Table 2 – Cost of Phases I & II
- Table 3 – Timing of Expenditure

Disclaimer

The recommendations made in this report are based on the understanding that the proposed Maritime Archaeology Assessment (MAA), analysis of the data obtained, report preparation and development of options for consideration by Governments will be planned, directed and managed by the Submarine Institute of Australia Inc (SIA).

The report remains valid for 60 working days from the date of issue.

The report is provided to inform the AE 2 Inter Departmental Working Group on the SIA's proposal for the conduct of a comprehensive archaeological survey on the submarine, HMAS AE 2, analysis of the data gathered, report preparation and development of options for consideration by Governments.

Executive Summary

BACKGROUND

This proposal builds on previous involvement by members of the SIA in efforts to preserve and protect the wreck of HMAS AE 2 and to tell the story of her brave crew, recognising the significance of HMAS AE 2 in Australian and Turkish history.

The overall objectives and supporting activities to achieve them have been jointly agreed in the Memorandum of Understanding (MoU) between the Turkish Institute of Nautical Archaeology (TINA) and the SIA.

Building on the experience of the 1998 Project AE2 Expedition, its recommendations for future actions and relationships established during this and subsequent activities, the SIA has developed a plan for the conduct of the MAA to collect observations and data, analysis of this data, generation of reports and the conduct of a joint workshop to agree on options to achieve the agreed objectives.

PROGRAMME

A rehearsal of the diving and ROV activities and will be carried out by the end of July 2006 on an ex J Class RAN submarine lying in 30m of water off Port Phillip Heads, Melbourne.

The Project manager will travel to Turkey by the end of July 2006 to complete logistic arrangements and arrange Turkish support and participation. To avoid raising false expectations this trip should not be undertaken unless approval in principle to proceed with the MAA has been given.

The sequence and arrangements to complete the MAA will require the 15 person SIA Team to assemble and travel to Turkey where they will combine with the Sonartech Atlas and Turkish members of the team at the operating base at Karabiga. A 3 day Hydrographic Survey of the site will be followed by a 10 day diving and Remotely Operated Vehicle (ROV) survey to collect the archaeological data required. The team will then demobilise and return to Australia.

As part of the process of telling the story of AE 2's action a documentary film crew will accompany the Australian Team. Under the terms of the MoU footage will be shared with Turkish parties and be available for future productions of follow-on accounts of the story.

Analysis of the data and completion of the reports will be undertaken in Australia. The Australian team has the necessary skills to complete the MAA, oversee the analyses of the results, prepare the reports and coordinate a joint workshop to agree future management options. An international peer review group will review the report to ensure it is suitably balanced and able to withstand scrutiny.

It is intended to involve Turkish parties in all field activities in Turkey, in order to maximise the joint nature of the activity and achieve the broadest acceptance of the results. However, the achievement of the necessary outcomes is not critically dependent on Turkish sponsorship or involvement.

Individuals with suitable expertise in specialist areas have been engaged as members of the Australian team, many are of international standing in their respective fields. All team members are members of the SIA and have completed an individual agreement with the SIA, agreeing to the ground rules for their participation.

Following publication of the reports, a joint workshop will be held in Turkey to agree options and make recommendations to both Governments on the future management of the wreck. The outcomes of Phase II will provide the Government with a range of options for the future management of the wreck.

Should the September 2006 time scale not be achievable the next suitable weather window is March/April 2007.

COSTS

The cost of the Phase I – The Preliminary (Feasibility) Phase is \$66K of which \$25K has been provided by way of a grant, \$21K from SIA funds and an additional \$20K grant is sought to cover the cost of the rehearsal.

The Cost of Phase II - The Assessment Phase is \$737K of which \$307K is by way of sponsorship and \$430K is sought as a grant from the Government. Agreement in principle is required before undertaking the planning trip. Since this trip must be completed by the end of July to allow arrangements to be

finalised, approval in principle is required by 30 June if the MAA is to go ahead in September 2006. This is the critical path.

The rehearsal is included in the costs of the Phase I. An increase to the current grant by \$20K is sought to cover these costs by 30 June, to allow the rehearsal to take place before the end of July.

TIMING OF EXPENDITURE

Of the \$430K sought for Phase II, \$80K is required by 30 June, to pay immediate expenses such as the insurance premium, travel and accommodation deposits. The balance of this grant will be expended in FY 06/07.

RISKS

A Risk Management plan has been developed by a consultant specialising in this field, with input from team members. This plan provides the mechanism for managing the risks and will be maintained during implementation.

The Australia team is covered by comprehensive, door to door all risk insurance provided by Chubb Australia. Turkish participants will be required to provide suitable insurance cover and to release the SIA from any indemnity for their participation.

CONCLUSIONS

The SIA has assembled a team capable of conducting the MAA and report development as the basis for the joint workshop to establish options for the future management of the wreck.

A detailed plan for the conduct of the MAA has been developed. The various risks and hazards associated with the diving survey operations have been considered and a comprehensive management plan developed.

Arrangements will be further refined and proved by a rehearsal and a planning trip to Turkey.

To ensure the best chance of a jointly agreed outcome, these activities will involve the maximum level practical of Turkish involvement and be backed by peer review from suitably qualified, independent experts.

Further development of the joint workshop to consider the MAA report and provide recommendation to the two Governments is required. This has deliberately been left until after the MAA. It is considered this is best undertaken after we have gained the confidence of Turkish authorities by the

successful execution of the MAA and have the benefit of the interaction with the Turkish parties.

Cost estimates for Phase II are based on previous experience in Turkey with an allowance for the intervening cost escalation. These will be refined during the planning visit to Turkey.

In principle approval to proceed with the Assessment Phase at a ceiling cost of \$430K and the rehearsal at a cost of \$20K is required by 30 June if the MAA is to be undertaken in September 2006. The next available weather window is 12 months later.

RECOMMENDATIONS

The IDWG should recommend in principle Government approval for proceeding with Phase II, with an MAA timed to commence on 16 September 2006, with a ceiling cost to the Government of \$430K. This will require commitment of \$80K funding to cover initial expenses and obligations to enable long lead arrangements to be made and this should be immediately available to the SIA.

Government approval to this course of action is required by 30 June 2006 to enable the planning visit to proceed in July. To avoid raising false expectations in Turkey, this visit should not occur unless in principle approval to proceed has been received.

Subject to satisfactory completion of the planning visit and rehearsal, final Government approval to proceed should be given by 14 August 2006, to enable the MAA to be conducted on 16 September 2006.

Introduction

Background

Historical Precedents

This proposal builds on the previous work of Mr Selçuk Kolay OAM in discovering the wreck, “Project AE2” and the outcomes of its 1998 diving operations in positively identifying it and commencing site analysis with Defence funding support. The Parties formally acknowledge the seminal work of that project and by Dr Mark Spencer and Tim Smith ¹ in providing the historical antecedents to future efforts.

Historical Significance of AE 2's Action

AE 2's action is significant ² in the history of Gallipoli because of the following factors:

- AE 2 was the first Allied submarine to penetrate the Dardanelles:
 - Allied submarines had not been able to overcome the difficulties of the narrows; strong out flowing currents and difficult navigational challenges set against the fierce defences of the Turkish forts and warships.
 - Two previous attempts had resulted in the destruction of the submarines involved.

AE's penetration was therefore the first step in the Allies successful submarine campaign to paralyse enemy shipping and deny the Ottoman forces use of the Sea of Marmara for resupplying the Gallipoli Peninsula.

The successful penetration demonstrated great bravery and determination by AE 2's Commanding Officer, Lieutenant Commander Stoker and the crew. Michael White³, Tom Frame⁴ and Fred & Elizabeth Brenchley⁵ have provided detailed accounts of this dramatic action.

- AE 2 was the first RAN warship lost in an engagement with the enemy.
- AE 2's success was taken as a positive omen and cited directly in Sir Ian Hamilton's decision to continue the landings after the set backs of the first day.

¹ Project AE 2 – Investigation of The Wreck of The HMA AE 2 Submarine Wreck Site, Turkey, October 1998 © NSW Heritage Office, Sydney NSW.

² The history of the AE2 has been written by a number of people, including White, Michael *Australian Submarines: A History*, AGPS, 1992, Chaps. 5,6; Brenchley, Fred & Elizabeth *Stoker's Submarine*, 2001, Harper Collins; Frame, Tom *The Shores of Gallipoli: Naval Dimensions of the Anzac Campaign*, 2000, Hale & Iremonger, and, for background of the campaign from the Ottoman point of view, see Fewster, Basarin & Basarin *Gallipoli: The Turkish Story*, 2003, Allen & Unwin.

³ *Australian Submarines A History*, Michael W. D. White, AGPS 1992, Chapters 5 & 6

⁴ *The Shores of Gallipoli: Naval Aspects of the Anzac Campaign*, Dr T. Frame, 2000, Hale & Iremonger.

⁵ *Stoker's Submarine*, Fred & Elizabeth Brenchley, 2001, Harper Collins, Chapter 5

- The tactic of exposing the submarine and aggressively engaging shipping was material in causing the Ottoman forces to re-route reinforcements, ammunitions and supplies to sustain much of their forces on the Gallipoli peninsula by an overland route using the poor roads of the time: this was a much slower process than the sea route across the Sea of Marmara. The effect of this was to delay the build-up of Turkish forces there by reducing the pressure on ANZAC and Allied troops and giving them more time to consolidate their beachhead.
- The submarine's sudden presence inside 'protected' territorial waters caused great alarm to the Turkish authorities.

The Turkish Significance.

From the Turkish perspective the sinking of AE 2 was a significant victory. AE 2's penetration of the Dardanelles marked a new phase in the war at sea. Having successfully repulsed the combined might of the Allied battle ships endeavouring to force the Straits in March; they were now facing a new challenge for control of their territorial waters. The destruction of AE2, the third submarine detected to this time, gave hope to the Turks that they could reduce the submarine threat.

The Significance of AE 2 Today.

The historical and archaeological significance of the AE2 wreck site was established by the 1998 Project AE2 team⁶. In summary, today AE 2 is:

- A significant Australian World War I shipwreck relic, one of the few remaining, lying in situ where it fell in battle.
- A memorial to the skill and determination of the RAN's fledgling submarine arm and a forerunner to the future impact of this weapon system on the war at sea.
- One of a handful of E class submarine wreck sites located internationally of the 57 built. A site that retains significant archaeological integrity and that does not constitute a war grave.

Earlier Australian and Turkish Consideration of AE 2

Following the wreck's Turkish discovery in July 1998 an Australian diving team provided official confirmation of its identity in October 1998. Team members published widely on this preliminary site assessment phase. Since then there has been an active dialogue and series of activities undertaken by interested Australian and Turkish individuals. Much of these activities are summarised in three reports:

⁶ Smith, T., Project AE 2 – Investigation of The Wreck of The HMA AE 2 Submarine Wreck Site, Turkey, October 1998 © NSW Heritage Office, Sydney NSW.

- Project AE2 1998 Expedition Report and Conservation Management Plan, Tim Smith, NSW Heritage Office, Sydney.
- AE 2 2003 report, Michael White QC, Centre for Maritime Law, 14 November 2003.
- Report On The AE 2 Workshop Held In Istanbul, Turkey, 17 May 2004, Michael White QC, Centre for Maritime Law, 14 November 2003.

These works have established the significance of the vessel, its history and archaeology, and identified critical actions required to better understand and manage the complexity of the site. The outcomes from the most recent event, the joint 2004 Workshop, can be précised as follows:

- Early steps should be taken by the Turkish Government for protection of the wreck.
- Cathodic protection for the wreck at an early stage is highly desirable.
- A thorough archaeological and environmental survey of the wreck was essential to establish its condition and significant values.
- Where possible work should be on a joint venture basis with the Australian team (then Project AE 2) and the Turkish Team working together.
- The future decision making basic steps should be:
 - A survey of the wreck;
 - Full data be recorded about the wreck;
 - Once completed the results should be published;
 - After such publication a Workshop of all relevant government and private sectors should debate and decide on a future plan for the wreck.
- Adopting a time schedule would be difficult but it was resolved to make 2015, the centenary of the landings and the sinking of AE2, a special year for commemoration, with particular emphasis on AE 2.
- A Steering Committee with representatives from the Turkish and Australian Government and private sectors should be established.
- All parties should take active steps to encourage publicity and public debate about the importance of the AE 2 to both countries.
- The Australian Government advised that if it were to be raised it would not seek to have the wreck returned to Australia. This statement was made without prejudging what option for the future of the wreck might be chosen.

The Objective

NEAR TERM

The objective, jointly agreed in the Memorandum of Understanding (MoU) between the Turkish Institute of Nautical Archaeology (TINA) and the SIA (at Enclosure 1), the wording of which was cleared by the AE 2 Inter Departmental Working Group (IDWG) is:

- To promote an understanding in Australia and Turkey of the submarine HMAS AE 2 role (1913-1915) in the Gallipoli campaign, as a basis for ongoing friendship and respect between the two nations.
- To achieve an outcome acceptable to both Parties as to how the wreck should be preserved and presented to the international public for the foreseeable future.

These Objectives are supported by activities to:

- Preserve, protect and promote the fragile archaeological AE2 wreck structure, with a view to engaging public knowledge of, and learning from, the role of AE2, the Dardanelles Campaign generally and the importance of the wreck to both nations involvement in the campaign.
- This work is to be undertaken in a professional manner, within the controls of the Turkish legal system and meet the highest international professional maritime archaeological standards, giving regard to the rules annexed to the UNESCO Convention on the Protection of the Underwater Cultural Heritage 2001.
- Preserve the AE 2 wreck as far as practicable so that future generations can use it as a means of achieving the Objectives.
 - This includes surveys to ascertain the materiel state of the wreck and obtain comprehensive images of the wreck.
 - The results of the Maritime Archaeological investigations and surveys should be presented with absolute transparency and with no underlying agendas.
- Establish public education opportunities, including developing interpretation centres in Turkey and Australia to tell the story of the engagement of AE 2 with Turkish defence forces and the conservation status of the wreck.
 - The intention is to have these centres available for celebrations of the centennial of the loss of HMAS AE 2 on 30 April, 2015.
- Provide protection to the wreck by:
 - Exploring opportunities to provide greater Turkish legislative protection to the wreck
 - Preventing inadvertent damage by fishing activities.
 - Possibly initiating anodic protection of the site to further physical retention.
 - Obtaining a comprehensive assessment of the site's conservation status through targeted studies, including an archaeological corrosion survey.

THE LONG TERM PLAN

The long term plan envisages 3 phases.

Phase I – The Preliminary Phase (also described as the Feasibility Phase), during which feasibility of conducting activities to protect, preserve AE 2 and tell its story is assessed. This Phase is currently underway.

Phase II - The Assessment Phase. This will be a pragmatic, step by step process with both Governments determining their individual future involvement after completion of each step. It will be conducted from September 2006 until April 2008 and have 3 sub phases:

- Sub-phase 1. Establish the condition of the hull by appropriate scientific measurement.
- Sub-phase 2. Development of options available for the future handling of the wreck.
- Sub-phase 3. Detailed costing and cost sharing arrangements of each option, including the production of the final report.

Phase III - The Action Phase. Following Australian and Turkish Government consideration and agreement on way ahead mutually agreed actions will be initiated to achieve the agreed objectives.

THE MINIMALIST OPTION

A minimalist option to protect and preserve HMAS AE 2 in situ might include the following:

- A check survey of wreck and, subject to agreement, placement of anti trawl and cathodic protection in 2008.
- A public campaign to launch The AE 2 Centenary of Gallipoli Plan including a Planning & Fundraising Phase running from May 2008 until April 2011.
- During this period plans for interpretative centres and displays in Turkey and Australia would be finalised and sufficient funding and funding commitments accumulated to initiate the next phase.
- The Construction Sub-Phase would occupy the period May 2011 until April 2015
- A check survey would be required in 2012 to monitor the wreck and ensure protective arrangements remained functional.
- Construct interpretative centre at Gallipoli and displays in Australia should be geared to open on 30 April, the centenary of the loss of HMAS AE 2 as part of Australia's Centenary of Gallipoli celebrations.

This 10 year vision is represented diagrammatically at Annexure A

THE OUTCOMES REQUIRED TO BE ACHIEVED IN THE MAA IN ORDER TO FACILITATE A JOINT TURKISH/AUSTRALIAN GOVERNMENT DECISION

Introduction.

The SIA early identified the need to action the archaeological recommendations identified by the 1998 Project AE2 team, following the initial survey of the wreck. An agreed critical outcome was the implementation of a thorough archaeological condition survey of the fragile wreck site to assist discussions on the best course of management. A crucial outcome that must be achieved through the MAA is the collection of sufficient data to assess the structural integrity of the hull and to aid interpretation of the site's significant heritage fabric. Only upon an understanding of the status (both identified and modelled) of the hull's integrity, can sound decisions be made that will deliver the most effective long term management path. Such management options will be presented for mutual determination by both the Turkish and Australian Governments.

Data.

The data to be collected has been specified by the Director – Maritime Archaeology, the Naval Architect [NA], members of the team and the Conservation Advisor. A range of analyses will be undertaken, both involving remote (surface) survey and sampling, and in-water specific data collection tasks. These include hydrographic and bathymetric data to enable the geographic and geological context of the wreck to be fully understood. The immediate vicinity of the wreck out to a radius of 100 metres will also be searched for any associated debris field, such as formed during the wrecking process or subsequent disturbance by fishing vessels. A major task will be the gaining of hull corrosion activity measurements, including hull thickness readings at designated points on the hull of the submarine. These will be collated by the dive team in conjunction with an ROV. Marine biological specimens growing on the hull, water samples and sea bed core samples in close proximity to the submarine will also be collected for subsequent identification and analysis. Additionally, a comprehensive visual survey and recording of the external hull will be undertaken in order to identify specific elements of the site, and localised condition. Should the opportunity arise, an initial penetration of the internal cavity of the hull will be undertaken by remote camera. This will be important in gaining information on the status of the internal spaces and range of relic scatters.

All Maritime Archaeological sampling and survey tasks have been identified to obtain critical data required to fully assess the site, and will involve tasks determined to incur minimal impact to the heritage fabric of the wreck.

Analysis.

The data obtained via the comprehensive inspection, imaging and monitoring of the hull and localised environment will be analysed by the Director – Maritime Archaeology, and form the basis of the MAA Report. The assessment of the site's significance values, the status of the hull and

associated relics collections, will assist determination of future sound management options for the site. The structural data will be analysed by the NA using current computer modelling algorithms to provide a definitive assessment of the strength of the submarine's structure. The corrosion data will be assessed by the Conservation Advisor to inform the NA assessment and to provide a basis for the development of a range of conservation regimes, such as cathodic protection, to match the management options to be put to both Governments.

Peer Group Review

It is intended to task a suitable group of eminent, professionally qualified experts to review the analysis and assessments to ensure the conclusions of the SIA team members are soundly based.

Joint Workshop to Derive Options and Recommendations.

On completion of the assessment of the collected data the SIA and TINA will collaborate in the development of a full range of options for the future management of the wreck which can be accurately costed. These options will range across the spectrum from leaving the wreck as and where it is, to recovery for display and conservation in a tank ashore.

Subsequently it is intended to convene a Joint Workshop with TINA in Istanbul to consider options and to make recommendations to both Governments as a basis to mutually determine the future management of the wreck. Development of detailed plans for this activity will occur after the survey, to leverage off the experience gained and contacts established during this activity.

Outcomes From Phase II

The outcomes of Phase II will provide the Government with a range of options for the future management of the wreck. The Government is not committed to a particular course of action at this point. Any decision taken should be seen as part of the planning for and the celebration of the centenary of the campaign in 2015. A conceptual time line for the future steps to be taken to achieve what is considered the minimum level of in situ protection and preservation of the wreck and activities to tell the story is at Annex A as a demonstration of one option for the 10 year vision.

Report Generation.

As noted, a report of the Expedition activities will be generated on completion of the MAA. This report to the Government of Australia will describe in detail what the Expedition has achieved, the data collected and assessments made, together with any pertinent comments, in satisfaction of the contract governing the Commonwealth Grant for the MAA.

The results of the Joint Workshop, the options and recommendations will be delivered to both Turkish and Australian Governments in a report of the workshop to facilitate a joint decision.

PROGRAMME FOR ACHIEVING THE JOINT OUTCOMES

The MAA Programme

The sequence and arrangements to complete the MAA will be:

- Assembly of the 15 person SIA team in Australia, with equipment and their air travel to Istanbul in Turkey.
- Establishment of the joint Turkish, SIA and Sonartech team, with the necessary stores and equipment at the operating base in Karabiga, some 90 nautical miles South West of Istanbul, on the Sea of Marmara and 2 hours by boat from the wreck.
- Diving operations will be preceded by a 3 day Hydrographic survey of the wreck and its immediate environs by a group of 4 Sonartech Atlas Pty Ltd personnel. This activity will be sponsored by Sonartech Atlas.
- A 10 day survey conducted by 9 divers using closed circuit re-breathing equipment, supported by 3 trained diving personnel and a Remotely Operated vehicle (ROV) provided as sponsorship by DSTO and operated by 2 DSTO personnel, participating as individual members of the team. Operations will be conducted from a diving support vessel anchored in the vicinity of the wreck.
- All activity will be overseen by the Operations Director, a senior and experienced SIA member with suitable delegation and authority over all activities and team members.
- All Maritime Archaeological survey operations will be under the supervision of the Director – Maritime Archaeology, reporting to the Operations Director.
- The total number of the Australian personnel involved will therefore be 19; 4 Sonartech personnel and 15 SIA members (3 of whom are also Sonartech personnel) in the diving and ROV elements.
- On completion the joint team will disband and the Australian members and their equipment return to Istanbul.
- From Istanbul the Australian team, equipment and scientific samples will return to Australia.

The Impact of Slippage

Should the September 2006 time scale not be achievable the next suitable weather window is March/April 2007. A 6 month delay would significantly check the momentum developed in Australia and Turkey, raises the risks of further damage to the wreck and will entail a Phase II cost increase. The possibility of Turkish parties losing faith in the joint process and acting unilaterally needs to be borne in mind.

Statement of Significance

The following SOS was developed by the 1998 Project AE2 team as part of the prepared Conservation Management Plan (1998). The SOS is a statement outlining the heritage significance of the AE2 wreck site and should be used to guide all future assessment and management actions at the site, and to ensure maximum survival, analysis and interpretation of its setting, values, historic fabric, and relic collections.

The *AE2* shipwreck is significant as a memorial to the daring exploits of the submarine crews in the Dardanelles Offensive of 1915. The vessel is a direct link to the Australian involvement in the Gallipoli Campaign which is embodied in the ANZAC legend. A site which has the potential to document aspects of life on board an Allied submarine, crew conditions and hardships, during the First World War. The surviving hull retains the potential to document technical aspects of the then peak of British submarine design and development.

Diver-based Photographic Recording of External Hull Condition

Archaeological Aims

Complete inspection and recording of physical condition and diagnostic hull elements is considered a critical objective in order to:

- Gain an understanding of the condition and layout of the external hull.
- Determine the level of visual corrosion of surfaces and fixtures.
- Identify and image specific features, fishing net damage, battle damage (if visible), and core areas of active corrosion.
- Examine the external formation of seabed profiles around hull to aid interpretation of localised hull scouring regimes.
- To obtain critical interpretative materials (eg photographs and video) to assist future public interpretation of the historic shipwreck.

Equipment and Expertise

Overall direction of activities will be undertaken by a professional Maritime Archaeologist – the SIA Director – Maritime Archaeology. The following activities are intended:

- CCR divers to inspect hull surfaces and photograph and measure key features.
- Prior vocational maritime archaeological training of personnel (eg AIMA/NAS Introduction of Maritime Archaeology internationally accredited training course).
- Diver support crew and pre-determined dive serialisations.

- DSTO ROV for remotely obtained video images. This will necessitate adequate lighting and umbilical length and a surface support crew and ROV pilot
- Download and export of digital data capability in field via a satellite data terminal.

Methodology

The following methodology will be employed:

- Diving operations to be systematically planned to cover entire external surfaces of exposed portion of AE2 wreck site.
- Gridding of wreck to allow divers to locate and map diagnostic features.
- Specialist underwater photography skills utilised to obtain quality images for reproduction and film uses.
- ROV flights to record diving operations.
- ROV flights to obtain vertical (plan) photogrammetric (photo) coverage of hull to aid visual interpretation.
- Dependent on minimal archaeological impact (eg disturbance to marine growth coverings and corrosion products a ROV/or Camera Penetration Survey of the wreck will be conducted.

Archaeological Aims of ROV or Camera Penetration Survey

ROV or camera penetration of the currently closed hull is considered highly desirable in order to:

- Gain an understanding of the condition and layout of the internal spaces of the structure.
- Determine the level of visual corrosion of internal surfaces and fixtures.
- Identify and image associated relic collections, their type, spread, associations and context within discreet sections of the vessel.
- Examine the existence or otherwise of intrusive elements such as sand/silt, marine colonisation, and marine organisms (eg conger eels).
- Provide an opportunity for the public interpretation of the interior working conditions of an E-class boat, of the historic working environment of the AE2 crew in the final hours of the submarine's operations.
- To obtain digital imagery for use in media releases and Project promotional products (eg TV documentary, web site, archaeological reports, etc).

The following equipment and expertise will be employed for The ROV or Camera Penetration Survey:

- DSTO ROV or pole-mounted video 'drop' camera.
- Adequate lighting and umbilical length.
- Surface support crew and ROV pilot.

- Diver support crew to place and recover the ROV or pole-mounted video 'drop' camera.
- Recovery equipment, eg a hook for ROV or camera retrieval by a diver.
- Download and export of digital data capability in the field utilising a satellite data terminal.

ROV Methodology

The following methodology will be employed for ROV operations:

- ROV flights will normally be made when other diving operations are not underway.
- As an exception, diver support will be provided for the ROV penetration survey or pole-mounted video 'drop' camera placement and exit at the conning tower.
- Use of DSTO-developed 3D animation of AE2's internal working spaces via digitisation of historic 1913 building plans will assist as a navigation guide.
- ROV penetration is dependent on the ability of the dive team to fully open outer conning tower hatch.
- This activity will only be actioned should the dive team successfully open the hatch with minimal archaeological disturbance.
- Any actions that would significantly compromise the security/retention of the hatch cover, fixtures, or protective marine growth coverings and corrosion products will halt any future ROV internal penetration activities.
- This tasking is dependent on open, clear access through external and internal watertight pressure hull entry hatches
- The operation requires careful manoeuvring of the ROV or pole-mounted video 'drop' camera to limit hook-ups, accidental contact with hull fabric and fittings, penetration depth and ability to extricate vehicle, nil introduction of gases into interior compartments (increase in corrosion potential by trapped gases).
- In the event that the hatch can not be opened it may be possible to insert the pole mounted 'drop' camera through the existing hatch opening.

Corrosion Survey

Archaeological Aims

Chemical corrosion survey of external hull and fittings is considered a critical objective in order to:

- Gain an understanding of the structural and chemical condition of the external hull.

- Determine the level of actual metal corrosion broadly across the hull and to determine any variances based on metal thickness, external abrasion, or due to contact/activity with significant internal elements such as engines.
- To determine the probable status of hull thickness and retention of solid metal as opposed to corrosion product.
- To assist in formulating management options for the site based on its determined physical condition, structural integrity (eg in situ retention and management through to recovery options).
- To identify contributory factors to identified corrosion profiles through scientific monitoring of water environment and seabed composition (see associated Water quality and sediment Survey).
- To identify opportunities to mitigate corrosion activity in order to prolong physical retention of historic fabric (either as part of in situ protection regime, or to assist pre-recovery in situ conservation actions – eg anodic protection).

Equipment and expertise

The following equipment and expertise will be employed:

- Diver hand-held corrosion metres.
- Diver hand-held ultrasonic hull thickness metres.
- Diver surface support crew.
- Diver pre-training of sample recovery through Australian-based shipwreck training program.
- Expert Materials Conservator interpretation of field data quality and professional evaluation and reporting.
- ROV remote flights to obtain additional ultrasonic hull thickness measurements.

Methodology

The following methodology will be followed:

- Specialised dive teams adequately training will undertake corrosion assessment in pairs.
- Approximately 12 measurements to be taken evenly across hull at key points.
- Support diver to obtain bare metal surface (through hand drill or localised removal of corrosion products).
- Sampling will be undertaken to minimise disturbance to historic hull fabric and overlaying corrosion matrix and marine growth.
- In-water recording of corrosion potential reading.
- Dependent on minimal archaeological impact (eg disturbance to marine growth coverings and corrosion products at hatch which reduce active corrosion activity).

- In-water patching of sample area using soft compound to re-seal surface metal area.
- ROV flights to obtain additional remote-from-surface ultrasonic hull thickness measurements, to provide additional back-up data set.

Environmental Survey

Archaeological Aims

Environmental survey of associated water quality and seabed composition is considered a critical objective in order to:

- Gain an understanding of the environmental factors impacting on hull survival, particularly the identified corrosion regime, support of hull through partial burial, and scouring regimes.
- Determine background pH, water temperature, salinity, dissolved Oxygen levels, during survey period.
- Use this data to model base water quality and influences on corrosion profiles extant at site.
- Note that this data is limited to the survey period and seasonal variability
- Determine sub-surface environment through hand probing to identify approximate sediment bodies and depths (eg silt/mud/clay or bedrock), as it impacts hull stability and structural integrity.
- Identify, through sediment sampling, the nature of the sediment profiles and existence of marine (microbial) elements, and their effect on hull corrosion rates.
- Recover samples for scientific laboratory examination in-country or via permit recovery to Australia, with AQIS/Customs prior briefing.

REPORTS TO BE PRODUCED

The outcomes of these field studies will be reviewed and collated into a single comprehensive MAA Report. The report will provide an overview of the Maritime Archaeological surveys, the constraints of the project work, and incorporate specialist studies such as subsequent water and environment assessment studies post sample return to Australia. The broad assessment of all data sets will be used to identify the integrity, condition and nature of the visible hull, and to model the likely extent and condition of internal fixtures and associated relics. This comprehensive knowledge of the historic hull, the fabric, environment and significance values, will allow decisions to be formulated regarding best-practice archaeological management and preservation of the complete and complex AE2 site.

TELLING THE AE 2 STORY

Australian Geographic

Australian Geographic have committed themselves as a minor sponsor and will publish the story of the AE2 and the Australian team's research efforts in their journal. This will provide an excellent opportunity to tell the story of AE2 in a well-respected, refereed quarterly journal. Plans for the publication of a picture book on AE2 and Gallipoli are also being discussed.

The TV Documentary.

Opinions have been sought from a variety of industry sources including the ABC as to the level of interest in telling the story of the exploits of HMAS AE2 and in recording the conduct of the MAA. The former Managing Director of the ABC, Mr Russell Balding took a keen interest and directed us to the Head of Documentary Production, MS Sonya Pemberton to explore what options there might be for the ABC to participate in the MAA later this year. Regrettably it seems that planning for current activities for this year leaves no capacity to spare for this activity. Furthermore funding to support travel to Turkey is also unavailable at present.

Other sources have suggested that the story of LCDR Stoker would not attract a great deal of commercial interest and that a docudrama dealing with details of the actual passage through the Straits might have greater attraction.

The SIA however continues to seek interest from other film makers and will continue to explore all possibilities including Australian Television stations, the BBC, Irish Television, The History Channel, the Discovery Channel and the National Geographic Magazine.

If the SIA is unable to come to terms with a professional Australian film maker, it is intended to take a comprehensive digital image record of the dived survey activities including planned vision from within AE2 using Expedition resources. An alternate film maker would be a member of TINA who is planning to participate in the MAA. He has already produced several documentaries about the naval battle which formed an important though often overlooked part of the Gallipoli campaign, in Australia.

Educational Material.

We envisage that educational material would be produced in due course, possibly by the ABC. In discussion with ABC personnel, interest has already been expressed in developing suitable educational material for sale in ABC shops. The SIA is keen to maintain dialogue with the ABC, as the infrastructure which the ABC has in most Australian towns and cities would be

invaluable as sales outlets for the sale of books, DVDs and other material to tell the story of AE2 and her brave crew to the Australian people.

Academic Publication

Apart from the MAA Report, key project team members intend to publish scholarly papers detailing the assessment of the site in leading international scientific journals. Other avenues for publishing the story will also be explored.

PROMOTIONAL PROGRAMME.

During the Action Phase [which will implement the plan mutually determined by both Governments] subsequent to the MAA, it is envisaged that a sponsorship programme to attract funding from the commercial sector, civil and defence industry, both foreign and Australian will provide the basis for a promotional programme. This programme would tell the story of AE2 to the Australian people as the sponsors' products are promoted. This programme is still under development but it can only begin when the data including images from the MAA and of the wreck of the submarine are available for use in such programmes

MANAGING THE RISKS

Risk Management Philosophy

Risk management is fundamental to the project management philosophy. The identification, assessment, response planning and documentation of project risk, has been initiated for all activities in Phase II of the project. The approach adopted broadly follows the standard AS/NZS 4360:2004 where risk inherent to this project is categorised functionally as follows;

- Risk to Personnel
- Operational Risk
- Technical Risk
- Financial Risk
- Legal Risk
- Social Risk, and
- Environmental Risk

During sessions of the Risk Management Working Group (RMWG) risks are identified then analysed & evaluated. Treatment or mitigation is determined and finally the RMWG monitors, reviews and gives feed-back with the aim of reducing residual risk to As Low As Reasonably Practical (ALARP). The rigor of the RMWG activities is vital to the success of this approach. Apart from the process described above the RMWG has produced a Risk Matrix which presents its workings in a clear and concise document for the

benefit of project team members and other stakeholders. The Risk Matrix is at Annex A.

Life Threatening Risks

Life threatening risks have been ameliorated as follows:

- To minimise the risk of a diving incident all diving will be carried out in compliance with Australian Standard (AS/NZS 2299.3:2003 - Occupational Diving Operations – Recreational Diving & Snorkelling Operations). All divers, the Dive Supervisor and diving operations will meet the requirements for Section 4 – Recreational Mixed Gas Diving at a Workplace and Section 5 – Decompression Diving. . The diving regime will be verified by an independent hyperbaric expert.
- The diving support vessel is fitted with a double chamber recompression chamber to manage any hyperbaric incidents.
- A hyperbaric physician will be embarked throughout diving activities.
- A MEDEVAC Plan has been developed for the evacuation of any casualty to the nearest suitable medical facility. This plan will be verified during the planning visit.
- The diving team will include a hyperbaric physician and a paramedic, both with extensive diving experience.
- The team will be equipped with 3 satellite telephones and a satellite data terminal to facilitate communications ashore in Turkey and to Australian base support personnel.
- In addition to the diving support vessel a high speed support boat will be engaged. This will be able to cover the journey from the diving site to Karabiga in approximately 30 minutes.

Insurance

The Expedition's policy for insurance is an important part of the risk management strategy. We have therefore sought comprehensive insurance cover including personnel issues of health & life, property damage, legal liability and consequential loss from reputable insurers. Never the less we are very aware of our responsibility and obligation for duty of care to the team members, particularly the divers. The conditions imposed by the insurer have had the added benefit of serving as an additional check and our procedures and planning are the better for it. We have a quote of \$20k for this cover to be activated if and when we undertake the rehearsal.

Rehearsal

As part of Risk Mitigation a Rehearsal has been planned when we will trial activities, procedures and equipment in as realistic an environment as possible. This will prove equipment and enable individual diver and the ROV operators to be trained in the data collection techniques. Equipment will also

be tested in 70m of water to ensure it is suitable for operations on HMAS AE 2.

The results of this series of trials will be fed back into the expedition planning. An added benefit of the Rehearsal will be the opportunity for team building, training and familiarisation of the team with the details of the plan. This will prove equipment and enable individual diver and the ROV operators to be trained in the data collection techniques. A Mindmap setting out the considerations and outcomes for the rehearsal is at Annex B.

Planning Visit to Turkey

A planning visit to Turkey by the Project Manager has also been factored into the plan again as a risk mitigation measure. During this visit it is intended to review the availability of necessary resources such as the diving support vessel, negotiate contracts with various service providers, support the Turkish approval of the diving and filming permits and continue the liaison with Turkish contacts and partners, including the Turkish Navy. A Mind Map setting out the considerations and outcomes for the Planning Visit is at Annex C.

To avoid raising false expectations, this visit should not proceed unless approval in principle has been obtained for the MAA to proceed in September 2006.

MEDEVAC Plan

The personnel and equipment provide this expedition with a significant capability to successfully manage a medical emergency:

- The intended diving support vessel is equipped with a double chamber recompression chamber.
- A Turkish diving physician is amongst the contracted service providers.
- The diving team's members include 3 qualified personnel; a diving physician, a hyperbaric technician and a paramedic.
- In addition a MEDEVAC plan is being developed for activation in the event of an incident requiring treatment beyond that available from the resources listed above.

This approach is again part of the projects risk mitigation strategy.

THE PROJECT TEAM

The Expedition project team was formed from a group of outstanding individuals with a thorough professional understanding of the field of Maritime Archaeology in combination with some well developed people management capabilities. The former are, in the main members of previous expeditions to

Turkey on AE 2. They are pre-eminent in the field of maritime archaeology and its associated disciplines including diving and underwater photography. In support we have co-opted acknowledged experts in Science & ROV operations, Corrosion, Naval Architecture and Sonar. The latter is provided by the SIA leadership and members in particular the appointment of the SIA VP AE 2, CDRE Terry Roach AM RAN Rtd, as the Director of Operations and head of the Expedition. Project management of this phase is the responsibility of CAPT Ken Greig RAN Rtd. All team members and supporters are members of the SIA and have completed an Individual Agreement along the lines of the pro forma at Enclosure 2.

Key Individuals' biographical data is attached at Enclosures 3-24.

Brief details for key individuals are set out in Table 1 below:

Name	Principal Role	Secondary role
Dr Mark Spencer	Creative Director	CCR Diver
Mr Tim Smith	Maritime Archaeology Director	Support Diver
Dr Stuart Cannon	NA & Engineering Advisor	CCR Diver
Dr Roger Neill	Scientific Director	ROV Ops
Mr Richard Taylor	Diving Supervisor	
Dr Ian MacLeod	Conservation Advisor	
Mr Mike Rikard-Bell	NA & Engineering Advisor	
CDRE Terry Roach	Director of Operations	
Capt Ken Greig	Project Manager	
Ms Becca Saunders	Logistics Manager	Image management
Gordon Hargreave	Hydrographic Director	Support Diver
Mark Matthews	Hydrography	Support Diver
Mark Baker	Hydrography	Support Diver
Helena Cannon	CCR Diver	Para Medic
David Apperley	CCR Diver	Technician
Dr Jeff Hughes	CCR Diver	Diving Physician
Costa Dongas	CCR Diver	Technician
Mervyn Maher	CCR Diver	Technician
Samir Alhafith	CCR Diver	Cameraman
Paul Garske	CCR Diver	Technician
Peter Graham	ROV pilot	Communications

Table 1 – List of MAA SIA Team Members

Table 1 includes 3 Sonartech Atlas employees who are also SIA members. In addition, the following 4 additional personnel from Sonartech Atlas will participate in the Hydrographic Survey activities; Anna Wajzer (Corporate Communications Manager), Mark Hegarty (Operations Manager), Dimiter Nedialkov (Software Engineer), Rex Patrick (Project Manager)

THE TURKISH CONTRIBUTION

The project is being planned on the basis that it will be self contained and not reliant on any external parties for the provision of any necessary resources. Resources and services in Turkey, such as the diving support vessel, will be acquired on a commercial basis.

Liaison with and the assistance of Turkish contacts including the SIA's partner organisation, TINA have been invaluable in accessing service providers who will be contracted as part of the MAA planning.

During discussions with the Chief of Navy, Vice Admiral Shalders in April 2006, the Turkish Navy indicated that it would be happy to assist in the approval process and may be able to provide some in kind support. Discussions during the planning visit are intended to follow up on these issues and determine the extent of Turkish Navy involvement. It is intended to invite the Turkish Hydrographer to witness the hydrographic and bathymetric serials as a matter of courtesy, out of respect for the Hydrographer's responsibilities for such activities in Turkish waters. Similarly we welcome representatives from TINA during the MAA as a matter of courtesy and to ensure transparency of our activities.

On previous expeditions a deal of in kind support has been obtained from Turkish companies and individuals. We have neither sought nor relied on sponsorship from Turkey for the MAA. The possibility of in kind sponsorship will be explored during the planning visit.

It is understood that TINA has good relations with the Koç industrial conglomerate; the company is reportedly interested in sponsoring the recovery and conservation of AE 2.

COSTS

The costs for this phase of the project have been tightly controlled; travel has been arranged through an agent that specialises in travel to Turkey at very low fares. Other costs have been similarly minimised by many in the team donating their time particularly those in regular employment working on AE 2 in their own time.

A summary table of costs for Phase I and II is included at Table 2 below; further details of the budget for Phase II are at ANNEX D

Item	Cost	Sponsorship	Government Grant
Phase I – Preliminary Phase			
SIA Expenditure, including Trust establishment	\$21,000		
Department of Environment & Heritage administered grant	\$25,000		\$25,000
Rehearsal Jul06 off Port Phillip Heads	\$20,000		\$20,000
Sub Total Phase I	\$66,000		\$45,000
Phase II – Assessment Phase			
MAA	\$526,989	\$252,000	\$274,989
Report	\$122,400	\$40,000	\$82,400
Workshop Istanbul	\$32,792		\$32,792
TV Documentary footage	\$20,000		\$20,000
AE 2 Trust Establishment and 2 years operating costs	\$35,000	\$15,000	\$20,000
Total Phase II	\$737,181	\$307,000	\$430,181
Sponsorship to be raised for Phase II		\$55,000	
Totals Phases I & II	\$803,181	\$307,000	\$475,181

Table 2 – Cost of Phases I & II

SPREAD OF EXPENDITURE

The spread of expenditure for these phases, both Feasibility Study and MAA, will commence in early July 2006 and continue over two years is set out in Table 3 below.

Item	Amount AUD	Timing	Amount from Govt
Insurance Premium	20k	1Q06/07 (01JUL)	20k
Trust - Establish	15k	1Q06/07 (01JUL)	10k
Rehearsal	20k	1Q06/07 (01JUL)	20k
Expedition deposits	30k	1Q06/07 (20JUL)	30k
Balance of above	500k	1Q06/07 (SEP)	245k
Filming	20k	1Q06/07 (SEP)	20k
Reporting	123k	2Q06/07 (OCT)	82k
Workshop	33k	3Q06/07 (FEB)	33k
Trust - Operate	10k	4Q06/07	5k
Trust - Operate	10k	4Q07/08	5k

Table 3 – Timing of Expenditure

\$80K is required by 30 June 2006 to cover the costs of insurance and reservation charges, including those for travel and accommodation. The bulk of the funds, \$345K are expended in FY 06/07, with the remaining \$5K on trust operations in FY 07/08.

FUNDING

Funding for the first phase of the project – the Feasibility Phase has come from two sources to date – the SIA and the Department of Environment and Heritage [DEH]. Funding to get the project started was provided by the SIA to enable internal travel within Australia for SIA members to attend IDWG meetings and to lobby various Ministers and officials. In addition travel to Turkey to initiate dialogue with TINA was funded by the SIA as well as the establishment of the Australian Submarine AE2 Commemoration Fund Ltd. As shown in Table 1 the SIA has spent \$19,000 of its own funds to date, with a further \$2,000 committed for a total of \$21,000.

Government Grant – Preliminary (Feasibility) Phase.

The DEH administered grant of \$25,000 has been used to fund additional travel to Turkey to conclude the negotiations for the MOU with TINA, internal travel in Australia to attend IDWG meetings, a Planning Workshop at DSTO Maribyrnong and administrative expenses. The balance is intended to fund a logistic planning trip to Turkey for the SIA's Project Manager and production of the Feasibility Report.

Government Grant – The Assessment Phase.

A submission to the Minister for Veterans' Affairs and the Minister Assisting the Minister for Defence, Mr Bruce Billson from VADM Russ Shalders AO, CSC RAN advocating an approach to the Prime Minister has been submitted. This submission informs the PM about the SIA's proposal and recommends a grant from the Government of \$430,000 to partially fund a total project cost of \$ 803,181. [See Table 1]

Contingency.

These figures shown above will be further refined during the logistics planning visit to Turkey. Cost Estimates for Phase II are based on previous experience in Turkey with an allowance for the intervening cost escalation. It should be noted that:

- Estimates contain suitable contingency allowances reflecting the confidence in the input figures.
- Costs will be refined during the planning visit, when contracts will be agreed with suppliers.
- No reliance has been placed on Turkish sponsorship or in kind support

Australian Sponsorship.

A sponsorship plan for implementation during Phase 3, the Action Phase is under development. The plan envisages approaches to suitable high profile Australian companies in the commercial, civil and defence sectors offering the opportunity to associate the companies with the AE 2 conservation project on an ongoing basis for the life of the project which has an end point in the centenary celebrations of the loss of AE2 in 2015. It is anticipated that one company in each sector will be approved to use the association to promote its products at the same time as the story of the AE2 is told.

Foreign companies either civil or defence, which are seeking to establish or consolidate a presence in the Australian market are expected to be attracted to the opportunity to display an association with what we hope to make an Australian icon – AE2.

It may be the case that Australian companies who have a presence in Turkey may also be interested in exploiting sponsorship opportunities, though this is considered as less likely. It is expected that such companies would want to see their sponsorship funding supporting Turkish institutions involved with the conservation of AE2.

However, until such time as the MAA data has been obtained, there is little for the sponsorship campaign to use to attract prospective sponsors. This campaign can only start in conjunction with the decisions of both Governments as to the future management of the wreck.

Turkish Sponsorship.

Apart from some small sponsorship grants for the supply of diving mixture breathing gases and the like for the MAA, no sponsorship funding from Turkish companies or institutions is expected for Australian initiatives or activities. Costings have allowed for the commercial supply of these services, to avoid a dependence on sponsorship for such essential services.

However, in respect of the Action Phase then substantial funding for conservation activities in Turkey is confidently expected by our Turkish counterparts, TINA. Should both Governments so decide, then the construction of an interpretive centre, at a location in Turkey to be decided by mutual consultation is possible. The SIA would expect this to be built substantially by Turkish funding. The Australian Government may choose to make a significant donation, but in general terms under the agreed TINA/SIA MoU, the country in which the activity is to occur would be responsible for funding from sponsorship or Government sources.

THE AUSTRALIAN SUBMARINE HMAS AE 2 MEMORIAL FUND LTD.

The SIA is in the process of establishing a Trust, structured as a not for profit, limited by guarantee company, to be titled 'The Australian Submarine HMAS AE2 Memorial Fund Limited' to:

- Receive sponsors' funds.
- Take ownership on behalf of Australia of such common intellectual property with TINA, as may be generated during the MAA.
- Manage all financial aspects of the SIA's activities in respect of AE2.

The company would comply with all the normal requirements of the Australian Securities and Investments Commission [ASIC] including the publication of independently audited annual reports. The board of directors would be formed by suitable prominent Australians with the President of the SIA as the Managing Director to provide oversight and direction of the handling of sponsors' and donors' funds for the designated purposes set out in the Company charter i.e. the telling of the story of the crew of HMAS AE2 and the preservation and conservation of the submarine.

Conclusions

The SIA has assembled a team capable of conducting the MAA and report development as the basis for the joint workshop to establish options for the future management of the wreck.

A detailed plan for the conduct of the MAA has been developed. The various risks and hazards associated with the dived survey have been considered and a comprehensive management plan developed.

Arrangements will be further refined and proved by a rehearsal and a planning trip to Turkey.

To ensure the best chance of a jointly agreed outcome, these activities will involve the maximum level practical of Turkish involvement and be backed by peer review from suitably qualified, independent experts.

Further development of the joint workshop to consider the MAA report and provide recommendation to the two Governments is required. This has deliberately been left until after the MAA. It is considered this is best undertaken after we have gained the confidence of Turkish authorities by the successful execution of the MAA and have the benefit of the interaction with the Turkish parties.

Cost estimates for Phase II are based on previous experience in Turkey with an allowance for the intervening cost escalation. These will be refined during the planning visit to Turkey.

In principle approval to proceed with the Assessment Phase at a cost of \$430K and the rehearsal at a cost of \$20K is required by 30 June if the MAA is to be undertaken in September 2006.

Funding for \$80K of the Phase II cost and the \$20K for the rehearsal is required by 30 June to meet anticipated expenditure.

These time scales are recognised as extremely tight, if they can not be met, the next available weather window is 12 months later.

Recommendations

The IDWG should recommend expanding the existing DEH grant by \$20K to cover the cost of the rehearsal and in principle Government approval for proceeding with Phase II, with an MAA timed to commence on 16 September 2006, with a ceiling cost to the Government of \$430K. This will require commitment of \$80K funding to cover initial expenses and obligations to enable long lead arrangements to be made and this should be immediately available to the SIA.

Government approval to this course of action is required by 30 June 2006 to enable the planning visit to proceed in July. To avoid raising false expectations in Turkey, this visit should not occur unless in principle approval to proceed has been received.

Subject to satisfactory completion of the planning visit and rehearsal, final Government approval to proceed should be given by 14 August 2006, to enable the MAA to be conducted on 16 September 2006.

Annexes

- A. HMAS AE 2 – One Option For The 10 Year Vision
- B. Risk Register
- C. Rehearsal Mind Map
- D. Planning Visit Mind Map
- E. Summary Budget

Enclosures:

- 1. SIATINA Memorandum of Understanding
- 2. Pro Forma of Individual Agreement

Individual CVs and role in the project team:

3.	Dr Mark Spencer	Creative Director	CCR Diver
4.	Mr Tim Smith	Maritime Archaeology Director	Support Diver
5.	Dr Stuart Cannon	NA & Engineering Advisor	CCR Diver
6.	Dr Roger Neill	Scientific Director	ROV Ops
7.	Mr Richard Taylor	Diving Supervisor	
8.	Dr Ian MacLeod	Conservation Advisor	
9.	Mr Mike Rikard-Bell	NA & Engineering Advisor	
10.	CDRE Terry Roach	Director of Operations	
11.	Capt Ken Greig	Project Manager	
12.	Ms Becca Saunders	Logistics Manager	Image management
13.	Gordon Hargreave	Hydrographic Director	Support Diver
14.	Mark Matthews	Hydrography	Support Diver
15.	Mark Baker	Hydrography	Support Diver
16.	Helena Cannon	CCR Diver	Para Medic
17.	David Apperley	CCR Diver	Technician
18.	Dr Jeff Hughes	CCR Diver	Diving Physician
20.	Costa Dongas	CCR Diver	Technician
21.	Mervyn Maher	CCR Diver	Technician
22.	Samir Alhafith	CCR Diver	Cameraman
23.	Paul Garske	CCR Diver	Technician
24.	Peter Graham	ROV pilot	Communications