Partner	Jim Peterson
Writer	Aaron Dahl
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Our reference	AKD:JKP:146797-00011
Your reference	Mr David Hatfield

Lawyers | McCullough Robertson

9 June 2010

Mr David Hatfield
Australian Competition & Consumer Commission
GPO Box 3131
Canberra ACT 2601

Dear Sir

Application for authorisation under section 88 Trade Practices Act - Brisbane Marine Pilots Pty Ltd

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We act for Brisbane Marine Pilots Pty Ltd ACN 010 836 496. Earlier this year we discussed with you, on a preliminary basis, our client's proposed application under section 88(8) *Trade Practices Act 1974* (Cth) in relation to an exclusive dealing arrangement with the State of Queensland.

Attached is:

(a) a Form E Exclusive Dealing: Application for Authorisation and relevant attachments;

(b) our client's submission in support of the application; and

(c) a cheque for $7,500 for lodgement fees.

We have sent a copy of the application to you by email. Please contact us if you have any queries regarding the application.

Yours sincerely

Jim Peterson
Partner

attachment
8244493v1

Form E

Commonwealth of Australia

Trade Practices Act 1974 — subsection 88 (8)

EXCLUSIVE DEALING: APPLICATION FOR AUTHORISATION

To the Australian Competition and Consumer Commission:

Application is hereby made under subsection 88 (8) of the *Trade Practices Act 1974* for an authorisation under that subsection to engage in conduct that constitutes or may constitute the practice of exclusive dealing.

PLEASE FOLLOW DIRECTIONS ON BACK OF THIS FORM

1. Applicant

(a) Name of applicant:
(Refer to direction 2)

A91235

Brisbane Marine Pilots Pty Ltd ACN 010 836 496.

(b) Short description of business carried on by applicant:
(Refer to direction 3)

*Marine pilotage services in the Port of Brisbane (as defined in schedule 5 of the Transport Operations (Marine Safety) Regulation 2004 (Qld))(**Port**).*

(c) Address in Australia for service of documents on the applicant:

Suite 2 Argyle Place
14 Argyle Street
Albion QLD 4010

2. Contract, arrangement or understanding

(a) Description of the conduct that would or may constitute the practice of exclusive dealing:
(Refer to direction 4)

*The applicant (**BMP**) has entered into a pilotage services agreement with the State of Queensland (represented by the Department of Transport trading as 'Maritime Safety Queensland') (**MSQ**) (agreement) under which, subject to BMP obtaining an authorisation from the Australian Competition and Consumer Commission (**ACCC**) under Part VII of the Trade Practices Act, MSQ must acquire all pilotage services in the Port exclusively from BMP for a period ending 31 December 2013 (unless the agreement is terminated earlier in accordance with its terms). The pilotage services agreement is confidential and contains sensitive information. The relevant sections of the agreement are set out in full in the supporting submission.*

(b) Description of the goods or services in relation to the supply or acquisition of which this application relates:

The provision of marine pilotage services to the State of Queensland. Further details of the context of this supply, including the relevant regulatory framework, are set out in the supporting submission

(c) The term for which authorisation of the conduct is being sought and grounds for supporting this period of authorisation:

A period beginning on the date the authorisation is given by ACCC and ending 31 December 2013 If an option to extend the term for a further term of 4 years is exercised a further authorisation may need to be sought at that time.

3. Parties to the proposed arrangement

(a) Class or classes of persons to which the conduct relates:
(Refer to direction 5)

The conduct is likely to affect:

(a) the State of Queensland (represented by the Department of Transport);

(b) all qualified pilots in the Port (ie being those persons holding a pilot licence issued under section 97 of the Regulation for the Port); and

*(c) the Harbour Master for the Port (ie being the person appointed under the Transport Operations (Marine Safety) Act 1994 (Qld) (**TOMS Act**).*

(b) Number of those persons:

(i) At present time:

One State of Queensland

37 qualified pilots

One Harbour Master

(ii) Estimated within the next year:
(Refer to direction 6)

No change is estimated.

(d) Where number of persons stated in item 3 (b) (i) is less than 50, their names and addresses:

State of Queensland – Maritime Safety Queensland

Mr Jim Huggett
GPO Box 2595
Brisbane, Queensland, 4001

Qualified Pilots – see attachment 'B'. All pilots can be contacted care of the applicant.

Harbour Master
Maritime Safety Queensland – Brisbane Region
MacArthur Avenue East
Pinkenba, Queensland, 4008

4. Public benefit claims

(a) Arguments in support of authorisation:
(Refer to direction 6)

Details of the public benefit arguments in support of authorisation are set out in the supporting submission

(b) Facts and evidence relied upon in support of these claims:

Details of the facts and evidence relied upon in support of the public benefit claims are set out in the supporting submission.

5. Market definition

Provide a description of the market(s) in which the goods or services described at 2 (b) are supplied or acquired and other affected markets including: significant suppliers and acquirers; substitutes available for the relevant goods or services; any restriction on the supply or acquisition of the relevant goods or services (for example geographic or legal restrictions):
(Refer to direction 7)

Affected market:

The market for pilotage services to MSQ in the Port. Further details of the market and the restrictions on supply in that market are set out in the supporting submission.

6. Public detriments

(a) Detriments to the public resulting or likely to result from the authorisation, in particular the likely effect of the conduct on the prices of the goods or services described at 2 (b) above and the prices of goods or services in other affected markets:

(Refer to direction 8)

BMP does not foresee any detriment. Further details on the perceived detriments are set out in the supporting submission.

(b) Facts and evidence relevant to these detriments:

Details of the facts and evidence relevant to the perceived detriments are set out in the supporting submission.

7. Joint Ventures

(a) Does this application deal with a matter relating to a joint venture (See section 4J of the *Trade Practices Act 1974*)?

No

(b) If so, are any other applications being made simultaneously with this application in relation to that joint venture?

.....

(c) If so, by whom or on whose behalf are those other applications being made?

.....

.....

8. Further Information

(a) Name and address of person authorised by the applicant to provide additional information in relation to this application:

.....

.....

Dated 2nd JUNE, 2010 — 2nd JUNE, 2010

Signed by/on behalf of the applicant

.....

(Signature)

GEOFFREY JOHN DAWSON — BRENTON LEWIS WINN

(Full Name)

BRISBANE MARINE PILOTS — BRISBANE MARINE PILOTS

(Organisation)

CHAIRMAN. — DIRECTOR.

(Position in Organisation)

DIRECTIONS

1. In lodging this form, applicants must include all information, including supporting evidence that they wish the Commission to take into account in assessing their application for authorisation.

   Where there is insufficient space on this form to furnish the required information, the information is to be shown on separate sheets, numbered consecutively and signed by or on behalf of the applicant.

2. Where the application is made by or on behalf of a corporation, the name of the corporation is to be inserted in item 1 (a), not the name of the person signing the application and the application is to be signed by a person authorised by the corporation to do so.

3. Describe that part of the applicant's business in the course of which the conduct is engaged in.

4. Provide details of the conduct (whether proposed or actual) which may constitute the practice of exclusive dealing in respect of which this authorisation is sought.

   In providing these details:

   (a) to the extent that any of the details have been reduced to writing — provide a true copy of the writing; and

   (b) to the extent that any of the details have not been reduced to writing — provide a full and correct description of the particulars that have not been reduced to writing.

5. Where authorisation is sought on behalf of other parties provide details of each of those parties including names, addresses, descriptions of the business activities engaged in relating to the subject matter of the authorisation, and evidence of the party's consent to authorisation being sought on their behalf.

6. Provide details of those public benefits claimed to result or to be likely to result from the proposed conduct including quantification of those benefits where possible.

7. Provide details of the market(s) likely to be effected by the conduct, in particular having regard to goods or services that may be substitutes for the good or service that is the subject matter of the authorisation.

8. Provide details of the detriments to the public which may result from the conduct including quantification of those detriments where possible.

ATTACHMENT B

EXCLUDED FROM PUBLIC REGISTER

Supporting submission

Application by Brisbane Marine Pilots Pty Ltd for authorisation under section 88 of the Trade Practices Act

Table of contents

Supporting submission

Application by Brisbane Marine Pilots Pty Ltd for authorisation under section 88 of the Trade Practices Act

Executive summary

The exclusive arrangement under the Pilotage Services Agreement with the applicant for providing pilots in the Port of Brisbane should be authorised by the Australian Competition and Consumer Commission (**ACCC**) because:

(a) an exclusive arrangement has, over the past 20 years, and will continue to, generate significant public benefit and favourable community outcomes;

(b) no public detriment has in the past, or will during the term of the agreement, result from adopting an exclusivity arrangement;

(c) the arrangement is consistent with the prevailing market practice in every other Australian port;

(d) where a competitive model has been attempted (such as the Great Barrier Reef and Torres Strait) it has been the subject of considerable criticism or shown to be flawed (as was the case in Cairns in 2001); and

(e) any attempt to implement a competitive tender process in the Port of Brisbane to provide pilots to MSQ would be artificial and a contrivance, given that marine pilots must be licensed to operate in the Port and all licensed pilots are currently employed by the applicant.

Background

1 The applicant

1.1 The applicant is Brisbane Marine Pilots Pty Ltd ACN 010 836 496 (**BMP**).

1.2 BMP is owned by marine pilots operating in the Port of Brisbane (**Port**).

1.3 BMP has entered into an agreement with the Department of Transport of the State of Queensland represented by MSQ to provide marine pilots in the Port dated December 2009 (**Pilotage Services Agreement**).

1.4 BMP is currently, and has been since its establishment in 1989, the sole provider of marine pilots to MSQ (or its predecessor) in the Port.

1.5 BMP is the sole employer of qualified pilots in the Port.

2 MSQ

2.1 Maritime Safety Queensland (**MSQ**) is a government agency of the Department of Transport in Queensland. The agency is responsible for:

(a) improving and regulating maritime safety for shipping and small craft through education and regulation respectively;

(b) minimising vessel sourced waste and responding to marine pollution;

(c) providing essential marine services (including pilotage); and

(d) planning and managing boating infrastructure.

2.2 The responsible Minister is The Honourable Rachel Nolan MP, Minister for Transport. The Director General for the department is David Stewart.

3 The services to be provided by BMP to MSQ

3.1 Under the Pilotage Services Agreement, BMP must supply pilots to handle the arrival, departure and removal, from one berth to another, of ships in the Port as MSQ requires and as directed by the Harbour Master (**Services**).

3.2 In providing the Services, BMP must ensure that:

(a) BMP personnel performing the services use reasonable skill, care and diligence and efficiency;

(b) BMP personnel performing the services are properly trained, licensed and fit in all respects to perform the service;

(c) the Services are made available to MSQ at all times and in all weather conditions unless notified otherwise;

(d) it employs a sufficient number of Qualified Pilots to undertake the Services; and

(e) it provides the transport required to allow its Qualified Pilots to undertake the Services.

4 The legislative requirement for pilotage services in the Port of Brisbane

4.1 Certain ships navigating in the Port must use the services of a qualified marine pilot.[1]

4.2 Those qualified pilots must be either:

(a) MSQ employees: or

(b) acting in the supply of the pilotage services under an agreement with MSQ and the pilot or a third party, such as BMP.[2]

4.3 MSQ does not currently employ anyone who is qualified to pilot ships in the Port. BMP is currently the sole source of qualified pilots for MSQ in the Port.

[1] Section 99 Transport Operations (Marine Safety) Act
[2] Section 102A Transport Operations (Marine Safety) Act

4.4 To have the conduct of a ship as its pilot, a person must hold a pilots licence (**Qualified Pilots**).[3]

4.5 MSQ is responsible for granting pilot licences. A licence will only be issued to an individual who meets the relevant suitability criteria.[4] At present, all Qualified Pilots for the Port are BMP employees.

5 History of the provision of pilotage services in the Port of Brisbane

5.1 Prior to BMP's establishment in 1989:

(a) all Port pilotage was undertaken solely by the State of Queensland acting through the Department of Harbours and Marine and, more recently, MSQ: and

(b) all Qualified Pilots for the Port were Department of Harbours and Marine employees.

5.2 Since 1989, BMP has been the sole provider of pilots to the State in the Port.

5.3 Under the relevant legislation, it is the State of Queensland which provides the pilotage services to the ship owners in the Port. That is to say, there is no direct contractual relationship between BMP (or any Qualified Pilot) and the ship owners.

5.4 It is the State of Queensland which sets the pilotage fee which is paid by the ship owners to the State.

5.5 Under the Pilotage Service Agreement, BMP agrees to provide the Services to MSQ so as to enable MSQ to discharge this function and responsibility as the pilotage service provider to ship owners under the legislation.

6 The relevant market

6.1 The market for the providing pilots to MSQ for the Port is the market relevant for this applicant.

6.2 There are no other organisations or individuals capable of providing the Services to MSQ apart from BMP and its employees.

7 The conduct requiring authorisation

7.1 The Pilotage Services Agreement contains confidential and commercially sensitive information which BMP submits is not suitable for publication. The clauses of the Pilotage Services Agreement that are relevant to this application are set out in this submission.

7.2 The Pilotage Services Agreement says:

> *'The State agrees to purchase and BMP agrees to supply the Services on the terms and conditions set out in this Agreement. Subject to clause 4.1(c) and 21, the State agrees to purchase the Services from BMP exclusively for the Term.'*[5]

7.3 The agreement does not restrict the State from issuing certificates exempting parties from the requirement to utilise a Qualified Pilot in the Port.[6]

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[3] Section 96 Transport Operations (Marine Safety) Regulation
[4] Sections 99 and 101 Transport Operations (Marine Safety) Regulation
[5] Clause 4.1(a) of the Pilotage Services Agreement

7.4 The exclusivity requirement does not apply if BMP:

(a) '*fails to provide the Services in accordance with the agreement for any period exceeding 24 hours*';[7] or

(b) '*is unable or is prevented from providing the Services in accordance with the agreement at a required time*'.[8]

7.5 BMP seeks authorisation from the ACCC to allow the operation of the exclusivity requirement in clause 4.1(a) of the Pilotage Services Agreement.

8 Position in other jurisdictions

8.1 Having a single provider of pilots for a nominated port is the model which operates currently in every Australian port as well as every port in the world. That is, there is no Australian port, or any other port in the world, in which more than one entity competes for the provision of pilotage services to that port.

8.2 Various US states tried competition and subsequently returned to a regulated monopoly. Hong Kong tried competition between four suppliers and eventually took them over and supplied the service via a regulated pilot authority. In the UK, devolution of pilotage to the port authorities in 1987 resulted in each port having just one pilotage service. The EU has excluded port pilotage from its draft legislation freeing up access to port services.[9]

8.3 Pilotage services in the Great Barrier Reef and Torres Strait were opened up to competition on 1st July 1993. There are currently three competing organisations in the jurisdiction. To our knowledge, this is the only jurisdiction in the world where competition in marine pilotage exists. A number of issues have plagued this service model and numerous reviews (approximately one every two years) have been undertaken into the model including the 2008 AMSA Review Panel Report and the McCoy Review Report. Both of these reports are attached to this submission.

Submissions

9 Public benefits and supporting facts

9.1 BMP submits that the exclusivity arrangement provides the public with significant benefits that would not be realised if there was competition to provide pilots to MSQ in the Port.

9.2 This submission is based, in part, upon a comparison with the outcomes delivered under the model used in the Great Barrier Reef and Torres Strait jurisdiction.

9.3 Pilotage services in the Great Barrier Reef and Torres Strait jurisdiction are currently provided under an open competition model with up to three service providers competing in some areas (**Competitive Model**). Under the Competitive Model, the pilots themselves are contracted to the service provider who acts as a 'booking agent' for each pilot. There is a direct contractual relationship between the pilot and the ship owners under this model.

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[6] Clause 4.1(c) of the Pilotage Services Agreement
[7] Clause 21(a)(i) of the Pilotage Services Agreement
[8] Clause 21(a)(ii) of the Pilotage Services Agreement
[9] See HM Kolsen "Review of Marine Ports Pilotage Legislation Public Benefit Test and Public Interest Test" (26.4.2002) attached as Annexure A.

9.4 In October 2008, a review panel was formed to address issues raised by the Australian Maritime Safety Authority (**AMSA**) and released a report on the delivery of pilotage services under the Competitive Model (**AMSA Review Panel Report**). A copy of the report is contained in Annexure B. A number of issues arising out of the non-exclusive arrangement are identified. These issues were also identified in a report commissioned by AMSA and written by John McCoy in 2005 (**McCoy Review Report**). A copy of this report is contained in Annexure C.

9.5 The exclusivity provision in the Pilotage Services Agreement assists in avoiding these issues from arising in the Port.

No tender for services

9.6 No tender process was conducted by MSQ to provide pilots to it for the Port prior to entering into the Pilotage Services Agreement. The State Purchasing Policy ordinarily requires that tenders are sought for services contracts prior to entering into the arrangement. BMP understands, from the representations made to it during the negotiations for the Pilotage Services Agreement, that the Queensland cabinet resolved, in the present circumstances, that a tender process was not warranted and was inappropriate. MSQ required BMP to complete a detailed 'Assessment Criteria' process to their satisfaction prior to committing to a single serviced supplier process and to obviate the need to follow a tendering process.

9.7 The flaws with trying to implement a tender process in the relevant market of providing Qualified Pilots in a port are well documented.[10] In essence, it has been recognised that a competitive tender process cannot be achieved in the port pilotage market because the essential safety requirements of port specific experience, which pilots must have, severely restricts the number of competitors that could take part in a competitive tender process.[11] Put simply, reliance on competition for the market of pilotage services is not possible unless there is:

(a) a willingness to reduce the current necessary level of pilot qualifications; or

(b) a means to effect the transfer of port specific knowledge of the incumbent pilots; or

(c) a means to ensure that a dynamic Safety Management System developed by a discreet pilotage organisation can apply to the whole port jurisdiction, including competing organisations.

Regarding paragraph (a), there is almost no support for this in the industry and certainly none in the community as a whole.[12] So to paragraph (b), this is simply not feasible in the Port. A Safety Management System referred to in paragraph (c) includes methodologies to be employed in dynamic situations when ships are passing at very close quarters with minimal margins for error. These methodologies are developed and continually amended 'in house' by the pilots based on their collective experience.

9.8 Consistent with the issues identified in paragraph 9.7, MSQ has as a mechanism under the Pilotage Services Agreement, in the event of BMP's default, to require BMP's Qualified Pilots to transition back into employment with MSQ rather than simply terminating the agreement. The reason for this is that MSQ merely terminating the agreement would give rise to almost insurmountable difficulties for MSQ to maintain an efficient, effective and safe management of the pilotage service in the Port. Typical contractual remedies for breach cannot be applied in respect of the services provided by BMP under the Pilotage Services Agreement. This highlights the special circumstances and position of the parties. Conventional views about 'competition' and competitive tenders cannot work in the pilotage services environment.

[10] Ibid.
[11] Ibid page 5.
[12] Ibid page 5.

9.9 The failure of the competitive tender process in similar markets is highlighted by experiences in the tender for pilotage services in Cairns in 2001. In 2001, Cairns Port Authority requested tenders for the provision of pilotage services for the Port of Cairns. Following a tender process, the Cairns Port Authority awarded the tender to a private company rather than the incumbent provider, Ports Corporation of Queensland. It was subsequently realised that the successful tenderer did not have the capacity to perform the services required. Following this failure, the Minister for Transport at the time, Mr Stephen Bredhauer ordered an investigation into the tender process which resulted in the pilotage services being, once again, taken over by MSQ.

9.10 The lack of a tendering process should not prevent an authorisation of the exclusivity arrangement by the ACCC. As set out above, there is no other party with the capacity to perform the required services.

Exclusivity creates certainty regarding pilotage services in the Port of Brisbane

9.11 The exclusivity for the term of the Pilotage Services Agreement assists in ensuring to all stakeholders in the Port, continuity and consistency of service.

Exclusivity ensures a single safety management system applies and enhances optimisation of safety practices

9.12 BMP (assisted by the conducive environment created by under its prior exclusive arrangement with MSQ in the Port) developed the following policies and systems:

(a) a comprehensive training and recruitment policy;

(b) a comprehensive and effective safety management and reporting system; and

(c) a fatigue management system.

9.13 BMP has an international reputation for its effective approach to safety management and service delivery.

9.14 There is evidence to suggest that the Competitive Model may, on the other hand, hinder optimal safety outcomes.[13] AMSA expressed the view that the Competitive Model has 'lead to competition between providers to an extent that could undermine shipping safety...if continued unchecked'.[14] AMSA also indicated to the review panel that 'the adoption of a safety culture of continuous improvement...is proving to be elusive and suggested it may be unattainable under the present service delivery model' (that is the Competitive Model).[15]

9.15 Whilst the 2008 AMSA Review Panel Report says that 'no evidence has been found to date that the competitive environment has adversely effected safety outcomes',[16] it acknowledges that there is a view that 'commercial pressure on coastal pilots may contribute to mitigating their identification of safety improvements and optimisation of safety practices'.[17]

9.16 The McCoy Review Report identifies 'concern over the impact that privatization of pilotage may have on safety standards'.[18] While that report does not come to any conclusion regarding whether the Competitive Model is the cause of a perceived lack of safety standards, submissions

[13] See reference to the anecdotal evidence discussed in the 2008 AMSA Review Panel Report
[14] Paragraph 4.4 of the 2008 AMSA Review Panel Report
[15] Paragraph 4.5 of the 2008 AMSA Review Panel Report
[16] Paragraph 2.30 of the 2008 AMSA Review Panel Report
[17] Paragraph 3.24 of the 2008 AMSA Review Panel Report
[18] Paragraph 1.4 of the McCoy Review Report

to that review suggested that, in that competitive market, commercial pressures tend to override safety issues[19]. Importantly, in his covering letter to AMSA when submitting his report Mr McCoy noted (see Peter Liley for the exact wording). Pilots in their submissions to that review indicated that the aggressive competition in that market, as a result of the Competitive Model, is 'the major issue affecting the achievement of an optimal safety outcome'.[20]

9.17 Regardless of whether conclusive evidence exists of a link between the Competitive Model and safety outcomes, BMP submits that the exclusive arrangement ensures that commercial pressures do not impede the provision of an effective safety management system as AMSA and the pilots themselves, have suggested has occurred where the Competitive Model has been adopted.

9.18 In the circumstances of the Port, a 'serial competition model' using a regular tender process followed be an exclusive appointment would be artificial and a contrivance given the absence of any entity with the capacity or ability to provide the required level of service on an exclusive basis. No entity, other than BMP, can credibly tender to provide the Services given that only BMP has to capacity and workforce able to do so. This is the major weakness of such an approach identified at the KPMG *Review of Port Pilotage Legislation in Queensland* in 1998 (**KPMG Review**).[21]

9.19 At the KPMG Review, industry feedback and anecdotal comment suggested that a non-exclusive licence approach is likely to put at risk the high standards of safety which are mandatory. This has lead Professor Kolsen to observe that even a marginal increase in the risk in the rate of incidents would far outweigh any benefit derived from a more competitive pilotage market.[22] This is the reason for the rejection of this model in the KPMG Review.

9.20 The exclusivity arrangement, on the other hand, ensures that MSQ, as regulator of marine pilotage in the Port, is only required to assess the effectiveness of the safety management system of one organisation. This reduces the regulatory burden on MSQ.

Exclusivity promotes expenditure on developing infrastructure and support for pilots resulting in enhanced safety outcomes

9.21 In the last four years (a period of exclusive engagement of BMP) BMP and its associated company (Queensland Marine Holdings Pty Ltd) have undertaken the following infrastructure expenditure:

(a) construction of additional pilot boats for use in the Port;

(b) acquisition of precision navigation instruments for use in pilotage);

(c) development of a world first pilot despatch system using PMDA's;

(d) expansion of office space for support staff; and

(e) renewal of its vehicle fleet acquiring environmentally friendly vehicles.

9.22 The exclusivity arrangement provides BMP with the certainty required to make a commercial decision to invest in the infrastructure necessary to ensure safe delivery of pilotage services.

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[19] Paragraph 1.4 of the McCoy Review Report
[20] Paragraph 5.2 of the McCoy Review Report
[21] HM Kolsen 'Review of Marine Ports Pilotage Legislation Public Benefit Test and Public Interest Test' (26.4.2002) page 8
[22] Ibid page 8

9.23 The McCoy Review Report, on the other hand, identified dissatisfaction with the infrastructure being provided by the competitors under the Competitive Model[23]. That review concludes that 'the quality of launches used for pilot transfer appears to be well below an acceptable standard and this is likely to be as a result of the commercial pressures impacting on providers'.[24]

9.24 The pilots submitted to the AMSA review panel that 'competition has reduced the capacity of pilotage providers to fund capital replacement'.[25]

9.25 BMP's exclusivity arrangement in the past has created a conducive environment for it to ensure sufficient capital is spent on updating and maintaining infrastructure with the purpose of enhancing safety for its pilots and the community generally.

The certainty created by the exclusivity arrangement attracts high calibre candidates to pilotage in the Port of Brisbane and promotes collegiate responsibility among pilots for safety in the Port

9.26 BMP has attracted the following high calibre candidates to the Port in the five year period ending 31 December 2009 (the last day of its previous period of exclusivity):

(a) Nicolas Fischer;

(b) Brent Josephson;

(c) Steven Jukes;

(d) Rockerick Mathers;

(e) Ross Nicholls;

(f) Simon Millwright;

(g) Douglas Williams;

(h) Brenton Winn;

(i) Michael Graham;

(j) Neil McBurnie;

(k) Christopher Cotterall;

(l) Cade Richardson;

(m) Robert Quirk;

(n) Adam Richardson; and

(o) Andrew Cambridge.

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[23] Section 5.5 of the McCoy Review Report
[24] Paragraph 2.13 of the McCoy Review Report
[25] Paragraph 2.29 of the 2008 AMSA Review Panel Report

9.27 In areas where the Competitive Model operates (such as the Great Barrier Reef) operators have been less successful in attracting candidates for employment. In those areas a greater dependency has been placed on the migration of foreign pilots.

9.28 This view is supported by the pilots operating under the Competitive Model who have indicated that the effects of competition have 'increased difficulties in attracting new entrants to join what is an ageing pool of qualified pilots'.[26] This is because, it is claimed, the Competitive Model 'has had an impact on pilot salaries, job satisfaction and created new risk factors particularly through recruitment policies'.[27]

9.29 The exclusive arrangement for which authorisation is sought, ensures that the body of pilots employed by BMP continue to be solely responsible for creating and maintaining the levels of safety in the Port. This is, of course, both desirable and appropriate. The panel in the 2008 AMSA Panel Review Report concludes that the Competitive Model, by way of comparison, does not always 'contribute to the promotion of collegiate responsibility...for improving safety outcomes'.[28]

9.30 BMP's pilots have established a world class safety management system and BMP (and in turn, the Port) has an international reputation for its effective approach to safety management. This reputation is the result of years of continual improvement, facilitated by the certainty provided to BMP and its pilots by exclusivity arrangements.

10 Public detriment

10.1 There is no public detriment in authorising the exclusivity arrangement contained in the Pilotage Services Agreement.

Effective 'monopoly' created by the arrangement does not effect fees charged to ship owners for pilotage services in the Port

10.2 The fee charged to ship owners requiring pilotage services in the Port is set by MSQ (without consultation with BMP) and has, historically, shown no correlation with the price paid to BMP in relation to that service. During the period of 20 years in which BMP has been the sole provider of pilots to the State of Queensland, BMP's price for each pilotage, as a percentage of the fee set by MSQ for the pilotage, has reduced steadily. These efficiencies and cost reductions have been achieved without the need for a competitive tender process.

11 Negotiation process for the Pilotage Services Agreement

11.1 The terms of the Pilotage Services Agreement were the subject of rigorous negotiations by the parties acting at arm's length for a period of approximately 12 months. Each party was separately and independently represented by highly reputable and respected advisers.

[26] Paragraph 2.29 of the 2008 AMSA Review Panel Report
[27] Paragraph 2.31 of the 2008 AMSA Review Panel Report
[28] Executive summary (page 1) of the 2008 AMSA Review Panel Report

Contact details

Applicant:	Brisbane Marine Pilots Pty Ltd
Address:	Suite 2 Argyle Place 14 Argyle Street ALBION QLD 4010
Contact person:	Brenton Winn
Phone:	(07) 3862 2238
Email:	bwinn@brisbanepilots.com.au

Dated: 2 JUNE 2010

Glossary

2008 AMSA Review Panel Report means the report into the delivery of coastal pilotage services in the Great Barrier Reef and Torres Strait commissioned by AMSA in 2008 attached as Annexure C.

AMSA means the Australian Maritime Safety Authority

Competitive Model means the competitive model of pilotage service delivery currently operating in the Great Barrier Reef and Torres Strait described in paragraph 9.2.

Harbour Master means a person appointed a harbour master under section 74 of the Marine Safety Act or his or her delegates as the context requires.

Kolsen Report means the report by H.M. Kolsen dated 26 April 2002 attached as Annexure A.

Marine Safety Act means the *Transport Operations (Marine Safety) Act 2004* (Qld).

Marine Safety Regulation means the *Transport Operations (Marine Safety) Regulation 2004* (Qld)

McCoy Review Report means the report into AMSA coastal pilotage regulation undertaken by John McCoy in 2005 attached as Annexure C.

MSQ means Maritime Safety Queensland.

Port of Brisbane or Port means the Brisbane Pilotage Area set out in Schedule 5 of the Marine Safety Regulation.

Qualified Pilots means pilots licensed to pilot ships in the Port of Brisbane under section 99 of the Marine Safety Regulation that have also complied with the training and accreditation procedures set out in the Pilotage Services Agreement.

Relevant Ships means ships that are required to use the services of a pilot under the Marine Safety Regulation.

Annexure A

Kolsen Report

Revised Pilots PBT ver 5 26042002.rtf

REVIEW OF MARINE PORTS PILOTAGE LEGISLATION

PUBLIC BENEFIT TEST AND PUBLIC INTEREST TEST

H.M. KOLSEN

26.4.2002

1. BACKGROUND AND INDUSTRY CONTEXT

Marine safety and protection of the marine environment are acknowledged as the most important objectives of government legislation relating to maritime matters. The mandated use of pilotage services by fully experienced pilots in all ports of Queensland ensures that these objectives are, to the extent possible, achieved.

1.1 Legislation and Objectives

The legislation relating to Queensland's port pilotage activities is the Transport Operations (Marine Safety) Act 1994 and the Transport Operations (Marine Safety) Regulation 1995, and subsequent amendments. The overall objectives of this legislation are as listed.

- To provide a system that achieves an appropriate balance between (a) regulating the maritime industry to ensure marine safety; and (b) enabling the effectiveness and efficiency of the Queensland maritime industry to be further developed (s.3(1)).
- In particular, the objectives of the Act are to allow the government to have a strategic overview of marine safety and related marine operational issues; and to establish a system under which: (i) marine safety and related marine operational issues can be effectively planned and efficiently managed; and (ii) influence can be exercised over marine safety and related operational issues in a way that contributes to overall transport efficiency; and (iii) account is taken of the need to provide adequate levels of safety with an appropriate balance between safety and cost (s. 3(2)).

1.2 Previous Reviews

The conditions of and regulations for the supply of pilotage services for Queensland ports have been the subjects of several recent reviews. The most recent review, by the consultants KPMG, *Review of Port Pilotage Legislation in Queensland* in 1998, was in response to obligations under the Competition Principles Agreement. It examined the question of whether the benefits from the then current regulations outweighed their costs, and whether the objectives of the regulations could only be achieved by legislation.

At the time, KPMG found that the principal restrictions on competition were:

(i) the requirement to be licensed by Queensland Transport in order to be a port pilot;

(ii) the requirement that a port pilot must be either an employee of Queensland Transport or of an entity prescribed by regulation; and

(iii) prescriptions in respect of the fees charged for pilotage services.

That Review concluded that (i) should be retained, and no alternative has been or will be suggested.

Concerning (ii), the Review recommended that a single entity should be contracted, by a competitive tendering process, to provide pilotage services in a particular port for a specified time period.

Concerning the prescription of fees (iii), the Review recommended that it be discontinued and that it be determined for each port as part of the competitive tendering process.

In considering the KPMG review recommendations, the Queensland Government took the view that the particular characteristics of individual ports placed the port authorities in the best position to decide their pilotage arrangements, including fees. This approach was considered to provide the least risk of negative safety and environment results while still providing a degree of contestability for the pilotage market. This approach was endorsed in the Competition Impact Statement (Review of Marine Pilotage Legislation in Queensland), which was subsequently reported to the National Competition Commission.

1.3 Industry Context

To put the following discussion in statistical context, some pilotage statistics appear in the Appendix. Table A-1 shows revenue from pilotage for each port in Queensland. It shows that revenue has grown from $21.4m in 1996-97 to $25.3m in 2000-01. Table A-2 shows pilotage movements and gross revenue tonnes. Pilotage movements grew from 10,387 in 1996-97 to 11,230 in 2000-01, and gross revenue tonnes of arrivals increased from $129m to $166m over the period.

One outstanding characteristic of port pilotage services is that the various demanders of the service have different, and frequently conflicting, views on how that service should be carried out. Only the more obvious will be mentioned.

- The ship captain/master, as an agent of the owner, is primarily interested in minimising the time necessary to enter or to leave a port. He may be willing to take some risks, given the prevailing conditions (eg the weather, other traffic).

- The ship's crew would be more interested in their own safety than in minimising the ship's port time.

- The ship's insurers would be more risk-averse, willing to wait if necessary until safer conditions exist.

- The willingness of the owners of on-shore loading and unloading facilities, including stevedores, refineries, etc, to expedite port entry or exit may depend on whether they are currently fully occupied, or waiting for a ship.

- The port authority is primarily concerned with preventing any accident, which would interfere with the port's operation, but also with ensuring that the port is attractive to actual and potential users.

- Public concern with environmental damage results in extreme desire to avoid risk.

Any pilot, in considering these different assessments of risk, has to use experience and judgment in determining appropriate actions. The pilot will be as aware of the costs of delayed entry or exit, as of the risks. The objectives of any one of the stakeholders must be balanced against those of the others.

It is therefore necessary to prevent the pilot from becoming the agent of any one of them, eg. by employment by the ship owners, the stevedores or the insurers. In some cases, port authorities have been regarded as being in a position similar to that of the pilot, being charged with a wide variety of responsibilities including that to the general public.

As a consequence of these considerations, pilots are almost everywhere employed by entities acting as agents for governments and port authorities, or independent companies formed by pilots. In the latter case, care must be taken to ensure the company is not taken over (captured) or unduly influenced by any of the stakeholder groups. Furthermore, the profit motive of such a company might provide inducement for *them to engage* the smallest number of pilots, reducing time in waiting for pilots but increasing it for ships. On-going oversight by government is necessary.

So far as pilotage in other jurisdictions is concerned, current information available suggests that public or regulated monopoly supply are the most usual means. Various US states tried competition and subsequently returned to a regulated monopoly. Hong Kong tried competition between four suppliers and eventually took them over and supplied the service via a regulated pilot authority. In the UK, the devolution of pilotage to the port authorities in 1987 with each port having just one pilotage service also produced problems of continuity of supply, as in Queensland. The EU has excluded port pilotage from its draft legislation freeing up access to port services. In Australia, various arrangements exist between pilot companies in some larger ports, and arrangements with port authorities, however comparisons are difficult to make because the decentralized nature of the state of Queensland results in a larger number of smaller ports. The nub of the problem is simply whether there is a supply of pilots who meet current qualification requirements including port-specific knowledge and are in sufficient supply to permit competition for the market from groups of bidders. It is of course possible to get a large number of bidder groups by reducing the necessary pilot qualifications. The KPMG Review regarded this as an unacceptable option. This is also the view of practically all industry stakeholders. Hence it was not further considered in this review.

1.4 Reasons for the Review

Attempts were made, by introducing competition for an exclusive port market through a tender process, to use market forces to provide the incentives for efficient supply. These attempts failed, not only because of the difficulties which arose at the port of Cairns, but because that failure drew attention to the flaws in the tender process approach. These flaws included the difficulty inherent in a process which relies on the availability of a sufficient number of tenderers, each with appropriately qualified staff able to provide the service, to enable an effectively competitive process to take place.

Such a competitive tender process could not be achieved because the essential safety requirement of port-specific experience, which pilots must have, severely restricts the number of competitors which can take part in a competitive tender process. This is so, regardless of any criticism which may be made of the Cairns process. Reliance on competition for the market for pilotage services is not possible, unless there is (i) a willingness to reduce the currently necessary level of pilot qualifications *or* (ii) a means to effect the transfer of the port-specific knowledge of the incumbent pilots. Regarding (i), there is almost no support for this within the industry, and certainly none in the community as a whole. With respect to (ii), this is not feasible if the incumbent is not willing to do so. The potential for the Cairns problem to become more widespread arises if port authorities attempt to shift from current arrangements with the incumbent pilots.

There is, therefore, no alternative to solutions which are not able to rely on competition to determine outputs, prices, and other matters, as it does in many other industries. Accordingly, an Issues Paper, REVIEW OF PORT PILOTAGE LEGISLATION, was sent by Queensland Transport to 75 major stakeholders on the 18.3.2002, inviting comments.

2. MAIN MATTERS OF CONCERN TO RESPONDENTS

2.1 General

10 submissions were received by the closing date for comments, as well as some telephone conversations, which included many useful suggestions and informed and frequently constructive criticisms. While it is impossible to deal with all the matters raised, a brief summation is possible.

The Issues Paper identified a number of models for consideration by stakeholders. The models were port-specific pilot arrangements which included exclusive licences, non-exclusive licences and flexible service delivery, and a pilot *pools* approach which included a privately provided model and publicly provided model. The major issues addressed by stakeholders in responding to the models in the Issues Paper are summarised in the remainder of section 2.

2.2 The Marine Agency of Queensland (MAQ) Concept

The suggestion that deployment of pilots under the MAQ should be under a regional pool arrangement was made by a number of submitters. This is taken up below under the discussion of the Pilot Pool (2.6).

There was concern that the MAQ would not be sufficiently removed from the regulatory arm of government, and that the line which should be drawn between licensing/regulatory functions and service providers would become blurred.

While there was support for the establishment of the MAQ, it was argued that the new model should take cognisance of some of the improvements which have taken place since 1999, especially to allow for differences in the characteristics of ports. One suggestion was that existing service providers should continue under contract to the MAQ, and also to provide such contracted services to ports without critical mass.

2.3 The Tender Process

Most submitters agreed that the tender process was unlikely to be successful, pointing out the absence of sufficient tenderers. This was seen as even more apparent so far as potential tenders for the port of Brisbane are concerned. Some were, however, of the opinion that failure of the Cairns process did not mean that other processes could not have been successful.

Suggestions were made for a collective pool for some of the smaller ports, with continuation of existing arrangements with Ports Authorities where feasible. One suggestion was that other options could be examined, so that pilots in smaller ports could undertake other port or cargo-related duties.

2.4. Pricing and Fees

There was general agreement on fees to be based on costs. However, it was suggested that a senior level Advisory Council should be set up to advise on all pilotage matters, including fees. Concern was that fees will be seen as contributing to the State's general revenue, rather than being cost-based.

It was generally recognised that fees could not be competitively determined, and that government would have to set fees. There was, to one submitter, the danger of flow-on effects on crewing costs if present changes are not carefully managed.

2.5. Training

It was generally recognised that the supply of pilots will be a problem in the long run, giving incumbents considerable market power. The remedy was suitable funding for training. Other suggestions included lower entry levels for piloting certain classes of ships, use of simulators to reduce on-the-water training time, and incentives to induce

more people into the industry, to counter the perception of exclusive training by incumbents.

2.6 The Pilot Pool

There were many suggestions, in part based in a perceived notion of a centrally based organisation allocating all pilots to all ports at all times. The constraints on such a model were stated by most submitters. These included the costs and times involved in transporting pilots around the state and the constraints imposed by the requirement of ports-specific experience.

The remedy was seen by some submitters as two or three regionally based pools, and avoidance of the "one shoe fits all" model. In some cases it was suggested that, where possible, pilotage services should remain under the control of the Ports Authority, with a formal service agreement with the MAQ.

The Pool approach was seen as better able to address the short and long run pilot supply problem than the current or other alternatives.

It was, of course, never suggested that pilot allocations from a single pool would be made daily or even periodically for all ports in Queensland. Port-specific requirements would prevent that. Practically all pilots in the large ports would continue in the ports they presently serve. The economies would be achieved by being able to move appropriately qualified pilots to where they are needed, especially between smaller northern ports. One submitter pointed out that, before the 1999 reorganisation, a relieving pilot from Brisbane would come north to relieve for holidays, and that this practice then ceased.

3. TEST OF PUBLIC BENEFIT

The requirements include:

that legislation should not restrict competition unless

- benefits of the restriction to the community as a whole exceed the costs; and

- the objectives can only be achieved by restricting competition.

The difficulty in the present case is that the attempt to legislate to remove restrictions to competition did not succeed. What the legislation did was to bring out the market characteristics which showed why competition could not succeed in this case.

Various options were considered, or, in many cases, re-considered in the light of recent experience. These options are examined in the following paragraphs.

3.1.1 Port-Specific Pilot Arrangements

The three options which were considered with respect to a port system in which pilotage services were contracted for each specific port were; (i) all port authorities to issue exclusive licences (a single contract per port), (ii) all port authorities to issue non-exclusive licences (multiple contracts per port) or (iii) each port authority to have the discretion to adopt exclusive or non-exclusive licences for pilotage.

3.1.1 Exclusive Licences

This would require port authorities to adopt a model under which tenders were called for a periodic contract to supply pilotage services exclusively to each port. The process of tendering would allow regular recourse to test the competitiveness of conditions to supply the market under a limited period monopoly. The standard of pilot services would be decided by the port authority with regards to safety, consumer preferences and commercial requirements. The period of the contract would have to be long enough to allow the operator to recover the investment in equipment but short enough to ensure: first, that new technologies can be introduced through the tender process; and second, that there is a pool of potential bidders for the contract. The tender process could encourage differentiation between bids on the basis of price, quality above minimum standard required and the range of services offered. Performance requirements would be written into contracts, monitored and penalty clauses invoked in case of poor performance.

A major weakness of the model is the difficulty in ensuring a substantial field of bidders, as many stakeholders recognised. This may be a problem even for large ports, and there may be few bidders or no bidders for the small ports. Pilotage fees may be lower in large ports than small ports, all other things being equal, reflecting the degree of interest in contesting the market for pilotage in a particular port. Furthermore, the irregularities in ship movements will result in fluctuations in demand for pilotage in smaller ports which cannot be dealt with by variations in the supply of pilots. Pilots in one port may be idle while there may be a shortage of pilots in another. Exclusive licences for the smaller ports tend to result in inefficient use of pilots.

3.1.2 Non-exclusive Licences

This option allows port authorities to open their market for pilotage services to competition from all licensed pilot operators with the necessary port-specific experience. This option requires the port authority to give up their existing relationship with users of port services and allow individual pilots to negotiate fees directly with their clients (shipping companies). It would allow competition in the market instead of for the market.

Industry feedback and anecdotal comment suggests that this approach is likely to put at risk the high standards of safety, which are mandatory. Even a marginal increase in the risk in the rate of incidents arising may far outweigh any benefit derived from a more

competitive pilotage market. This was the reason for rejection of this model in the KPMG Review.

3.1.3 Flexible Service Delivery

Flexible service delivery allows each port the discretion to decide whether to adopt the use of exclusive licences or to directly employ pilots. This option was accepted by the Queensland Government after considering the issues raised in the Public Benefit Test and the Competition Impact Statement, developed after the previous KPMG Review. This included the requirement of a single service provider in each port.

In the Queensland port context, the scale of the ports varies greatly. In respect of the scale of a port, a market structure that may produce an efficient solution in terms of prices and non-price requirements in one port, may not work efficiently in another port with different market attributes.

Ports differ with regards to tides, navigational aspects, weather, harbour and channel conditions, and the variety of ships and frequency with which different classes of vessel call at the port. Whilst this is a significant factor in respect of pilots requiring qualifications specific to each port, it is also relevant in respect of the particular delivery mechanism for pilotage services in each port. Thus the staffing of a pilotage service must factor in matters of port scale, port location, the difficulty and duration of the ship navigation to enter or exit a port. While the port of Brisbane may require a large number of pilots each day (eg. 23), others (like Weipa) do not even require one full time pilot each day. Some ports may require expensive service vessels and or helicopters as a result of the length of the channel or prevailing weather conditions, while other ports need only cheaper vessels or can use tugs to transfer the pilot to the ship.

The Competition Impact Statement (*Review of Marine Pilotage Legislation in Queensland*) took the view that the particular characteristics of individual ports placed the port authorities in the best position to decide their pilotage arrangements. The option was considered to provide the least risk of negative safety and environment results while still providing a degree of contestability for the pilotage market.

The results of consultation at the time (1998-9) led to a prevailing view that contestability for pilot services would result in improved services and overall efficiencies. Potential services providers were the strongest advocates of competition in the market, while port authorities and users with the greatest interest in safety supported the approach for individual port authorities to issue exclusive licences by tender.

Subsequent experience, discussed further below, shows that these models did not meet the objectives of the legislation.

3.1.4 Subsequent Experience

The port-specific approach to pilot services, in this case giving the port authorities the discretion to adopt a particular variation of the general approach, has been found to have three main problems: (i) non-continuity of supply, (ii) mismatches between demand and supply of pilot services, and (iii) pilot training.

First, non-continuity of supply can arise when the tender process is used. This has been evidenced in the break down of the tender process in the port of Cairns. The process has been unable to guarantee the continued supply of pilots necessary for providing on-demand services in one port. While current arrangements in a number of ports are providing the necessary supply of pilots, there is likely to be serious problems should they choose to deviate from those arrangements. Thus there is the ongoing problem of potentially uncertain supply arrangements for pilot services. This problem, then potential and now actual, was noted in the KPMG Review. Incumbent pilots are unwilling to train those who will take over their jobs. The transfer of intellectual capital cannot be enforced by legislation.

Second, mismatches between demand and supply of pilot services may arise where the port authority assumes responsibility for the supply of pilotage. Whether by exclusive contract or otherwise, and especially in smaller ports, port-specific pilot arrangements have created excess capacity of pilots at off peak demand times, and a shortage of pilots at peak demand times.

Finally, there is the problem of pilot training. In varying degrees it will be a problem with each of the port-specific approaches to pilot supply. Pilot training is in part general, and in part port-specific. If port authorities outsource by exclusive contracts, the applicants for a pilotage contract with a ports authority must have pilot accreditation, but would have the required port-specific qualification only if they were the incumbent contractors or had been trained by them. It is unreasonable to suppose that the incumbents are willing to train those who, in the case of exclusive licences, will take their jobs. The option of becoming market place competitors, in the case of non-exclusive licences, is not acceptable, mainly because of safety concerns but also because it is not viable in any but the largest ports.

As noted in the KPMG Review, "...if the incumbent pilots would not assist with the training of new pilots..." (p.31) it would then take far longer than 18 months to train the new pilots. Further, to compel to incumbent pilots to train their replacements is almost certainly neither acceptable nor legal.

This would not be of crucial consequences if there are many pilots at a port, with a steady stream of training for replacement rather than for displacement. This does not apply generally, especially at smaller ports, and the absence of competition from a number of entities with a sufficient supply of appropriately qualified pilots may also make competitive tendering a problem in the long run for large ports.

The current problem demonstrates that, given the constraints imposed by the necessary qualifications, an effectively competitive tender process for each port or for groups of ports is impossible. There is an insufficient supply of suitably qualified pilots to enable a number of groups of pilots to be formed to enable competition. It follows that, even if there were no efficiency gains from a pools approach - to be discussed - an effectively competitive tender process is not possible.

The question to be considered is what methods of service delivery exist which will ensure continuity of services, given the objectives of the legislation.

3.2 The Pilot Pool Approach

To address the problems common to port-specific systems of pilot supply, the pilot pool approach needs to be re-considered. It has been the customary means of pilot supply in many ports around the world.

The idea of sharing pilots was explored in the KPMG Review. KPMG suggested the coupling of larger and smaller ports. However, that could not solve either the long-run or the short-run supply problems. To overcome the pilots' unwillingness to train others requires that each of the coupled entities has need for a sufficiently large number of pilots to be seen by them to provide employment opportunities and continuity not markedly inferior to those provided by the demand for pilotage services for the state as a whole. To overcome the problem it would be necessary to lower the standard of qualifications so giving access to a larger number of competitive groups to allow a tender process to work effectively. All but one submitter argued strongly against any reduction in pilot qualifications. Given safety and environmental concerns, such a reduction was not further considered. This was also a conclusion reached in the KPMG Review. The reduction in pilot qualifications would be contrary to the safety objective of the legislation.

The solution is to have a pilot pool from which allocations to ports are made as required, and which will have training for replacement, which is not seen as training for displacement. A pools approach offers advantages with respect to the transfer of knowledge between pilots. With experienced pilots within a pool, they no longer face the problem of being replaced by other pilots in the short term. The creation of a cooperative, not a competitive, work culture will lead pilots to assume as one of the responsibilities of their job the training of the next generation of pilots, as they did in the past. No pilot is likely to have current port specific knowledge of every port in the state, but the grouping of ports to be served from a regional pool of pilots makes it possible for there to be pilots with port-specific knowledge of more than one port within each pool.

The pilot pool will also reduce short-run excess supply and demand at many ports by pilot allocations which reflect port needs. This removes the necessity of each port, or combinations of two or three ports, to have sufficient pilots to cope with demand peaks without them being on station when there are no ships at that port.

Allocation of pilots from a Queensland pilot pool would reduce the costs associated with the constraints imposed by exclusive port authority markets. A simple and obvious example was given by a submitter who referred to the ability to send a relieving pilot for a short period from Brisbane to one of the ports north of it. This practice ceased with the introduction of port specific arrangements.

Additionally, since the service must be available when ships require it, exclusive provision by a port authority requires backup pilots at that port. Pilots may be absent on leave for various reasons (holidays, sickness, accidents etc.). The pilot supply, organised in this port specific way, requires each port to have enough pilots not only to cope with the fluctuations with ship arrivals and movements (ie. to cope with the maximum demand), but also to have some standby capacity for the contingencies mentioned above.

The ability to provide the necessary pilot back up for a number ports, to the extent that backup pilots have the particular port-specific knowledge, produces efficiency gains for the entire system. These efficiency effects are, of course, similar to those of any network of services which is required to provide un-storable services to meet fluctuating demands.

Electricity supply - also un-storable and required to meet fluctuating demand - provides a similar example of standby capacity which can be used in the system. To have standby capacity for each generating station is more costly than to provide it for large parts of the system or for the system as a whole. This is one of the principal reasons for having an interconnected system.

While precise operational assessments were not undertaken in this PBT, a simple example will suffice to provide the efficiency reasons for the pools approach. Suppose there are to be three ports, supplied by one pilot pool. Each requires pilots to meet maximum demand and for stand-by capacity. Maximum demand occurs at different times in the three ports. At the time of maximum demand in port 1, pilots in ports 2 and 3 will have spare capacity and can, if not constrained by exclusive contracts, be deployed to meet the demand at port 1. Certainly the total number of pilots required for all three ports will be less. Even if the reduction is only one pilot, the savings will be of the order of $150,000 p.a.

Using the same example for the provision of contingencies, at least one pilot in each port needs to be on call to meet foreseeable (holidays) and unforeseeable (sickness, accidents) events. Pool supply will clearly make it possible to reduce this by at least one pilot, representing a further saving of $150,000 p.a.

The savings to the system as a whole would obviously be considerably more.

While the pool solution provides for the most efficient supply of pilotage services, the pool can be either a government or a privately-owned entity. The relative merits of the alternatives must be examined, given the objectives of efficiency in pilot deployment and the guarantee of a sustainable supply of pilots.

The question is whether alternatives can be found to the pilot pool approach, which allow efficient delivery of pilotage services and ensure continuity of service supply.

3.2.1 A Privately provided Pilot Pool

One important question is whether it is possible to establish the privately-owned pool entity by an effectively competitive tender process, which would need to be repeated every five years. This may be difficult, since a competitive process requires tenders from a number of independent groups, each with a sufficient number of pilots with the appropriate experience to replace the incumbents.

A competitive tender process would, given the current problem, require each of the applicants to be able to guarantee that the incumbent pilots are willing to pass on their port-specific experience by providing the necessary training. Without such a guarantee, the current problem would not be solved, and sustainable pilotage services could not be provided.

These considerations indicate that the essential requirements to be met by the tenderers place severe restrictions on the applicants for the contract. Competition for the contract will face difficulties in ensuring that there are a sufficient number of appropriately qualified potential suppliers to make it effective.

It is, nevertheless, necessary to consider the possibility that it can be made to be effective, especially because the benefits from competitively determined supply may allow the determination of competitively established pilotage fees.

The successful tenderer would require some regulation. The company's share register, given the conflicting objectives of the interested parties, would require oversight. Pilot licensing will continue to be in the hands of government, but a sufficiently competitive and regularly repeated tender process can be expected to result in competitively determined fees. While this fee level may advantage some ports and disadvantage others, this may become a matter for consideration by government after the fees are known.

The question is whether an effectively competitive tender process can take place.

3.2.2 A Publicly provided Pilot Pool

Supply of pilotage services by a government entity would not face problems of pilot supply. However, costs would not be under competitive pressure, and fees would have to be determined by government.

There are various means by which pilotage services can be provided by a government entity.

For pilot training and service delivery, Queensland Transport has considered a range of possible options and concluded that the creation of a separate agency attached to

Queensland Transport, with state-wide responsibility for pilot training and pilot service delivery for all Queensland ports, is the best means to ensure a sustainable supply of appropriately qualified pilots from the establishment of a critical mass of pilots, at reasonable costs and prices.

In addition to the problem that competition may not be able to provide a sufficient number of competitors for the market, some of the stakeholders' primary concern for safety and the environment make pilotage supply a matter of public interest. Government needs to be aware of possible conflicts between commercial considerations on one hand, and safety and protection of the environment on the other. The benefits from possible competitive supply of alternative arrangements for the delivery of pilotage services must be assessed with that conflict in mind.

In the Competition Principles Agreement, the various sub-clauses in 1 (3) make it clear that, while the competitiveness of Australian businesses (1 (3) (i)) is one matter to be taken into consideration, the other clauses refer to wider matters of community concern to be taken into consideration. So far as supply by a pilot pool is concerned, clause (1 (3) (j)) refers to the efficient allocation of resources, a requirement which is not met by current arrangements.

With a public pilot pool, additional questions to be answered are:

(a) should the training of pilots be carried out by the government agency responsible for pilot supply or

(b) should the training of pilots be carried out by a private training organisation(s).

The choice is thus between (i) one more attempt to introduce competition by the tender process with a private pilot pool, or (ii) to establish a public pilot pool. The choice must take into account natural monopoly elements, difficulties in a sufficiently competitive tender process, the needs of stakeholders with different objectives generally, and especially the public interest component.

The proposed legislation accepts this failure of the competitive model, which resulted primarily from the inability to ensure the availability of a sufficient number of competitive groups to make the tender process effective. Experience has shown that on-going services of port pilots, essential for safety and protection of the environment, cannot be achieved by competitive processes in Queensland, either in or for a ports market. The expected impacts of the proposed legislation - in terms of public benefit and public interest - are shown in a table of impacts and are examined in the text of the Review.

4. PILOTAGE FEES

The process of competitive port-specific tendering was supposed to resolve the problem and result in fees based on costs in the ports to which the tenders applied. On that

understanding, the KPMG Review "...recommended that the prescription of fees for pilotage services should be repealed." (p.45). The Government's response was to allow port authorities to determine pilotage fees in the same way as other port charges.

A sufficiently competitive tender process for supply by a pilot pool would result in competitively determined fees. However, because such a process is not feasible fee determination by a government entity must be adopted. In this context, it should again be noted that competitively determined fees would not have solved all problems. For example they may have disadvantaged some ports, and, where this conflicted with other government policies, may still have required government support for some ports.

When fees cannot be competitively established, a brief discussion of the relevant principles to be applied under monopoly supply by government, where fees are to be based on costs and possible oversight under the Competition Principles Agreement, is useful.

The implications of the requirements under the Competition Principles Agreement are that where required outcomes can be achieved only by legislation, the prices to be set should be similar to, as far as possible, the prices which would have been determined in a reasonably competitive market. This requires a relationship between costs and revenue similar to what it would have been in a competitive market. However, the various cost complexities mentioned in the next paragraph make it difficult to apply the total cost base to individual ports.

It is possible to go into minute detail in attempts to base pilotage fees on pilotage costs. There are many cost complexities associated with most transport services including pilotage, referred to variously as fixed, joint, marginal, variable, attributable, long and short run, avoidable, separable, out-of-pocket, and more.

Unfortunately, while commercial pressure in competitive markets enforces cost-related prices by demonstrated sustainability regardless of cost complexities, monopoly markets provide no such discipline. In monopoly markets in which regulation requires that prices reflect costs, prices are usually primarily based on the two main cost components of the services. These are:

(i) the more or less readily ascertainable costs which vary directly with the provided services, eg time spent and distance travelled, and

(ii) the other costs, such as equipment, stand-by, administration, etc, which do not vary directly with the provided service. These costs are frequently recovered by reference to the capacity of the recipient of the service to pay, eg the size of the vessel or the volume of cargoes exchanged.

This is not a new idea. "To meet local needs the Pilotage Act of 1870 devised a system of dues based on the distance of pilotage and the tonnage of the vessel" (Lewis, G.1973, A History of the Ports of Queensland, UQ Press, p.62). So long as the relationship between

the revenue collected and the costs of pilotage is as required (eg by the Competition Principles Agreement and the Queensland Government), it is difficult to improve on an approach based on such considerations.

With government being responsible for determining fees for pilotage services, a means of prices oversight should be considered.

5. Transition/Review/Sunset Arrangements

Current delivery of pilotage services includes a pilots' company (Brisbane), and various arrangements with port authorities and Queensland Transport. The proposed new arrangements will have little immediate effect on service delivery, apart from more effective use of pilots for services in the smaller ports. However, the ability to provide the necessary backup pilots for a number of ports has an immediate efficiency effects, allowing more effective deployment of pilots. There will be benefits to the entire system, not just the small ports. Nevertheless, the primary objective is to ensure future service supply, with a secondary objective of achievement of some efficiencies in pilot deployment for smaller ports.

Though currently the available options do not provide acceptable, or perhaps even feasible, alternatives, this may not be so in the future. A review of the new arrangements should be mandated, to take place not more than five years from the date of commencement of the new arrangements.

Benefits to the community are that pilotage services will *continue to* be provided by independent professional pilots. The safety benefits must be compared with the costs of marine accidents, and the potential to increase the risk of environmental damage.

The impacts on industry are shown in the following Table 1. The impacts described cover income transfers, efficiency gains and efficiency losses as well as non-efficiency. The table shows that in the short run, there are a range of effects which are minimal, as the service will continue to be provided as currently. In the longer run, users of the pilotage service will benefit from the assured supply and assured quality of pilots. The assured supply of pilot services to individual ports in Queensland cannot be left to the uncertainties and difficulties of current arrangements. Recent experience has revealed that the state's economy cannot be exposed to the risk of the inability of market forces to arrange pilotage services.

The impact on communities will also be positive, especially for those relying on small ports.

So far as the impact on costs is concerned, there will be some cost reductions made possible by more efficient pilot deployment from the pilot pools.

6. THE PUBLIC INTEREST

The impact of the proposed reorganisation of pilotage services on ecologically sustainable development, social welfare and equity considerations and CSOs is small, since the services will generally be available as they are now. Where the pool model allows better matching of supply with demand in smaller ports, this will make such ports more attractive to users, with corresponding benefits.

So far as occupational health and safety, industrial relations, access and equity are concerned, there will be little change in the short run because, as mentioned above, pilotage services will continue to be provided as currently. Pilots located at particular ports will continue to provide those services in those ports, to be eventually engaged by the Maritime Authority of Queensland. The longer run impact will be in the guarantee of continued supply of such services by highly qualified independent professional pilots.

Economic and regional development will benefit from assured supply, which will also serve the interests of the consumers.

Competitiveness of Australian business is unlikely to be affected by the proposed changes, which merely acknowledge that it was not possible to apply competitive processes to Queensland ports pilot markets.

The efficiency of resource allocation is enhanced by arrangements which, by use of the pool model, allows reductions in idle time and ensures efficient pilot deployment.

Economic and Non-economic Impacts of Proposed Legislative Arrangements for Port Pilotage Supply

Impact	Size of Impact	Direction of Impact	Stakeholders Affected
Income Transfers			
Economic rents of pilots	Relatively small	Uncertain	Pilots
Economic rents of shippers and ship owners	Relatively small	Positive through some cost reduction by more efficient pilot deployment.	Shippers and ship owners
Funding a public pilotage agency	Relatively small, but depends on government fee decisions.	Insignificant relative to industry costs.	Queensland taxpayers, shippers and ship owners
Efficiency Gains			
Guaranteed pilot supply continuity	Significant	Positive trade benefits	All, but particularly small ports
Continuity in pilot training	Significant	Positive trade benefits long term	All
Operational independence of pilots	Significant	Positive trade benefits long term	All
Matching demand and supply of pilots by pilot pooling	Significant	Positive trade benefits long term, greater utilisation of available pilots.	All
Regulated pilot prices and fees	Significant as competitive forces are not available, but dependent on government decisions.	Positive	All
Efficiency Losses			
Absence of competitive pressure on pilots, requiring on-going government oversight	Minor	Negative	Pilots, port authorities and ship owners
Non-efficiency Effects			
Marine safety	Significant long term	Positive	All
Marine ecology	Significant long term	Positive	All
Social welfare	Minor	No change	All
Access and equity	Minor	No change	All
Occupational health and safety	Minor	No change	All
Industrial relations	Minor	Positive through continuity of engagement of pilots	Pilots

NB: It is acknowledged that existing arrangements in a number of ports are also delivering many of the benefits outlined above. However, there is a significant risk that if deviations from current arrangements take place in those ports, there will be a break in the continuity of pilotage service supply and consequently the benefits derived under current arrangements would not continue to be realized.

7. RECOMMENDATIONS

7.1. Establish the Marine Authority of Queensland (MAQ) as an independent entity within Queensland Transport.

7.2. Attach all Queensland port pilots to the MAQ. Regulatory and licensing should be clearly separated from other matters , either by appropriate arrangements within the MAQ, or as currently by Queensland Transport.

7.3. Allow for agreements between selected ports authorities and the MAQ regarding pilot deployment.

7.4. Establish arrangements by MAQ for pilot deployment from three pools, southern, central and northern.

7.5. Establish a Technical Advisory Council.

7.6. Fees to be set by government, based generally (but not necessarily on the costs of each port) on costs of supply of pilotage services, with appropriate provision for oversight.

7.7. A review of the proposed new arrangements should occur no later than five years after the new legislation takes effect.

H.M. Kolsen
26.4.2002.

APPENDIX

TABLE A-1: REVENUE FROM PILOTAGE

Port	96/97	97/98	98/99	99/00	00/01
Brisbane	$9,553,000	$10,077,000	$10,473,000	$11,652,000	$11,101,000
Bundaberg	$121,000	$97,000	$109,000	$127,000	$99,000
Port Alma	$55,000	$74,000	$71,000	$96,000	$73,000
Gladstone	$3,812,000	$3,207,000	$3,447,000	$3,858,000	$4,188,000
Mackay	$445,000	$424,000	$305,000	$360,000	$344,000
Hay Point	$3,782,000	$3,893,000	$3,606,000	$4,725,000	$5,504,000
Abbot Point	$416,000	$410,000	$714,000	$657,000	$711,000
Townsville	$1,647,000	$1,664,000	$1,649,000	$1,628,000	$1,870,000
Lucinda	$81,000	$57,000	$78,000	$67,000	$44,000
Cairns	$483,000	$373,000	$397,000	$334,000	$368,000
Karumba	$46,000	$33,000	$77,000	$34,000	$31,000
Weipa	$679,000	$418,000	$575,000	$543,000	$643,000
Thursday Island	$9,000	$2,000	$9,000	$14,000	$30,000
Mourilyan	$103,000	$96,000	$118,000	$69,000	$76,000
Cape Flattery	$199,000	$169,000	$161,000	$138,000	$171,000
TOTAL	**$21,431,000**	**$20,994,000**	**$21,789,000**	**$24,302,000**	**$25,253,000**

TABLE 2: PILOTAGE MOVEMENTS AND GRT

Port	1996-97		1997-98		1998-99		1999-00		2000-01	
	Total piloted movements	Total GRT (on arrival)	Total piloted movements	Total GRT (on arrival)	Total piloted movements	Total GRT (on arrival)	Total piloted movements	Total GRT (on arrival)	Total piloted movements	Total GRT (on arrival)
Abbot Point	159	3,819,256	161	4,069,864	237	5,537,093	186	5,082,219	212	6,112,952
Bundaberg	98	659,556	85	652,374	85	641,450	93	764,608	68	551,227
Brisbane	4,329	40,828,114	4,401	42,942,655	4,710	46,120,953	4,971	50,191,981	4,620	48,693,355
Cairns	623	2,301,320	654	2,639,505	765	3,067,542	607	2,867,869	494	2,480,572
Cooktown	8	12,590	2	56,250	4	117,086	0	128,125	1	128,125
Cape Flattery	95	1,216,419	74	1,026,304	67	911,426	70	962,827	74	984,599
Gladstone	1,492	29,865,769	1,402	31,766,356	1,500	33,373,500	1,685	36,629,842	1,730	39,735,283
Hay Point	1,178	28,880,982	1,257	31,997,723	1,304	34,555,050	1,521	39,233,525	1,606	43,132,763
Karumba	160	104,525	96	84,621	129	145,095	152	242,483	120	366,390
Lucinda	57	482,089	50	494,788	34	382,516	40	423,849	22	270,892
Maryborough	0	0	0	0	0	0	0	0	6	28,897
Mackay	337	2,734,859	326	2,958,442	274	2,663,509	294	2,589,630	272	2,361,111
Mourilyan	77	594,584	86	556,372	93	573,188	81	579,516	52	421,044
Port Douglas	3	300	0	0	4	1,418	0	0	4	996
Port Alma	148	527,637	155	469,970	159	551,510	163	548,490	142	463,192
South Port	0	0	0	0	0	0	0	0	0	0
Thursday Island	32	107,717	13	96,757	14	139,208	48	143,232	42	178,809
Townsville	1,285	8,682,489	1,359	9,569,858	1,323	9,914,814	1,396	10,103,595	1,435	11,168,433
Weipa	306	8,195,998	211	8,005,313	271	8,719,267	264	9,415,758	330	9,284,971
TOTAL	**10,387**	**129,014,204**	**10,332**	**137,387,152**	**10,973**	**147,414,625**	**11,571**	**159,907,549**	**11,230**	**166,363,611**

Annexure B

2008 AMSA Review Panel Report

The Delivery of Coastal Pilotage Services in the Great Barrier Reef and Torres Strait

Review Panel Report

October 2008

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Executive Summary

On 2 July 2008 the Australian Maritime Safety Authority (AMSA) and the Department of Infrastructure, Transport, Regional Development and Local Government announced a review of the delivery of coastal pilotage services in the Torres Strait and Great Barrier Reef.

The review was conducted in consultation with the shipping industry, pilotage service providers, coastal pilots and their representatives, relevant Government departments/agencies and regional community interests as a consequence of issues raised about current pilotage service delivery arrangements, including the introduction of under keel clearance management systems in Torres Strait.

An Issues Paper was prepared for the purpose of initiating the consultation process and seeking formal written submissions, with senior AMSA representatives visiting those stakeholders directly affected to explain its contents.

Submissions closed on 8 August 2008 and a suitably qualified and experienced review panel was set up to examine each submission against appropriate terms of reference and make a report.

The panel met from 3-4 September 2008 and commenced its work by identifying the safety related concerns that helped prompt the review, along with the key issues raised in each submission. From this standpoint it became clear that the sanctions provisions in Marine Order Part 54 *Coastal Pilotage* might benefit from some amendment and that the introduction of under keel clearance (UKC) management in Torres Strait should be treated as a separate matter from the delivery of pilotage services.

The panel examined a number of different options for service delivery, including that put forward in the issues paper, in accordance with its terms of reference and keeping in mind the safety related concerns already identified.

In the short term, it was agreed that greater attention should be paid to overseeing the activities of pilots and service providers through improved compliance, enforcement and incentive strategies, supported by appropriate amendments to Marine Order Part 54. It was also recognised however that whilst this approach should improve regulatory compliance and the ongoing achievement of the required safety outcomes, it may take some time to have any measurable impact on the development of a culture of continuous safety improvement between all parties involved.

Further analysis led the panel to conclude that the coastal pilots' current contractual employment arrangements do not always contribute to the promotion of collegiate responsibility or the most effective risk management regime for improving safety outcomes amongst pilots and service providers operating in these environmentally sensitive waters.

It was also noted however that whilst the applicable regulatory requirements generally appear to be being met, the pilotage providers had made significant

investments in transfer equipment and associated infrastructure since the current service delivery model was first introduced.

Based on these conclusions, the panel agreed that if improved compliance, enforcement and incentive strategies do not prove effective in promoting the establishment of a collegiate approach to safety outcomes, then the introduction of an alternative model should be considered. The panel's preferred option would be to set up a coastal pilots' cooperative, contracted by Government, with its costs and fee structure pre-determined in accordance with open and transparent criteria and subject to annual contractual review – provided such an approach is deemed acceptable under Government competition policy and supporting legislation.

Under this model, arrangements for pilot transfers, including boat and helicopter transfer services and associated shore based infrastructure would be contracted by Government on the basis of open periodic tender using a number of different providers, each verified as capable of supplying the required service under the contract. One or more service providers may be selected from the tender process.

Requests for pilotage would be made to the cooperative who would arrange the pilot and associated transfer arrangements with the contracted provider and bill the ship afterwards. Payment would be made by the ship's agent to the cooperative based on the bill's two components, pilotage and transfer, with the cooperative keeping the pilotage payment and passing the transfer payment on to the nominated provider. An alternative would be to raise two separate invoices with the cooperative and transfer provider paid directly for their services similar to the way towage and pilot charges are dealt with in most ports.

Such a model would allow for open competition between providers, much in keeping with existing arrangements, whilst reducing commercial pressure on the nautical element of pilotage in the Great Barrier Reef and Torres Strait that helps contribute to safe passage through these environmentally sensitive areas.

The panel noted however that if such an approach is acceptable, substantial amendments would be necessary to the underpinning statutory requirements and careful thought would need to be given to the transition process.

Turning to UKC, panel members reached a majority view that a single management system is required, selected through an open tender process. The system would be under direct Government control with purchase, operating and upkeep costs shared between the Commonwealth and Queensland Governments, as the potential benefits would not be realised by all shipping interests required to pay the Navigation Levy.

It was also recommended that to achieve the maximum safety benefit, consideration should be given to integrating the system with the operations of *ReefVTS*, as part of its function as a navigational assistance service, with a licensed pilot available to monitor use of the UKC system and associated activities of VTS operators at all times.

The Panel made a number of recommendations in reaching the conclusions summarised above, in addition to examining a variety of other related matters raised in the submissions, the detail of which is covered in the following report. One Panel member noted that while not all the recommendations had unanimous agreement, they all had majority support.

List of Recommendations

Recommendation 1

That the sanctions and measures available to AMSA under Marine Order Part 54 to manage coastal pilotage be amended to improve their effectiveness in dealing with procedural breaches that have the potential to put ship safety at risk.

Recommendation 2

That the effectiveness in delivering safety outcomes of the improved compliance, enforcement and incentive strategies associated with the changes recommended to Marine Order Part 54 Coastal Pilotage be reviewed 12 months after the revised MO54 comes into effect. If after 12 months, the safety concerns prompting this review have not been adequately addressed, new coastal pilotage service delivery arrangements will be introduced.

(The panel's preferred option in such circumstances would be to set up a coastal pilots' cooperative, contracted by Government, with its costs and fee structure pre-determined in accordance with open and transparent criteria and subject to annual contractual review – provided such an approach is deemed acceptable under Government competition policy and supporting legislation.)

Recommendation 3

That a single under keel clearance (UKC) management system for use in Torres Strait be selected through an open tender process.

Recommendation 4

That the UKC management system acquisition, operation and upkeep costs should be shared between the Commonwealth and Queensland Governments, as the potential benefits would not be realised by all shipping interests required to pay the Navigation Levy.

Recommendation 5

That the UKC management system should be integrated with the operations of *ReefVTS*, as part of its function as a navigational assistance service, with a licensed pilot available to monitor use of the UKC system and associated activities of VTS operators at all times.

List of Abbreviations

AMSA	Australian Maritime Safety Authority
DITRDLG	Department of Infrastructure, Transport, Regional Development and Local Government
GBR	Great Barrier Reef
IMO	International Maritime Organization
NSAC	AMSA Navigational Services Advisory Committee
ReefVTS	Great Barrier Reef Vessel Traffic Service
RIS	Regulation Impact Statement
VTS	Vessel Traffic Services
UKC	Under Keel Clearance

1. Introduction

1.1 The Great Barrier Reef (GBR) is internationally recognised as a unique marine environment. It is the largest coral reef ecosystem and the world's biggest living structure. It extends over 2,300 kilometres from Lady Elliot Island off the coast south of Gladstone to the tip of Cape York Peninsula in the north.

1.2 Indigenous communities have had a close association with the coastal and marine environment in the GBR region over thousands of years for both cultural and economic reasons.

1.3 The Torres Strait is an area of rich geographical, ecological and cultural diversity, home to some 10,000 indigenous Australian inhabitants, resident on 18 island communities, and some 20,000 indigenous Papua New Guinea nationals, who live in coastal villages. They depend on the unique marine environment for subsistence fishing and gathering, with their seafood consumption being one of the highest in the world.

1.4 Torres Strait is also a major shipping channel for Australia, linking the Coral Sea in the east with the Arafura Sea in the west providing a sheltered and well surveyed passage. It has over 150 islands and numerous coral cays, exposed sandbanks and reefs, many of which are still to be properly surveyed. It is characterised by fast moving, shallow waters and at its narrowest point, north to south, is 150 kilometres across and presents a number of navigational challenges for ships with several shallow sections, considerable tidal variations and strong currents.

1.5 Both the GBR and Torres Strait are recognised internationally for their highly sensitive and pristine environments, which Australia seeks to protect from pollution and environmental damage through a range of internationally recognised ship safety and pollution prevention measures (see Appendix 7). These include restrictions on discharges from ships, adoption of ship routeing and other navigational measures, such as compulsory pilotage and vessel traffic management.

1.6 Pilotage is an important factor in reducing the risk of a shipping incident during the transit of Torres Strait and the GBR. Up until 1993, the licensing, operational administration and tariff structure of marine pilotage in the GBR and Torres Strait region was the responsibility of the Queensland Government and was operated as a statutory monopoly by the Queensland Marine Board.

1.7 When the Australian Commonwealth Government assumed responsibility from Queensland for regulating coastal pilotage that same year, it adopted the policy that the pilot licensing system to be administered by the Australian Maritime Safety Authority (AMSA) was not to be used for managing service pricing.

1.8 Commercial aspects, such as pilot numbers and charges for pilotage, were to be determined by the market. Government control over these matters was to be relinquished and the provision of coastal pilotage services handed over to the private sector.

1.9 The relevant statutory requirements are to be found in Marine Order Part 54 *Coastal Pilotage*, which includes the *Queensland Pilotage Safety Management Code* and details of the *Torres Strait Pilotage Area*.

1.10 Two competing private sector providers emerged from the former statutory monopoly, with a later, third competitor mainly servicing those ships using Hydrographers Passage. The pilot providers offered pilotage services to the shipping industry. Licensed pilots contracted themselves to one of the service providers, creating a competitive pilotage service. Recruitment and training of new pilots, consistent with the AMSA licensing requirements, is arranged through the service provider.

1.11 Competition between the providers initially resulted in a significant reduction in the cost of coastal pilotage to the shipping industry. It also raised concerns that the extent of this competition had the potential to reduce the pilotage service providers' focus on safety and the model was seen by some as being generally contrary to international best practice.

1.12 A number of different reviews have been undertaken into various aspects of coastal pilotage since, and a short summary of each is given at Appendix 8, "Previous Reviews".

1.13 On 2 July 2008 AMSA and the Department of Infrastructure, Transport, Regional Development and Local Government announced a review of the delivery of coastal pilotage services in the Torres Strait and GBR.

1.14 This review was conducted in consultation with the shipping industry, pilotage service providers, coastal pilots and their representatives, relevant Government departments/agencies and regional community interests as a consequence of matters raised about current pilotage service delivery arrangements, including the introduction of under keel clearance management systems in Torres Strait.

1.15 An Issues Paper (see Appendix 2) was prepared for the purpose of initiating the consultation process and seeking formal written submissions, with senior AMSA representatives visiting those stakeholders directly affected to explain its contents.

1.16 Submissions closed on 8 August 2008 and a suitably qualified and experienced review panel (see Appendix 5) was set up to examine each submission against formal terms of reference (see Appendix 4) and make a report.

1.17 The panel met from 3-4 September 2008 and the report of its findings and recommendations follows.

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2. Background

2.1 Torres Strait and the Great Barrier Reef (GBR) are not only areas of outstanding environmental and cultural significance, as mentioned in the introduction to this report, but they also make important contributions to the national economy and the economy of Queensland in particular.

2.2 These areas underpin regional tourism and the local fishing industry, as well as providing access for shipping to four major Queensland ports of Cairns, Townsville, Mackay and Gladstone. The consequences of a serious marine incident in Torres Strait or the GBR have the potential to damage both Australia's environmental and economic reputation, something which all those tasked with managing the delivery of safety outcomes within these particularly sensitive sea areas are acutely aware.

2.3 In addition to coastal pilotage there are a number of other ship safety and pollution mitigation measures in place to minimise the risks associated with commercial shipping using these sea areas. Some of these measures are preventive, others aid early detection and rapid response, but all are kept under regular review when assessing the likelihood of a serious incident.

2.4 Whilst coastal pilotage is important, it should not be considered in isolation, but rather as part of an integrated approach to managing ship safety in Torres Strait and the GBR to be viewed in combination with all the other measures listed at Appendix 7.

Queensland Coastal Pilotage

2.5 By way of more detailed background explanation, the coastal pilotage area along the Queensland coast falls into three areas:

- Torres Strait extends from Booby Island in the west to Bramble Cay in the east and includes the Prince of Wales Channel and the Great North East Channel. Since October 2006, ships are required to take a pilot in line with IMO resolution MEPC.133(53).

- The northern inner route through the Great Barrier Reef from Cape York to Cairns, the Whitsunday Islands and Hydrographers Passage. Since October 1991, compulsory pilotage has applied to the inner route and Hydrographers Passage, as per IMO resolution MEPC.45(30).

- The inner route from Cairns to the southern limit of the Great Barrier Reef, including Grafton and Palm Passages, has no mandatory pilotage, but AMSA and Maritime Safety Queensland currently recommend ships should use a licensed pilot if unfamiliar with these waters.

2.6 Torres Strait, including the Great North East Channel, is used primarily by ships trading between ports in southern Asia, Australia and New Zealand, South America, Papua New Guinea and Pacific Island nations.

2.7 The majority of tankers bound for the Australian east coast refineries also use the Torres Strait as their link with the outer route of the GBR. Ships entering or leaving the inner route of the GBR also use the Prince of Wales Channel at the western end of the Torres Strait.

2.8 During a year, over 1000 different ships use the Torres Strait making a total of more than 3,000 separate voyages. There also are over 400 recreational vessels greater than 10 metres in overall length registered with the Torres Strait Council and a large number of licensed fishing vessels and traditional fishing craft existing outside this category that operate in Torres Strait waters.

2.9 The last grounding incident within the GBR investigated by the Australian Transport Safety Bureau involving a ship under pilotage was that of the bulk carrier *Doric Chariot* on Piper Reef that occurred on 29 July 2002. The last reported grounding in Torres Strait was of the bulk carrier *Agean Falcon* in September 2002. This ship was not carying a pilot at the time.

2.10 Appendix 10 identifies the number of incidents in the Torres Strait and GBR reported to the ATSB from 1993 to the present where there was a pilot on board. It indicates that the rate of incidents reported to the ATSB has fallen significantly over this period. Thus, there were 6 incidents from 1993-1996, 5 from 1997-2000, 3 from 2001-2004, and 2 from 2004 to the present

2.11 There is no pilotage requirement on the outer route of the Great Barrier Reef, commencing at the Great North East Channel and continuing south through the Coral Sea to rejoin the Queensland coast south of Gladstone. No licensed commercial pilotage services are provided to ships on the outer route as it is not regarded as navigationally challenging and lies within international waters. The 'outer route' of the Great Barrier Reef transits the Coral Sea between the eastern end of the Great North Channel and an area south of Gladstone, Queensland.

2.12 Following the introduction of the GBR compulsory pilotage areas in 1991, the Queensland Government asked the Australian Commonwealth Government to take over the regulation of the pilotage function. In July 1993, the Australian Maritime Safety Authority (AMSA) assumed responsibility for regulating the Queensland coastal pilotage services that provide navigational guidance to ships voyaging through the GBR and Torres Strait region.

2.13 Under Queensland control, the service had been effectively a statutory monopoly operated by a single provider, Queensland Coast and Torres Strait Pilot Service, and closely governed by State legislation and regulations. Individual coastal pilots were self employed and responsible to the Marine Board of Queensland, which licensed the pilots and appointed the secretaries who managed the infrastructure and the bookings for pilots. The pilots owned the principal assets, the pilot boats and accommodation at the pilot stations.

2.14 In line with contemporary Commonwealth regulatory and microeconomic reform policies aimed at encouraging market efficiency and flexibility, stakeholders agreed that AMSA should only regulate pilot licensing and the safety of pilotage operations. There would be no regulation of the commercial

aspects of pilotage services, such as the number of pilots, their recruitment, terms and conditions of pilot employment, pilotage fees, provision of infrastructure and/or administration of the pilotage service.

2.15 The intention of this approach was to create a more open and competitive market with pilotage licences becoming more accessible with setting of pilotage fees determined by the market.

Commonwealth Legislation

2.16 AMSA's licensing arrangements meant that any person could be licensed as a pilot provided they met minimum competency and medical fitness standards. AMSA also established a coastal pilotage training program and a *Model Code of Conduct for Coastal Pilots*.

2.17 Initially, AMSA recognised the licences already granted by Queensland to the coastal pilots as a transitional measure in introducing its own system of licensing, training and safety regulation.

2.18 In 1994, amendments were made to the *Navigation Act 1912* to add a new Part IIIA (sections 186A to 186F) to allow AMSA to regulate the licensing of coastal pilots and the safe performance of coastal pilotage. While expressed as applying to "any part of the Australian coastal sea", in practice, the licensing of coastal pilots under Part IIIA has been limited to the Torres Strait and GBR region since its introduction.

2.19 Part IIIA allowed for AMSA to make regulations in relation to coastal pilotage services and these are covered in Marine Orders Part 54 *Coastal Pilotage*. Initially this applied only to the licensing of coastal pilots, but it has been expanded subsequently to include the *Queensland Coastal Pilotage Safety Management Code*. This adopts a modern safety management systems approach to safety regulation involving both the coastal pilots and the pilotage providers.

Service Providers

2.20 Before AMSA assumed responsibility for regulating coastal pilotage on 1 July 1993, there had emerged two competing pilotage service providers through a split in the monopoly provider, Queensland Coast and Torres Strait Pilot Service.

2.21 Queensland Coastal Pilot Service Pty Ltd (now known as Torres Pilots Pty Ltd) evolved from the previous service with a small number of its pilots. Those pilots remaining established a second provider, Queensland Coast and Torres Strait Pilot Association Pty Ltd, now known as Australian Reef Pilots Ltd. Pilotage services for the inner route is an effective duopoly.

2.22 Individually, pilots continued to offer their services, generally through private personal companies as contractors to either of these pilotage service providers. The providers act as booking agents for the pilots' services and accept a commission or fee from the pilot based on a percentage of the pilotage fee or an agreed payment under the contract.

2.23 In July 1996, a third group was formed, Hydro Pilots Australia Pty Ltd, by three coastal pilots providing their own infrastructure and only servicing ships using Hydrographers Passage through helicopter transfers.

2.24 The level of competition between the providers led to an initial reduction of some 20% in pilotage fees and this commercial tension between the three provider companies remains to this day.

2.25 In response to the Issues Paper, the Service Providers, supported by some shipping industries, maintained that the current competition model delivered a safe pilotage service and stressed the potential negative impact that any change to the current system would have on their current investment in pilotage boats, helicopter assets and other service infrastructure

Coastal Pilots

2.26 There has been a consistent view put forward by coastal pilots and their representative organisations that economic regulation rather than competition would better protect the public interest in ensuring optimum safety in the provision of coastal pilotage services.

2.27 Economic regulation was seen as a way of maximising the focus on safety and avoiding duplication of capital expenses on supporting infrastructure, whilst enhancing regulatory oversight.

2.28 The pilots argue that Australian coastal pilotage has some unique features given there is only a small pool of coastal pilots operating in remote locations and over lengthy distances. They maintain that other countries have not deregulated their pilot services to the same extent and in general regard pilotage as a public service that should be regulated by Government.

2.29 The pilots claim that while Australian pilot productivity is high by world standards, competition has reduced the capacity of pilotage providers to fund capital replacement and the decrease in average pilot incomes since deregulation has increased difficulties in attracting new entrants to join what is an ageing pool of qualified pilots.

2.30 A number of independent reviews and inquiries in relation to ship safety have included examination of these concerns, see Appendix 8, but no evidence has been found to date that the competitive environment has adversely affected safety outcomes. A number of recommendations have been made to strengthen the safety regulatory regime, most of which have been implemented by AMSA.

2.31 Despite these reviews and resulting strengthened regulatory requirements, perceptions remain that the current structural arrangements continue to exacerbate the development of a safety culture in the coastal pilotage sector and impose greater complexity on the introduction of innovative and improved services, such as the adoption of under keel clearance management systems. It is also claimed that the current competition model has

had an impact on pilot salaries, job satisfaction and created new risk factors, particularly through recruitment policies.

McCoy Review

2.32 The last independent review of the coastal pilotage arrangements undertaken by Captain John McCoy in 2005 found that a "safety culture should be pervasive throughout the organisation and at all levels" and that "a safety management system should operate from the board room to the bridge of the ship". However, he noted that this adoption of a safety culture was not as clear in terms of the activities of the pilotage providers.

2.33 Captain McCoy concluded that whilst the conduct of pilotage operations was not *prima facie* unsafe, there were significant gaps in the safety management systems at both the organisational and operational levels.

2.34 There still appears to be a wider view that commercial pressure on coastal pilots may contribute to mitigating their identification of safety improvements and optimisation of safety practices, especially if these impinge on their ability to maximise the number of ships piloted and so maintain continuity of income.

Under Keel Clearance

2.35 AMSA has been considering the introduction of under keel clearance (UKC) management in Torres Strait as an additional tool to help improve safety practices. The overall expectation is that UKC would increase safety for deep draught vesel transits, enhance protection of the environment and at the same time, enable significant cost efficiencies and ultimately have a positive impact on the Australian economy.

2.36 In general terms the management of UKC takes into account a number of hydrodynamic, hydrographic, meteorological and oceanographic (met-ocean) factors, including:

- A best estimate of actual water depth;
- Tidal height residuals and charted depth accuracies;
- A best estimate of the actual draught of the vessel;
- Squat and additional factors related to hydrodynamic and manoeuvring characteristics; and
- Allowance for other component data eror estimates.

2.37 There are some components of UKC management, such as long term transit planning relying on UKC predictions, short term planning to provide passage plans using predictions that are then refined with the latest measurements of tide and meteorological conditions; and the actual transit itself, all of which may require the use of sophisticated portable computing equipment by pilots using real time met-ocean data inputs.

2.38 Predictive and real time UKC management has led to the more efficient use of fairways with limited depths, particularly in the approaches to and within ports, reducing the risk of grounding whilst allowing ships to lift additional cargo.

2.39 The introduction of pilotage in Torres Strait led AMSA to consider UKC management as a means of ensuring safer UKC allowances and more efficent use of available water depths, although actual experience of its use in comparable open and navigationally challenging waters is limited.

2.40 Ships transiting Torres Strait are currently limited to a maximum draught of 12.2 metres in conjunction with a 1 metre net UKC for draughts less than 11.9 metres; and a minimum net UKC of 10 per cent of draught for draughts of 11.9 metres or more. This requirement is contained in the *Pilot Code of Conduct* approved under *Marine Order Part 54.*

2.41 It has been noted that the shipping industry stands to gain from improved efficiencies in the event that any new UKC management arrangements enable draughts to be increased as tidal and other met-ocean conditions permit.

2.42 Conversely, it is anticipated that a more formal and systematic approach to the management of UKC would result in there being some days of the year when ships may not be able to transit Torres Strait with a draught of 12.2 metres. This is due to the accuracy of the depths currently shown on the nautical charts, although this should be overcome over time with the completion of more accurate hydrographic surveys.

2.43 Recent consultations with immediate stakeholders on the governance framework for UKC management in Torres Strait have highlighted the variables in its application mentioned above. In doing so, concerns have been raised over the potential to adequately regulate safety risks associated with the commercial provision of UKC services under the existing coastal pilotage service delivery arrangements.

Establishment of the Review

2.44 Consequently on 2 July 2008, AMSA and the Department of Infrastructure, Transport, Regional Development and Local Government commenced stakeholder consultations on the potential support for reviewing the current open competition model for provision of pilotage services in the Torres Strait and the GBR.

2.45 A discussion paper (see Appendix 2) was released to stakeholders describing the issues steming from the current arrangements and raising the possibility of progressing to a serial competition model using a single service provider, with written submissions being sought on its contents.

2.46 The remainder of this report documents the examination of these submissions and makes recommendations on future options for the delivery of coastal pilotage services in Torres Strait and the GBR.

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3. Conduct of the Review

3.1 The Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government and the Australian Maritime Safety Authority (AMSA) publicly announced this review of the delivery of coastal pilotage services in the Torres Strait and the Great Barrier Reef (GBR) Issues paper through a media release (see Appendix 1) on 2 July 2008.

3.2 The review was commissioned in light of issues raised about the current service delivery arrangements; including their ability to accommodate the introduction of the use of under keel clearance (UKC) management to assist with ship navigation and potentially increase cargo carrying capacity through Torres Strait.

3.3 A paper highlighting these issues and suggesting an alternative service delivery option was prepared for the purpose of initiating preliminary discussions, as well as providing a framework to assist interested stakeholders in making written submissions (see Appendix 2).

3.4 During the first two weeks of July, senior AMSA representatives met with Torres Strait and GBR service providers, coastal pilots, shipowner/operator organisations and the Queensland State Government to discuss the contents of this paper and encourage written submissions to the review.

3.5 Meanwhile a suitably qualified and experienced panel (see Appendix 5) was selected to examine and report on submissions received against formal terms of reference prepared by AMSA and the Department (see Appendix 4).

3.6 19 submissions were received before the closing date of 8 August 2008 (see Appendix 3) and these were provided to panel members prior to them meeting face to face to consider the documents on 3 and 4 September.

3.7 The agenda for this meeting is shown at Appendix 6. After the welcome and introductions, a short presentation was given on the background to the review, including much of the information contained in section 2 of this report.

3.8 The terms of reference (see Appendix 4) and panel's modus operandi were then discussed. It was noted that when analysing the contents of each submission, particular attention was to be paid to the need for the panel to focus on the delivery of pilotage services; and the evaluation of existing and alternative options in terms of their ability to:

- deliver safety outcomes;
- protect the marine environment;
- take account of relevant local, national and international interests;
- make use of human resources, infrastructure and other necessary resources, including contemporary technological developments;
- contain costs to shipowners/operators;
- interact with other regional shipping safety arrangements;
- provide cost-effective pilotage services; and
- be consistent with general competition policy principles

3.9 It was agreed that first the key issues contained in each submission should be identified and listed. Each listed issue relating to service delivery was then to be considered separately; and from this process alternative options, including the serial competition model initially suggested in the issues paper, be carefully examined.

3.10 Following on from developing these options, the listed issues were then to be subjected to further analysis against the dot points at 3.8 above in a bid to determine the potential impact of each service delivery option considered. It was envisaged that taking this approach would help hone in on both the benefits and disadvantages of each of these options and assist in making recommendations to be included in the panel's report.

3.11 As this process got under way, it became clear that some of the safety concerns that led to this review had not been fully explored in the original issues paper and the panel sought further details from its AMSA members. This information is now provided in section 4 of this report.

3.12 During the identification and listing of the key issues contained in the submissions, it was agreed that the introduction of under keel clearance (UKC) management in Torres Strait should be treated as a separate matter from the delivery of pilotage services. Accordingly the outcomes and recommendations from the panel relating to service delivery are dealt with under section 6 and those concerning UKC management in section 7, whilst other relevant matters that arose from the submissions on which the panel reached a view are detailed in section 8 of the report.

3.13 The completed report has since been provided to AMSA and the Department to assist in developing future policy initiatives to enhance the safe management of shipping in the Great Barrier Reef and Torres Strait.

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4. Safety Issues

4.1 The panel recognised in considering the submissions that one of the main concerns relating to the commissioning of this review was that the safety issues that led to it had not been fully explored in the original issues paper (see Appendix 2).

4.2 In considering both the delivery of safe outcomes and the marine environment issue, the Panel noted the assertions made by some of the submissions supporting change that despite the absence of any reported incidents in the pilotage area, there were incidents not reported. The Panel sought clarification of these claims. It became apparent that there was anecdotal accounts of breaches of the existing Marine Order, which, if substantiated, created a potentially unacceptable risk to safety and the environment.

4.3 The panel agreed that examining this matter further should be its initial priority and sought further details from its members representing the Australian Maritime Safety Authority (AMSA).

4.4 The AMSA view is that existing arrangements for the provision of pilotage services within the Great Barrier Reef (GBR) and Torres Strait have led to competition between providers to an extent that could undermine shipping safety and put the marine environment in this pristine area at increased risk if continued unchecked.

4.5 AMSA as the responsible regulator observed that the adoption of a safety culture of continuous improvement by all those operating within this particular sector of the Australian maritime industry is proving to be elusive and suggested it may be unattainable under the present service delivery model.

4.6 A number of concerns were raised in support of this conclusion, but the panel noted that objective verification may not be available in every case.

4.7 Panel members expressed appreciation for being provided with these examples as additional background to the establishment of this review, but in doing so recognised that they had no authority under their terms of reference to compel the supply of objective information relevant to the issues raised (such information is required by AMSA under MO54).

4.8 The idea of a third party audit of pilotage providers was canvassed as a mechanism for independently verifying these AMSA concerns, whilst it was also suggested that some thought might need to be given to alerting the wider shipping industry regarding these examples, possibly associated with the introduction of some form of confidential reporting system to help highlight procedural failures with a view to minimising them in future.

4.9 This led to considerable discussion about the ability of AMSA to effectively manage the current situation through the application of the sanctions and measures available under Marine Order Part 54 *Coastal Pilotage*. The overall conclusion was that they are rather limited in both their scope and effect

at present and might benefit from amendment to enable a wider range of both sanctions and incentive measures operating at differing levels to be applied, especially in the case of the service providers.

4.10 The panel also acknowledged however that whilst increasing sanction options might improve regulatory compliance, it may take some time to have any measurable impact on helping to develop a culture of continuous safety improvement by all parties involved.

4.11 Consequently AMSA was asked to provide guidance on changes to Marine Order Part 54 that would assist in better managing the type of examples mentioned at 4.5 above and this information is given at Appendix 9.

Recommendation 1

That the sanctions and measures available to AMSA under Marine Order Part 54 to manage coastal pilotage be amended to improve their effectiveness in dealing with procedural breaches that have the potential to put ship safety at risk.

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5. Submission Issues

5.1 Having learnt more about the safety issues that had led to the commissioning of this review, the panel then turned its attention to examining the 19 submissions received (see Appendix 3).

5.2 Its first task was to identify and list the key issues contained in each one, a process that generated considerable discussion on the matters raised. The panel members noted the generally high quality of the submissions and would like to record their thanks to all who responded to the issues paper.

5.3 Suffice to say that similar issues were raised in a number of submissions, albeit in a variety of different ways, so for the sake of brevity, each of these has been listed and described in broadly generic fashion under three headings, as follows:

5.4 ***Service Delivery Issues***

- The current service arrangements provide a safe pilotage system while meeting the Government's competition policy
- Duplication of pilot transfer infrastructure
- Maintenance of pilot transfer infrastructure
- Cost pressures on training
- Inconsistencies in pilot recruitment and training practices between providers
- Lack of standardised operating procedures between both pilots and providers
- Improved regulation in preference to changing the model
- Division of responsibilities between the pilot and provider is unclear
- Model should be based on capacity to deliver reduction of risk and improvement in safety, not commercial benefit
- Pilotage fees should be negotiated in a competitive environment
- Service delivery and UKC should be treated separately
- Regulator should set and monitor the service standard, user should ensure it is consistently met
- Service delivery in Hydrographers Passage could be separated from that in the GBR and Torres Strait
- Serial competition eventually leads to monopolistic behaviour – competitive tension is healthy and open competition should be encouraged
- Adequacy of current regulatory control and associated audit regime
- No evidence present current delivery has contributed to an increasing incident rate

5.5 ***Under Keel Clearance (UKC) Issues***

- Improvement of supply chain performance

- Alignment with use of UKC by some Queensland ports
- UKC is an aid to navigation, use should be monitored through *ReefVTS* and complement existing risk mitigation measures, see Appendix 7
- Commercial benefits of UKC come before safety benefits in Torres Strait
- Differences in approach to introduction and use of UKC management
- A single system is needed now in Torres Strait
- Need for clear delineation of different roles and responsibilities of master/pilot/provider/VTS/regulator when UKC management system is in place and operating
- Reliability of UKC management systems – alternative arrangements including duplication and redundancy in case of failure
- Costs of UKC management system should be shared between AMSA, Queensland and GBR Marine Park Authority

5.6 ***Other Issues***

- Transition to (and implementation of) any changed arrangements
- The use of "notice of cause" letters to pilots, rather than masters and shipowners tends to "hide" safety issues
- Tensions between pilots and providers over nautical and technical issues
- Unprofessional working relationships between individual pilots
- Inappropriate use of pilots' accommodation and associated impact on fatigue management
- Inability of AMSA to obtain consensus and/or consistency across a fragmented constituency
- Need for a pilot training regime that includes English language skills and is approved under legislation
- Ageing pilotage skills base
- Extension of compulsory pilotage within the GBR
- Incident reporting should be more effectively enforced
- Potential for service provider "exit assistance"
- Introduction of a "just" culture between all parties

5.7 The panel agreed that most of these issues are interlinked to some extent and many are the by-product of cause and effect from either the coastal pilotage service delivery arrangements, the dynamics between the players, or aspects associated with regional geography.

5.8 It was also noted that in general the applicable regulatory requirements appear to be being met and that the providers had made significant investments in transfer equipment and associated infrastructure since the current service delivery model was first introduced.

5.9 Whilst some may have argued that the lack of a major shipping incident in either Torres Strait or GBR for more than five years indicates that the service delivery system is operating satisfactorily, the panel took the view that when considered in light of the safety issues mentioned in section 4 of this report, the

system does appear to be under pressure. The panel noted and discussed the submissions in favour of maintaining the current arrangement, noting the absence of any shipping incident since the *Doric Chariot* grounding in July 2002. Although this was cited as evidence of a satisfactory delivery of safe pilotage services, the panel was concerned that the safety outcomes outlined in 4.5 of this report was prima facie evidence of latent risks and a flawed safety culture. It also had to be recognised that the proposed dynamic UKC program, while potentially reducing the risk in some areas, increases the risk in respect of occasions when the draught may exceed 12.2m.

5.10 Whilst the introduction of improved compliance and enforcement strategies in conjunction with amendments to Marine Order Part 54, see Recommendation 1, might help reduce this pressure, it was the opinion of the panel that the contractual employment arrangements of the pilots (see section 2 – Background) do not always contribute to the promotion of a sense of collegiate responsibility for improving safety outcomes amongst both pilots and service providers operating in these environmentally sensitive waters.

5.11 From this standpoint, the panel decided that the focus of its further work under the terms of reference in considering other options for service delivery should be to mitigate the risks stemming from the current arrangements and particularly those relating to the human element.

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6. Service Delivery

6.1 In turning its attention to options for service delivery, the panel took particular note of the issues raised in sections 4 and 5 of this report and in doing so re-confirmed its decision to focus on the human element when contemplating the terms of reference applicable to this task.

6.2 The relevant terms of reference are re-stated below:

- deliver safety outcomes
- protect the marine environment
- take account of relevant local, national and international interests
- make use of human resources, infrastructure and other necessary resources, including contemporary technological developments
- contain costs to shipowners/operators
- interact with other regional shipping safety arrangements
- provide cost-effective pilotage services
- be consistent with general competition policy principles.

6.3 Having considered the options, the panel was to identify and assess the risks attendant in each case, together with any associated regulatory changes that may be required.

6.4 The service delivery models identified by the Panel and considered against the terms of reference (see above) were:

- open competition (status quo)
- status quo initially with staged regulatory change
- single provider/serial competition under contractual arrangement
- AMSA/cooperative/employment of pilots with providers supplying necessary infrastructure (contract employment)
- national coastal pilotage system under AMSA/MSQ control (direct employment; infrastructure supplied by providers).

6.5 This panel began by examining the existing open competition model for the delivery of coastal pilotage services in the Great Barrier Reef (GBR) and Torres Strait, drawing on its earlier discussion of the safety issues arising as contained in section 4 of this report.

6.6 There was broad agreement that the current situation required attention and that improved compliance, enforcement and incentive strategies, supported by appropriate changes to Marine Order Part 54 *Coastal Pilotage* as already proposed in Recommendation 1 should be introduced as promptly as the associated consultation and amendment process would allow.

6.7 In suggesting such enhancements to the existing model, the panel acknowledged that whilst these strategies may improve regulatory compliance,

they may take some time to have any measurable impact on the development of a culture of continuous safety improvement amongst all parties involved.

6.8 The panel also noted that the way in which the associated consultation and implementation processes was managed would have a bearing on the outcome and recommended that these changes be allowed to flow through the existing service delivery arrangements for a period of time and their impact reviewed, before any further proposals to implement a new model were contemplated.

6.9 Nevertheless in keeping with its terms of reference, the panel then moved on to consider the serial competition model as discussed in the issues paper prepared for the purpose of initiating the review consultation process and providing the basis for analysis of written submissions.

6.10 The panel recognised that whilst there might be safety benefits expected from this model, its initial establishment might prove to be administratively challenging. It was also noted that to continue to generate improvements, the pilotage activity would have to be tendered at regular intervals, however, the barriers to entry for a new service provider wishing to tender are severe and likely to be prohibitive. Under these circumstances, the model could be counter productive.

6.11 In addition, it would be reasonable to expect under this serial competition model for service delivery that all coastal pilots would be contracted to the initial single provider, making any subsequent transition to another provider who might win the contract problematic in terms of maintaining continuity of coastal pilotage services to the shipping industry.

6.12 The panel also noted that a number of submissions suggested that serial competition can lead to monopolistic behaviour and does not bring any guarantee of safety improvements, despite best endeavours in managing the accompanying contractual arrangements.

6.13 In light of these concerns the panel decided to examine other options rather than recommending any more consideration be given to the serial competition model suggested in the issues paper.

6.14 The panel then looked for delivery options other than those requiring individual pilots to generally offer their services as contractors to service providers and having the potential to help generate a greater sense of collegiate responsibility for improving safety outcomes.

6.15 Two versions of this model were proposed, the first and preferred being to set up a coastal pilots' cooperative, contracted by Government, with its costs and fee structure pre-determined in accordance with open and transparent criteria and subject to annual contractual review – provided such an approach is deemed acceptable under Government competition policy and supporting legislation.

6.16 Under this model, arrangements for pilot transfers, including boat and helicopter transfer services and associated shore based infrastructure would be

contracted by Government on the basis of open periodic tender using a number of different providers, each verified as capable of supplying the required service under the contract.

6.17 Requests for pilotage would be made to the cooperative who would arrange the pilot and associated transfer arrangements with the contracted provider and bill the ship afterwards. Payment would be made by the ship's agent to the cooperative based on the bill's two components, pilotage and transfer, with the cooperative keeping the pilotage payment and passing the transfer payment on to the nominated provider. An alternative would be to raise separate invoices with the cooperative and transfer provider paid directly for their services similar to the way towage and pilotage charges are dealt with in most ports.

6.18 The pilotage fee structure would be determined on a number of agreed criteria, such as ship length and tonnage, pilotage route, etc., together with an appropriate allocation to cover the cooperative's management and administration arrangements, with pilotage fees subject to annual review.

6.19 Such a model would allow for open competition between providers, much in keeping with existing arrangements, whilst reducing commercial pressure on the nautical element of pilotage in the Torres Strait and GBR that helps contribute to safe passage through these environmentally sensitive areas.

6.20 The second version of this model, should the pilots be unable to establish a cooperative as outlined above, would require the pilots to become salaried employees of Government. In other respects this model would operate in a similar manner to that already described for the cooperative, with the transfer and infrastructure providers contracted by Government.

6.21 Requests for pilotage would be made to directly to the relevant Government department or agency, who again would arrange the pilot and associated transfer arrangements with the contracted provider of the shipowner's choice and then bill the ship afterwards. Payment would be made by the ship's agent to Government based on the bill's two components, pilotage and transfer, with the Government retaining the pilotage payment and passing the transfer payment on to the nominated provider.

6.22 The panel noted however that before either of these two service delivery options could be given any further consideration they would have to be deemed acceptable under Government competition policy and supporting legislation, a matter in which the panel was not qualified to make a judgement.

6.23 If found acceptable, it was the panel's view that substantial amendments would be necessary to the underpinning statutory requirements and careful thought given to any transition process, together with associated costs and benefits in moving away from current service delivery arrangements.

Recommendation 2

That the effectiveness in delivering safety outcomes of the improved compliance, enforcement and incentive strategies associated with the changes recommended to Marine Order Part 54 *Coastal Pilotage* be reviewed 12 months after the revised MO54 comes into effect. If after 12 months, the safety concerns prompting this review have not been adequately addressed, new coastal pilotage service delivery arrangements will be introduced.

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7. Under Keel Clearance

7.1 The panel had previously agreed whilst identifying and listing the key issues contained in the submissions that the introduction of under keel clearance (UKC) management in Torres Strait should be treated as a separate matter from the delivery of pilotage services.

7.2 A detailed explanation of UKC management was provided by AMSA as background to assist the panel in assessing the use of this technology to assist in improving safety outcomes in this environmentally sensitive and ecologically significant area. (Section 2 – Background – Under Keel Clearance refers)

7.3 The panel recognised the potential of UKC management to ensure safer UKC allowances and the more efficient use of available water depths in Torres Strait, based on its introduction to ports having fairways where draught limitations apply. The panel consequently agreed that UKC management systems should be approached in the same way as any other aid to navigation.

7.4 The panel also noted that the margin for error when piloting deeper draught ships through Torres Strait was already minimal and practical experience of the use of UKC management in comparable open waters was limited. It also acknowledged that real time data inputs would be required, in addition to such basic information as accurate estimates of ships' draughts forward and aft whilst under pilotage.

7.5 In light of these observations panel members reached a collective view that a single UKC management system is required, selected through an open tender process. This tender process should comprehensively address not only system performance requirements and ongoing supplier support, but also ancillary matters such as duplication, redundancy and communications links in the event of failure of any one key part of the system.

7.6 Initial use should be on a trial basis only, especially given the limited margins for error, to help all parties involved develop the necessary experience and confidence in operating under a UKC management system in order to keep any associated safety risks to a minimum.

7.7 Improving the commercial benefits that may flow from allowing larger ships to transit Torres Strait at a deeper draught by using the system should be a secondary consideration to the maintenance of the overall safety of pilotage in the region, especially given the environmental and heritage significance of this waterway and the national and international attention that it receives.

7.8 It was also the panel's view that the UKC management system acquisition, operation and upkeep costs should shared between the Commonwealth and Queensland Governments, as the potential benefits would not be realised by all shipping interests required to pay the Navigation Levy.

Recommendation 3

That a single under keel clearance (UKC) management system for use in Torres Strait be selected through an open tender process.

7.9 The panel also concluded that in order to achieve the maximum safety benefit, consideration should be given to integrating the UKC system with the operations of *ReefVTS*, as part of its function as a navigational assistance service, as defined under IMO resolution A.857(20) *Guidelines for Vessel Traffic Services*, with a licensed pilot available to monitor use of the UKC system and associated activities of VTS operators at all times.

7.10 This *ReefVTS* based pilot would assume responsibility for assisting a ship's pilot by "talking them through" the Torres Strait transit in the event of failure of any critical part of the UKC management system.

Recommendation 4

That the UKC management system acquisition, operation and upkeep costs should be shared between the Commonwealth and Queensland Governments, as the potential benefits would not be realised by all shipping interests required to pay the Navigation Levy.

7.11 The panel also noted that the introduction and use of such a system would require close cooperation between the successful UKC management system tenderer, responsible Government agencies, the service providers and coastal pilots, all of which would assist in focussing the different operational working relationships on safety outcomes in Torres Strait.

Recommendation 5

That the UKC management system should be integrated with the operations of *ReefVTS*, as part of its function as a navigational assistance service, with a licensed pilot available to monitor use of the UKC system and associated activities of VTS operators at all times.

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8. Other Matters

8.1 Having considered the delivery of coastal pilotage services in the Great Barrier Reef (GBR) and Torres Strait, in keeping with its terms of reference, along with the introduction of under keel clearance (UKC) the panel re-examined the submissions received in light of the recommendations made.

8.2 Other relevant matters arising from the submissions on which the panel reached a view are detailed under:

Extending Compulsory Pilotage

8.3 The panel took note of the suggestion that the future increase in shipping traffic expected from the development of Abbot Point as a major Queensland coal exporting port could lead to the need to consider Palm Passage and potentially Grafton Passage as high risk areas that might benefit from a southerly extension to GBR compulsory pilotage from Cairns to Townsville.

8.4 The broad conclusion reached was that traffic numbers and navigational conduct in this area should continue to be monitored by *ReefVTS*, with a view to making a formal proposal to extend compulsory pilotage in this area to the AMSA Navigational Services Advisory Committee (NSAC) for consideration as soon as it appears to be warranted.

Pilot Recruitment and Retention

8.5 A number of submissions made reference to the challenges associated with the continuing recruitment and retention of coastal pilots. The majority of the panel saw this as part of a wider problem being experienced throughout the Australian maritime industry. Information received since indicates that a number of inquiries and reviews are considering different aspects of maritime recruitment, training and qualifications in bid to assist in this regard, including:

- The Parliament's House of Representatives Inquiry into Coastal Shipping Policy and Regulation;
- The Australian Maritime Safety Authority, through its review of marine qualifications from both a national and international perspective;
- The Australian Maritime Group that reports to the Australian Transport Council's Standing Committee on Transport; and
- A number of industry organisations are also understood to be examining these matters.

8.6 Given that the outcomes from a number of these inquiries and reviews are expected shortly and should bring further insight to the whole of the maritime industry's employment issues, it seemed premature for the panel to consider the recruitment and retention of coastal pilots separately at this time.

Pilots' Qualifications and Training

8.7 Some submissions commented on coastal pilots' entry level qualifications, including language skills, together with arrangements for ongoing training.

8.8 An AMSA panel representative advised that an entry level examination for coastal pilots, including the demonstration of English language skills, was being introduced to deal with any shortcomings that might have been noted previously in this regard. The panel accepted this information on the understanding that monitoring of the progress of individual pilots after passing this examination would show whether the process was satisfactory in helping to minimise any future concerns of this nature.

8.9 Looking at the ongoing training of coastal pilots, it was the conclusion of the panel that this issue was essentially one of cost and opportunity. It is understood that training costs are met through a levy on the pilotage service users included in the fee charged by the pilotage providers. It is then up to the provider to subsidise appropriate training opportunities for individual pilots from this levy.

8.10 The arrangements underpinning the ongoing training for coastal pilots are seen as being less than satisfactory by some pilots. The panel considered that whilst outside its immediate terms of reference, if this matter is not capable of being addressed during regular AMSA audits of the pilotage providers, then it should be taken up in the context of the review of Marine Order Part 54 already mentioned at Recommendation 1.

Ship Specific Safety Issues

8.11 Where submissions included ship specific incidents to illustrate possible safety issues for consideration, the panel took the broad approach that whilst helping to supply additional context to the matters under review, in general if a specific response was required or expected as result, then it should be addressed separately by AMSA as the responsible regulator; and not contained in the report of the panel.

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9. Conclusions

9.1 This report has been drafted to document the outcomes from the deliberations of the panel set up to examine submissions received on the delivery of coastal pilotage services in the Great Barrier Reef and Torres Strait.

9.2 It is the understanding of the panel that this is the first part of an extensive process of review and its recommendations may, or may not, be accepted by AMSA or the Department.

9.3 Additional rounds of consultation can be expected during the course of this process, as follows:

- If the recommendations are accepted and changes to the relevant statutory requirements are deemed to be required as a consequence, then a regulation impact statement (RIS) will have to be prepared in consultation with all affected parties, in keeping with guidance provided by the Office of Best Practice Regulation, see: http://www.finance.gov.au/obpr/proposal/ria-guidance.html

9.4 The panel agreed that the issues surrounding coastal pilotage services are complex and largely interlinked as a consequence of the method of delivery, the dynamics between the players and other aspects associated with regional geography and the history behind the current arrangements.

9.5 Accidents are random events that in a well operated safe system cannot be predicted. In the event of an accident, the flaws and latent failures within the system become all too apparent with hindsight. Although the current pilotage system has operated with apparent safety since July 2002, the issues identified at 4.5 are indicators of attitudes and behaviours that significantly increase risk.

9.6 AMSA has already proposed that any change to coastal pilotage service delivery arrangements should also be subject to review by an international expert to test compatibility with best practice in pilotage service delivery by other major maritime nations.

9.7 Nevertheless, the panel is pleased to present this report as a first step in the review process and hopes that its contents and recommendations will provide a firm basis for AMSA and the Department to consider the future delivery of coastal pilotage services in the Great Barrier Reef and Torres Strait.

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Appendices

Appendix 1 - AMSA Media Release 02 July 2008

Review of Coastal Pilotage Service Delivery in the Torres Strait and Great Barrier Reef

The Department and the Australian Maritime Safety Authority (AMSA) is reviewing the delivery of coastal pilotage services in the Torres Strait and Great Barrier Reef.

The Minister for Infrastructure, Transport, Regional Development and Local Government, the Hon Anthony Albanese MP has agreed to the review as part of the Australian Government's commitment to modernising the nation's transport system.

The review will be conducted in consultation with the shipping industry, pilotage service providers, coastal pilots and their representatives, government departments/ agencies and community interests in the Torres Strait and Great Barrier Reef.

Stakeholders have raised issues with the Minister about the current pilotage service delivery arrangements operating in the Torres Strait and Great Barrier Reef.

There also have been issues raised about the ability of the current system to accommodate the introduction of under keel clearance management systems assisting ship navigation and with the potential to improve cargo carrying capacity through the Torres Strait.

In view of these issues and the need to ensure the regulatory system can deal with future challenges, the Department and AMSA will investigate alternative models of service delivery for consideration by the Government.

Previous independent reviews of coastal pilotage regulation in the Torres Strait and Great Barrier Reef have commented upon its unique competitive situation compared to State and Territory Government arrangements for delivery of harbour pilotage in Australian ports.

Initial stakeholder consultations will commence in early July 2008.

An issues paper is available on the AMSA Internet site at http://www.amsa.gov.au/Shipping_Safety/Coastal_Pilotage/Coastal_Pilotage_Services.pdf to facilitate those discussions and also the making of written submissions by stakeholders.

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Appendix 2 - An Issues Paper for use in Consultation with Interested Stakeholders

Coastal Pilotage Services in the Torres Strait and Great Barrier Reef

Summary

This paper explores issues surrounding the current use of an open competition model for the provision of pilotage services in the Great Barrier Reef and Torres Strait. It considers the possibility of progressing to a serial competition model using a single service provider and has been prepared solely for the purpose of initial consultation and discussion with interested stakeholders. The Australian Government has not yet made any decisions on changes to the current regulatory approach.

1. Introduction

1.1 The present open competition model for the provision of pilotage services in the Great Barrier Reef (GBR) and Torres Strait has been criticised by some stakeholders as not providing the optimal safety outcome for ships operating in some of Australia's most sensitive and biologically diverse marine environments.

1.2 This paper examines the safety related issues and potential associated risks and puts forward an alternative pilotage services model as one option to enhance the safety of shipping and environmental protection within this internationally recognised sea area.

2. Background

2.1 Until 1993, the licensing, operational administration and tariff structure of marine pilotage in the GBR and Torres Strait region was the responsibility of the Queensland Government and was operated as a statutory monopoly by the Queensland Marine Board.

2.2 When the Australian Government assumed responsibility from Queensland for regulating coastal pilotage, it adopted a policy that the pilot licensing system to be administered by the Australian Maritime Safety Authority (AMSA) was only for safety regulation and not to be used for managing service pricing.

2.3 Commercial aspects, such as pilot numbers and charges for pilotage, were to be and are currently determined by the market. The government no longer exercised control over these commercial aspects and private sector providers were solely responsible for delivery of coastal pilotage services.

2.4 In July 1993, AMSA assumed responsibility for the licensing and safety regulation of all Australian coastal pilotage services, although these services are presently only required in the GBR and Torres Strait. The relevant statutory requirements are contained in the *Navigation Act 1912* and Marine Orders Part

54 *Coastal Pilotage*(1). The Marine Order includes the Queensland Pilotage Safety Management Code and details of the Torres Strait Pilotage Area.

2.5 Two competing providers emerged from the former statutory monopoly, with a later third competitor only servicing those ships using Hydrographers Passage. Detailed information on pilotage requirements and services within the GBR and Torres Strait region can be found in the annual list of Notices to Mariners published by the Australian Hydrographic Service(2).

2.6 Competition between the providers initially resulted in a reduction in the cost of coastal pilotage to the shipping industry. However, some stakeholders also raised concern that internationally pilotage services were not provided competitively and a high level of competition could potentially impact on the safety of services.

2.7 A number of reviews of coastal pilotage have commented upon the level of competition between coastal pilotage providers. The latest review, *AMSA Coastal Pilotage Regulation Review*(3) was published in 2006.

2.8 This independent review noted that safety regulatory regime for coastal pilotage "contain the most comprehensive system of safety regulation of pilotage by a regulator in Australia". The review also suggested that the existing competitive environment presented difficulties for AMSA, as the safety regulator, in applying the requirements of Marine Orders Part 54 to the three commercial pilotage service providers to deliver identical safety outcomes in each case.

2.9 Some of these difficulties have been identified as stemming from:

- the relationships between the pilotage service providers;
- the relationships between pilots contracted by different providers;
- the relationships between the pilots and providers;
- the requirements for pilot training;
- the need for duplicated infrastructure;
- the daily competition for a limited number of ships; and
- the difficulty in developing an overall safety culture.

3. Technological developments

3.1 As part of its statutory responsibilities for ship safety, AMSA stipulates a maximum draught (12.2 metres) and minimum net Under Keel Clearance (UKC) for all commercial shipping transiting Torres Strait(4).

3.2 UKC is the distance between the keel of a ship and the seabed required to ensure safe navigation and avoid grounding, which could potentially place seafarers at risk and lead to a significant pollution incident.

3.3 Developments in technology have led to the introduction of predictive and real time UKC management systems in some ports, leading to the more efficient use of approach fairways with limited depths.

3.4 In general terms UKC management relies on a combination of hydrodynamic, hydrographic, meteorological and oceanographic (met-ocean) data and may require pilots to employ sophisticated portable computing equipment with real time data inputs, especially in the case of more open waters.

3.5 A recent study(5) commissioned by AMSA from Thompson Clarke Shipping found that the introduction of a UKC management system should improve knowledge about actual navigational safety margins, potentially enabling ships with draughts greater than 12.2 metres to transit Torres Strait when particular tidal and met-ocean conditions permit.

3.6 A preliminary estimate of the total anticipated economic benefit from such a system to affected ship owner/operators would be from around A$10 million to A$13 million per year, whilst set up and running costs remain to be fully determined depending upon the system chosen and its method of implementation and delivery.

3.7 AMSA has been engaged with stakeholders over the introduction of a UKC management system for Torres Strait. An advisory committee has been established to help decide the most appropriate delivery model and associated governance arrangements(6). Advisory committee members have raised issues concerning the potential to regulate safety risks in the commercial provision of UKC services under the current competitive coastal pilotage regime.

4. Possible Alternative Model of Service Delivery

4.1 The GBR and Torres Strait pilotage services are the only pilotage regime in Australia that operates in an openly competitive environment. By way of comparison Australian ports function with a single pilotage provider.

4.2 In February 2008 the National Transport Commission briefed the Australian Transport Council on *National Transport Policy Framework – a New Beginning*(7). This document contains several broad references to the types of issues already mentioned concerning pilotage services, including the need to focus on wage payment methods and workplace conditions to bring about better transport system safety, as well as improving protection for the environment.

4.3 In line with wanting to ensure the robustness of the regulatory system to deal with future challenges, the Department of Infrastructure, Transport, Regional Development and Local Government and AMSA are investigating alternative models of service delivery to address the issues identified in previous reviews. This issues paper looks at the possibility of one such option, that being a serial competition model using a single service provider to replace the existing open competition model for the provision of pilotage services in the GBR and Torres Strait.

4.4 This model would involve in general terms a periodic tender process for a single provider of pilotage services, in a similar manner to many Australian ports. Pilotage fees to be charged by the successful tenderer would be a factor to be considered in the tender evaluation process, along with a number of other key criteria such as the provision of appropriate training, safety and

environmental management, infrastructure and pilotage equipment, as well as the use of technological advances, such as a UKC management system.

4.5 The potential benefits of changing the service provision arrangements to a serial competition model include:

- improving the relationships between individual pilots, as a single provider allocating ships should help reduce any perception of commercial influence on the choice of pilot to undertake a particular pilotage task
- stabilising and strengthening over time the relationship between the pilots and the single provider;
- preventing the financial penalisation of pilots for refusing pilotage to substandard vessels;
- ensuring requirements for consistent pilot training and associated funding could be clearly stated in the contract; and
- reducing the need for duplicated infrastructure and daily competition for a limited number of ships.

The relationships between pilotage service providers would be formalised by using comprehensive transition planning within the tender process to cover the start and end of each contract period.

4.6 Contract management would be underpinned by an audit regime and include suitable incentives for the introduction of continuous improvement initiatives, whilst enhanced mechanisms for ensuring compliance will provide the necessary assurance that essential performance requirements are consistently met.

4.7 The serial competition single provider model also has the potential to generate a number of associated benefits for key players who may wish to take advantage of the opportunities presented if this path were to be followed, for example:

- expansion and/or consolidation options for existing service providers;
- greater pricing certainty for ship owner/operators using the service; and
- more stable employment conditions for pilots in the longer term.

5. Next Steps

5.1 This issues paper has been prepared for the purposes of initial consultation with interested stakeholders.

5.2 It is intended that key stakeholders, including representatives of the pilotage providers, pilots and affected Torres Strait Islander communities and ship owner/operators will be consulted individually, together with other interested parties, including relevant Australian and State Government departments and agencies.

5.3 Feedback from this initial consultation will be collated and analysed before any proposed changes are progressed and these will be accompanied by further consultations with interested stakeholders, including the preparation of a detailed regulation impact assessment for any significant proposed changes.

July 2008

References

(1) Marine Orders Part 54 "Coastal Pilotage", see:
http://www.amsa.gov.au/shipping_safety/marine_orders/Marine_Orders_currently_in_force.asp

(2) Annual Australian Notices to Mariners in force on 1 January 2008, numbers 10C, 21 and 23, see http://www.hydro.gov.au/n2m/notices.htm

(3) AMSA Coastal Pilotage Regulation Review, Captain John McCoy, December 2005, see:
http://www.amsa.gov.au/Shipping_Safety/Coastal_Pilotage/

(4) AMSA Marine Notice 23/2007 Draught Limitation in Torres Strait, see:
http://www.amsa.gov.au/Shipping_Safety/Marine_Notices/2007/23-2007.asp

(5) Under Keel Clearance – Final Thompson Clarke Shipping Report, see:
http://www.amsa.gov.au/Shipping_Safety/Great_Barrier_Reef_and_Torres_Strait/Under_Keel_Clearance_management.asp

(6) Public Brief on Torres Strait UKC Governance Arrangements, see:
http://www.amsa.gov.au/Shipping_Safety/Great_Barrier_Reef_and_Torres_Strait/Under_Keel_Clearance_management.asp

(7) National Transport Policy Framework – A New Beginning, see:
http://www.ntc.gov.au/DocView.aspx?page=A02216506300390020

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Appendix 3 - List of Submissions

To be provided subject to consent from authors.

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Appendix 4 - GBR and Torres Strait Pilotage Review Panel

Terms of Reference

The Australian Maritime Safety Authority (AMSA) and the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government are reviewing the delivery of coastal pilotage services in the Great Barrier Reef (GBR) and the Torres Strait – see Appendix 1.

An issues paper has been prepared to facilitate initial discussion and assist in the provision of written submissions by interested stakeholders – see Appendix 2. Initial consultations with key stakeholders were held in July 2008.

A suitable qualified and experienced Panel has been set up to review submissions received and report on policy options for the future delivery of coastal pilotage services.

This panel has the following terms of reference:

1. Identify and advise on options for delivering coastal pilotage services in the GBR and Torres Strait, and evaluate each option in terms of its ability to:

    1.1 deliver safety outcomes;
    1.2 protect the marine environment;
    1.3 take account of relevant local, national and international interests;
    1.4 make use of human resources, infrastructure and other necessary resources, including contemporary technological developments;
    1.5 contain costs to shipowners/operators;
    1.6 interact with other regional shipping safety arrangements;
    1.7 provide cost-effective pilotage services; and
    1.8 be consistent with general competition policy principles.

2. Identify and assess the risks attendant to each option, and any associated regulatory changes that may be required.

3. When examining these matters, the Panel is to consider stakeholders' written submissions and feedback from consultations.

4. Make a report of the review to AMSA and the Department.

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Appendix 5 - Review Panel Members

To be provided subject to consent of Panel members.

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Appendix 6 - Coastal Pilotage Review Panel Canberra Meeting, 3-4 September 2008

Agenda

1. Welcome and introductions
2. Background to the review
3. Terms of reference and panel's modus operandi
4. Identification and listing of the issues contained in each submission
5. Consideration of the issues raised in submissions
6. Consideration of preferred model
7. Consideration of specific issues in light of preferred model
8. Summary of outcomes and close

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Appendix 7- Other Risk Mitigation Measures to Protect Torres Strait and the Great Barrier Reef

In addition to coastal pilotage, the Australian Maritime Safety Authority (AMSA), Maritime Safety Queensland (MSQ) and the Great Barrier Reef Marine Park Authority (GBRMPA) continue to cooperate in the development, implementation and review of a range of other risk mitigation measures employed in the Great Barrier Reef and Torres Strait to improve ship safety and environmental protection.

These preventive, monitoring and response measures include:

1. **Coastal Vessel Traffic Service (*REEFVTS*)** - a joint AMSA/MSQ service currently operating through a facility located near Mackay, Queensland. It uses modern communications and automated ship reporting technology to provide a near real-time traffic image of ships transiting the region.

The *REEFVTS* designated area extends from the Torres Strait and the Great North East Channel to include the waters of the Great Barrier Reef from Cape York southwards to the Capricorn Channel off the coast between Mackay and Gladstone. All ships of 50 metres or more in length and all oil tankers, liquefied gas carriers and chemical tankers regardless of length are required to supply a pre-entry report and route plan before entering the *REEFVTS* designated area. Ships then provide automated position reporting via Inmarsat C satellite system while transiting the area.

2. **Automatic Identification System (AIS)** - a shipboard broadcast transponder system that automatically exchanges data (such as identity, position, course, speed, and ship characteristics) with other ships and shore based facilities fitted with the system. AMSA has given priority to installing this system infrastructure in the Torres Strait and Great Barrier Reef to benefit from its potential to provide accurate data on ship movements and improve navigational safety.

AMSA has established base stations throughout the region, with the latest stations built in 2007 providing coverage of the Torres Strait's Great North East Channel, including sites at Dalrymple and Darnley Islands at its eastern limit; and the south of Cairns, including Hydrographers Passage. AMSA's work is complementing the rollout by Maritime Safety Queensland of base stations in all ports and some high traffic coastal sites.

3. **The AMSA National Aids to Navigation Network** - has more sites in Queensland waters than any other State or Territory due to the importance of assisting safe navigation in this regional area's hazardous waters. AMSA's Five Year Strategic Plan for Marine Aids to Navigation includes in its work program ongoing improvements to the aids to navigation network in the region.

In addition, met-ocean sensors are being established within the shipping route in Torres Strait to provide more accurate data on tidal heights, currents and tidal streams and wave movement along with improved communication systems to provide input in real-time to shipboard navigational systems, such as under keel clearance management systems.

4. **Electronic Navigation Charts** - for the entire Torres Strait and Great Barrier Reef region have been prepared by the Hydrographic Service of the Royal Australian Navy. These are required to provide input to modern Electronic Chart Display and Information Systems used for navigation on board most ships trading internationally.

5. **Differential Global Positioning System (DGPS)** - is a method of providing discrepancy corrections to the Global Positioning System (GPS) to improve positional accuracy to better than 10 metres (usually two to four metres in the case of AMSA DGPS stations). It also monitors the integrity of the GPS signal and warns users to disregard a satellite within seconds of it operating outside specification compared to some hours of such warnings through the GPS. AMSA has a network of 16 stations around the Australian coast, of which seven are located in Queensland providing coverage of the Queensland coast from Karumba in the Gulf of Carpentaria to south of Brisbane.

6. **Emergency Towage Services** - in the region have been established as part of the National Maritime Emergency Response Arrangements, with AMSA contracting the dedicated emergency towage vessel, *ETV Pacific Responder*, permanently operating in the northern Great Barrier Reef and the Torres Strait.

7. **National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances (the National Plan)** - is managed by AMSA. It coordinates the provision of oil and chemical pollution preparedness and response services, in consultation with State and Northern Territory Governments, port corporations and authorities, emergency services and the shipping, oil, exploration, and chemical industries. These services include response planning, training personnel, maintaining stockpiles of response equipment and conducting regular exercises testing the effectiveness of these arrangements.

The National Plan includes two specialised plans for the Torres Strait, *Marine Pollution Contingency Plan for Torres Strait* (TORRESPLAN) and the Great Barrier Reef, the *Marine Pollution Contingency Plan for the Great Barrier Reef* (REEFPLAN). The primary combat agency under these plans with operational responsibility to respond to ship-sourced marine pollution is the Queensland Government through the Queensland National Plan State Committee, with assistance from other National Plan stakeholders as required.
These special plans are regularly reviewed and tested by simulated oil or chemical pollution response exercises involving all interested parties in the region. Major stockpiles of response equipment are maintained at Townsville and Brisbane, with equipment also located at other major Queensland ports.

8. **International Convention for Prevention of Pollution by Ships** - specifically prohibits ship discharges in the Torres Strait and Great Barrier Reef.

9. **Torres Strait Marine Safety Program** - is a special program to strengthen the maritime safety culture in the Torres Strait aimed at reducing the high number of search and rescue incidents in the region.

AMSA is working with Maritime Safety Queensland and the Torres Strait community through the Torres Strait Regional Authority to develop and implement joint initiatives in three main areas: improving access to training and safe boating education across the Torres Strait, conducting a census and baseline survey to gain data on Torres Strait vessels, and expanding availability of safety equipment (including life jackets, flares and distress beacons).

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Appendix 8- Previous Reviews

Since 1993, there have been several reviews of the safety regulation of the coastal pilotage service, as follows:

1993 Prices Surveillance Authority Inquiry

During consultations with stakeholders in early 1993, users of coastal pilotage services expressed concern at Queensland's existing level of coastal pilotage fees and the ability of the single provider to exercise monopoly power in a deregulated environment. Both AMSA and the Queensland Department of Transport approached the Prices Surveillance Authority (PSA) to assess the current level and structure of coastal pilotage fees. The Australian Government also asked the PSA to conduct a formal inquiry into the appropriateness of the fees, the effect of the industry structure, regulation and barriers to entry on pricing and competition, as well as the need for the PSA to have an ongoing role in monitoring of pilotage fees.

In September 1993, the PSA report endorsed the "market approach" adopted by AMSA in only regulating pilot licensing. It concludes many users already benefited from a significant reduction in pilot charges (around 20%) and increased transparency, simplicity and negotiability of charges.

The PSA did not consider the provision of coastal pilotage services was a natural monopoly and the market was found to be quite contestable, as reflected in the emergence of two pilotage providers. It concluded that even if a monopoly provider should emerge in the future, the environment was still regarded as being contestable as coastal pilots had the choice of establishing their own agencies or being employed directly by larger ship operators. The PSA recognised some economies of scale in relation to pilot transfer services had been lost with the two providers establishing separate infrastructure leading to excess capacity. However, it foresaw future rationalisation over the longer term and that the pilot transfer market also appeared to be contestable.

The PSA analysis showed that the reduction in pilotage fees had been accompanied by a decline in pilot earnings, but the PSA concluded that pilot incomes before 1 July 1993 reflected monopoly power inherent in the previous arrangements.

1994 Crone Review

During 1993, there was considerable concern expressed by Australian Reef Pilots Ltd and its contracted coastal pilots and pilot representative organisations about the impact of the new regulatory arrangements on safety.

These concerns centred on the impact on pilot earnings of the "price war" between the two providers severely undercutting pilot fees; the providers' recruitment practices, which had increased the number of pilots from 44 to 57 further exacerbating the reduction in pilot earnings by reducing work opportunities; encouragement to retired pilots, some in their 70s, to return to pilotage work; the discriminatory allocation of pilotage work to individual pilots by the providers; and a claimed decline in professional standards and increased

risk of a shipping incident, with coastal pilots being stressed and seeking to work longer hours to improve their earning capacity.

In 1994, AMSA commissioned a former senior executive from the Department of Transport, Mr Patrick Crone, to conduct a review of the claims that the lack of commercial regulation compromised safety in the region. The review concluded that, provided effective safety audit and control mechanisms were in place, there was no evidence that the absence of direct commercial regulation posed a threat to the safety of the Great Barrier Reef and Torres Strait. It also found no evidence of a shortage of suitable applicants for coastal pilot licences.

1999 House of Representatives Standing Committee on Communications, Transport and the Arts Inquiry, *Beyond the Midnight Oil - Managing Fatigue in Transport*

In relation to marine pilotage, the report highlighted the importance of fatigue as a causal factor in maritime incidents, with the proportion of incidents attributable to marine pilot fatigue assessed as being in the range 10 to 25 per cent.

The report recommended the Australian Government should ensure national guidelines on marine pilotage standards should include coverage of fatigue management and it should impose a national regulatory regime to implement the guidelines if they were not adopted by the States and Territories. It also recommended that the AMSA model code of conduct for coastal pilotage should have the section on fatigue management expanded to specify the maximum duration of a pilot's tour of duty and length of rest break.

The submission to the inquiry by the Australian Marine Pilots' Association addressed the adverse impact of competition leading to marine pilots working longer hours and being subject to commercial pressures that may lead to a compromise in safety standards.

2000 Holden Review

In April 2000, a further independent review of safety measures in the Great Barrier Reef was commissioned by AMSA and Queensland Transport from three maritime experts, Captains Holden, Ross and Mansell, which included the examination of the coastal pilotage service.

The report found that both pilotage service providers, Torres Pilots and Australian Reef Pilots, were still operating in an intensively competitive environment that influenced their management and organisation practices and these may operate to the disadvantage and disincentive of the pilots.

The review found that the morale of pilots was considerably below that expected from self-employed, professional people. However, the third provider, Hydro Pilots, which was managed by the coastal pilots themselves, presented an enthusiastic and innovative team spirit. It concluded that, in principle, pilots raised little objection to an open, competitive market, provided they could access it through an efficient, level playing field.

Individual pilots also were concerned with the standards of transfer launches, including poor seaworthiness standards, equipment and safe operation. They also objected to predatory pricing practices considerably disadvantaging pilots and the duplication of transfer services. The safety and cost of helicopters also was raised. Pilots were fearful that reporting of unsafe conditions would lead to them being penalised by their service providers by a reduced allocation of pilotage work. Some pilots suggested there should be an open tender process for the provision of single pilotage transfer systems at each transfer location.

The review recommended that a competitive structure for the provision of safe pilotage and regulation that has minimal impact on commercial economic issues should remain the hallmark of coastal pilotage policy. It concluded that the two pilotage service providers were the primary source of competitive pressures on pilots and recommended greater regulation of the providers and improved training requirements for new recruits to address a perceived lack of experience and expertise.

2001 *Review of Great Barrier Reef Ship Safety and Pollution Prevention Measures*

The review was established by the Australian Government in response to a shipping incident in the Great Barrier Reef when a container ship grounded near Cairns outside the compulsory pilotage area and after the coastal pilot had disembarked the vessel. The review team included the Chief Executive Officer of AMSA, the General Manager of Maritime Safety Queensland, the Chair of the Great Barrier Reef Marine Park Authority and a senior officer of the Department.

The review received a number of submissions from coastal pilots and pilot representatives advising that the deregulation of the coastal pilot market in 1993 had increased operational pressures on pilots leading to increased fatigue, declining competency, reduced capital investment in infrastructure and making the industry less attractive to new entrants.

The report noted that the Commonwealth Government had clearly decided, in agreeing to regulate coastal pilotage, that it was not appropriate to directly control the supply or pricing of pilot services, and that appropriate review mechanisms were available through the Australian Competition and Consumer Commission.

The review supported adoption by AMSA of the safety management systems approach in Marine Orders Part 54 as an effective way to address safety outcomes in the competitive environment for pilotage services.

2005 McCoy Review

AMSA commissioned an independent review of its safety regulation of coastal pilotage services in the Great Barrier Reef and Torres Strait by Captain John McCoy, a former Chairman and Chief Executive of the Marine Board of Victoria.

The review assessed the effectiveness of recent initiatives by AMSA to strengthen safety regulation, including enhancements to the safety management system, development of the check pilot scheme, improved fatigue management measures, upgraded training and ongoing professional development schemes.

The review examined all aspects of coastal pilotage safety regulation and overall found that the system of safety regulation was the most comprehensive in Australia and was fundamentally sound. Captain McCoy made a number of recommendations to address ancillary issues, including improving relations between pilotage service providers and coastal pilots, the safety of pilot boats and the application by pilotage service providers of safety management systems and codes.

During the review, Captain McCoy consulted widely with the three pilotage service providers, coastal pilots and pilot representative bodies. He received submissions from a number of coastal pilots and their representative bodies about the impact of the current level of competition between the three pilotage service providers on the safety of pilotage services. The report found that the robust and sound safety regulatory systems mean that the effects of competition are not reducing safety outcomes.

The review concluded that, as AMSA only has responsibility for safety regulation, the pilots advocacy for reintroduction of economic regulation was beyond AMSA's safety regulatory purview and hence outside its terms of reference. However, it observed that no evidence was found supporting claims that safety had been compromised because of competition.

Captain McCoy noted that a change in the competitive regime would require a change in Government policy, amendments to legislation and AMSA to adopt different regulatory methods. He suggested a cost/benefit analysis of the different regulatory options may be a way to consider the different views and discussed some alternative arrangements in an appendix to his report.

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Appendix 9 - Changes to Marine Orders Part 54 *Coastal Pilotage*

At present, Marine Orders Part 54 *Coastal Pilotage* contains the following penal provisions:

6.4 Issue of licences, restricted licences and trainee pilot licences

6.4.8 *The person to whom an interim document has been issued must surrender it to the Manager:*
(a) within 14 days of the issue, renewal, cancellation or suspension of the licence or restricted licence to which it refers; or
(b) when so required by the Manager.

6.5 Cancellation, suspension or variation of licences and restricted licences

6.5.8 *The holder of a licence or restricted licence that has been cancelled or suspended must surrender it to the Manager within 14 days of that cancellation or suspension.*

6.6 Replacement of licences, restricted licences and trainee pilot licences

6.6.2 *When a lost licence, referred to in 6.6.1 has been recovered and returned to the holder, the holder must return the recovered licence to the Manager within 14 days.*

7.1 Queensland Coastal Pilotage Safety Management Code

A pilot must carry out his or her duties in accordance with the Queensland Coastal Pilotage Safety Management Code.

8.1 Document of Compliance

8.1.1 *A person must not act as a pilotage provider unless that person is the holder of a valid Document of Compliance.*

8.2 Queensland Coastal Pilotage Safety Management Code

A pilotage provider must operate in accordance with the Queensland Coastal Pilotage Safety Management Code.

Action under these Marine Orders can be taken against a licensed pilot as follows:

6.5 Cancellation, suspension or variation of licences and restricted licences

6.5.1 *If, in relation to a licence or restricted licence, the Manager determines that:*
(a) the holder has demonstrated incompetence or misconduct relating to the performance of his or her duties as a pilot; or

(b) the holder is unable from any cause to perform properly the duties appropriate to the licence or restricted licence; or
(c) the licence or restricted licence was obtained by reason of a false representation,
the Manager may:
(d) cancel the licence or restricted licence; or
(e) suspend the licence or restricted licence until specified conditions are met; or
(f) impose restrictions on the purposes for which the licence or restricted licence is valid for use until specified conditions are met.

***6.5.2** Examples of the conditions that the Manager might specify under 6.5.1(e) or (f) are:*
(a) successful completion of a particular course;
(b) passing an oral examination in appropriate operational knowledge;
(c) completion of additional transits as observer;
(d) undertaking one or more voyages with a check pilot;10
(e) production of references.

***6.5.3** Examples of restrictions that the Manager might impose under 6.5.1(f) are:*
(a) restriction on draught of ship;
(b) restriction on type of ship;
(c) restriction on area of operation.

Action can only be taken to suspend or cancel a pilot's licence as follows:

***6.5.4** The Manager must not suspend or cancel a licence or restricted licence under 6.5.1 until the following steps have been completed:*

(a) the Manager considers that there are prima facie grounds for believing that one or more of the circumstances listed in 6.5.1 exist in relation to the licence or restricted licence;
(b) the holder has been informed that action against his or her licence or restricted licence is contemplated, and the reason why;
(c) the holder has been provided with copies of any documents which the Manager will be using to make his or her decision;
(d) the holder has been allowed sufficient time, which must not be less than 28 days, during which he or she may make submissions, which need not be in writing, in relation to the decision;
(e) the Manager has given proper consideration to submissions made by the holder.

***6.5.5** If a decision has been made to cancel or suspend a licence or restricted licence, the Manager must cause to be given to the holder notice in writing of:*
(a) the decision;
(b) the right of review contained in provision 5; and
(c) the date on which the cancellation or suspension is to take effect.

In the case of a grounding or collision however the following action can be taken against a pilot:

6.5.12 *If a ship under pilotage is involved in a grounding, or collides with another ship or any other object, the Manager must, as soon as practical after being advised of the grounding or collision, suspend for a period not exceeding seven days the licence or restricted licence of the pilot having conduct of the vessel.*

6.5.13 *If a ship under pilotage is involved in a grounding, or collides with another ship or any other object, and the General Manager is satisfied that it is in the interests of safety or the protection of the marine environment that the licence or restricted licence of the pilot having conduct of the vessel be suspended pending:*

(a) a decision on whether action should be taken under 6.5.1; or
(b) the completion of the procedures specified in 6.5.4,the General Manager may suspend the licence or restricted licence of the pilot for such period not exceeding six months as is reasonably necessary for a decision to be taken under 6.5.1 or the completion of the procedures specified in 6.5.4.

The range of actions that can be taken against a pilotage provider under similar circumstances however is much less prescriptive and/or comprehensive, being limited to those under provisions 8.1 and 8.2 already mentioned above, with the ultimate sanction being:

8.1.5 *If the systems and procedures of a pilotage provider fail to conform in a major respect with the Queensland Coastal Pilotage Safety Management Code, the General Manager may withdraw that pilotage provider's Document of Compliance.*

Possible Interim changes to MO54:

- Regular reporting (period to be determined) to enable AMSA to monitor:
  - the operational safety activities of providers, e.g. status of pilot boats.
  - the fatigue management of pilots and pilot boat crews by the providers.
  - incident reports made by pilots or pilot boats crews.
  - pilots adherence to and compliance with requirements of Deep Draft Passage Plans.

- Regular reporting (period to be determined but less frequent than the above) to enable AMSA to monitor:
  - audits and management reviews conducted by providers.
  - safety meetings that could be required to be attended by pilots and any actions resulting from those meetings.
  - any training undertaken by pilots and pilot boat crews.

Possible longer term Changes to an Amended MO54:.

- Introduction of a tailored Safety Management System including.

    - Standard Operating Procedures.
    - Training requirements.
    - Emergency procedures.
    - Deep draft (UKC) requirements.
- Improved Pilots Code of Conduct including.
    - Fatigue management.
- Improved/Strengthened pilot boat transfer standards.
    - Safe procedures and limitations.
    - Boat construction and equipment.
- Reporting requirements.
- Methodology for participation in operational and safety meetings by pilots and management.
- Feedback from safety meetings to industry.
- Strengthened control over pilot recruiting methods.
- Strengthened punitive provisions for providers and pilots.

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Appendix 10 - Australian Transport Safety Bureau incident data (GBR - 1993 to present)

Incident Date	Location	Loc Type	Vessel Name	Vessel Type	Summary text
Incidents since 1993 in Great Barrier reef where Pilot is on Board					
02/11/1993			*Blosson Forever*		The south bound Blossom Forever was slowly overtaking the Pearl Prosperity in an area of the GBR where the maximum width of fairway reduced from about 1.5 miles to about 1 mile. The differential in speed meant that the overtaking manoeuvre would take about 45 minutes or about 10 miles to complete. The two pilots had been in contact by VHF & it was mutually agreed that the Blossom Forever would overtak on the Pearl Prosperity's port side. The Pearl Prosperity's Pilot considered that the vessel was unnecessarily close & the passing distance would be less than a cable (185m). The ship's master commented on the fact to the Pilot, who was becoming concerned. He therefore contacted the Pilot on board the Blossom Forever & suggested that he alter course away from the Pearl Prosperity. The Blossom Forever's Pilot agreed & the distance between the ships increased & the passing manoeuvre was completed safely.
15/11/1993	Waterwitch Reef		*Iron Shortland*	Bulk Carrier	On 15 Nov 93 the Palm Monarch was overtaking the Iron Shortland. Both vessels were in ballast, each vessel being in excess of 225m in length. The two ships were in the same area of the GBR as the incident of 2 Nov 93, but in this case the vessels were north bound. Palm Monarch overtook Iron Shortland & the converging courses put the overtaking ship close ahead with both ships on course to pass to the east of Waterwitch Reef. The Master of Iron Shortland expressed concern at the closeness of the other ship & the Pilot altered the ship's course to port, to pass to the west of Waterwitch Reef & any potential risk of collision was averted.

30/03/1995	South Ledge Reef GBR	Coastal waters (within 12 miles)	*Carola*	Container ship	The *Carola* sailed from Sydney on 25 Mar bound for Singapore by way of the inner route of the GBR. At 0100 on 29 Mar the vessel embarked a licensed pilot off Cairns for the passage through the inner route to Goods Is. At about 0230 on 30 mar the Pilot left the bridge in an area where there was to be no alteration of course for about 2 hours & where other shipping & fishing boats presented no potential hazard. The Pilot gave clear directions to the 2nd Mate the OOW that he was to be called at a position that he had marked on the chart, or if the mate had any concerns. At a little after 0400 the Mate relieved the 2nd Mate, who passed on the instruction about calling the Pilot. At 0458 on 30 mar the vessel ran aground on South Ledge Reef. The damage was assessed, soundings of the ship's tanks were taken. It was established that the fore peak tank was breached & some water was entering the bow thruster space, however the ship's pumps were able to handle the ingress of water. There were no injuries & no pollution resulted from the grounding.

18/07/1996	Piper Reef, GBR	Coastal waters (within 12 miles)	*Peacock*	Refrigerated cargo ship	The Panamanian flag refrigerated cargo vessel Peacock, on a ballast passage from Singapore to New Plymouth, New Zealand, embarked a licensed pilot off Goods Island at 1630 AEST on 17 July 1996 for the passage through the Torres Strait and the Inner Two Way Route of the Great Barrier Reef. At about 0155 on 18 July 1996, the vessel grounded on Piper Reef at full speed, in a position 100 metres eastward of the light beacon. Initial attempts to refloat the vessel by going astern on the engine were unsuccessful. Peacock remained stranded on Piper Reef until the late afternoon of 26 July 1996, when salvors successfully refloated the vessel after having transferred some of the fuel oil bunkers to a barge. The vessel's hull was not breached and no pollution occurred. However, machinery tests showed that only one steering motor was fully functional, therefore Peacock was towed to Cairns for necessary repairs. The pilot sat in the pilots' chair and lost situational awareness, in all probability fell asleep. The pilot's recent work schedule, particularly the high proportion of nights of disruped sleep, had caused chronic fatigue. The absence of bridge resource management procedures and monitoring of the situation by the watch-officer resulted in the pilot's failure to order the necessary course alteration to go unnoticed. There was no formal control framework in place to monitor a coastal pilot's nights of disturbed sleep, to prevent the development of chronic fatigue.

26/11/1996	South of Low Isles Great Barrier Reef	Coastal waters (within 12 miles)	*Maersk Tapah*	Bulk Carrier	In the afternoon of 26 Nov '96, the Aust FV Nimbus was on passage from Cairns to Thursday Island in company with the FV Anniki, after both vessels had completed a refit. Each vessel was towing a string of dories or dinghies in line astern - Nimbus was towing five. The Singapore flag bulk carrier Maersk Tapah was on passage from Gladstone to India with a full load of coal. The navigation was under the control of a licensed pilot. Both vessels were making for a point to the east of Low Isles, about 30 miles north of Cairns. At about 1522, while Maersk Tapah was overtaking Nimbus the two vessels collided. Nimbus sustained damage to its bow & wooden hull. Nobody was hurt & no pollution resulted from the collision. The Pilot on Maersk Tapah ensured that Nimbus required no assistance & the two vessels exchanged details. Maersk tapah continued on its voyage to India & Nimbus resumed passage for Thursday Island.
29/04/1997	GBR - 5 Miles West of Booby Island	Coastal waters (within 12 miles)	*Maersk Taupo*	Bulk Carrier	At 0245 29 Apr 97, the Reefcentre advised the MRCC that the vessel Maersk Taupo had a fire aboard. The report was made by the embarking pilot when the vessel was 5 miles west of Booby Island (1036S 14155E). A call to the ship confirmed. The incident was minor & that the fire had been in a piece of electrical equipment. The vessel resumed passage through the Torres Strait at 0414 29 Apr 97. The vessel is on passage to Singapore to out of area & will not stop in Australia.

13/03/1997	Heath Reef, Great Barrier Reef	Archipelago	*River Embley*	Bulk Carrier	On the afternoon of 13 March 1997, the Royal Australian Naval patrol vessel Fremantle left an anchorage off the Flinders Group of Islands, at the eastern side of Princess Charlotte Bay, and, in company with two other patrol boats following astern, commenced passage for Thursday Island. The vessels followed a planned route utilising the inner route of the Great Barrier Reef at a speed of about 15 knots. At this time the Australian Bulk carrier River Embley was on a south bound loaded passage approaching Piper Reef some 150 miles to the north. River Embley was loaded to a draught of about 12.2 m and while underway, at speeds of between 13 and 14 knots, was drawing about 13.5 m allowing for squat. The navigation was under the direction of a licensed Reef pilot. At about 2100, the three warships were approaching Heath Reef from the South and River Embley was approaching the reef from the north. The depth of water in the area meant that River Embley was obliged to keep to the eastern side of the two way route and pass about 3 cables off Heath Reef. VHF contact between those on the bridge of HMAS Fremantle and River Embley was established and the message passed that River Embley was a deep draught vessel and the distance the Pilot intended passing off the Reef. The vessels were closing at about 28.5 knots on nearly reciprocal courses with the first two of the three patrol boats crossing ahead of River Embley. A few minutes after 2100, the lead patrol boat HMAS Fremantle crossed ahead of River Embley, followed by the second vessel in line, the third altered course to pass between River Embley and Heath Reef. HMAS Fremantle made a number of slight alterations and, at about 2108 the rudder was put 20? to starboard. The patrol boat collided with River Embley. There were some slight injuries sustained aboard the patrol vessel as a result of the collision, but nobody on either vessel was seriously hurt. No pollution resulted from the collision. Damage was sustained to the port side of the patrol boat and some damage was caused to the hull plating close to River Embley.

26/11/1998	Prince of Wales Channel		*Fu Yu Shan*		Vessel Fu Yu Shan sailed thorugh the Torres Strait and Great North East Channel of the GBR without the services of a licenced pilot. When approaching the Prince of Wales channel Fu Yu Shan was involved in dangerous close quarter ssituations with two other ships the Ganga Sagar and Bunga Terasek. Both had pilots onboard.
17/05/1999	Heath Reef	Coastal waters (within 12 miles)	*New Reach*	General cargo ship	The Panama flag general cargo ship New Reach sailed from Cairns, at 0654 on 16 May 1999 bound for Penang, with a full cargo of sugar. A licensed pilot was embarked to take charge of the navigation through the inner route of the Great Barrier Reef. At about 1020 on 16 May, New Reach passed Low Isles, the southern limit of the compulsory pilotage area. The pilotage proceeded routinely until about 0311 on 17 May, when after making a routine mandatory report to the Reef Reporting Centre, the pilot realised that the light on Heath Reef was in the wrong position relative to the ship's heading. He altered course to port to bring New reach to the west of Heath Reef. At about 0320 the ship grounded in shallow waters about 220 m south of the reef edge on a heading of 327°, about one hour before low water. Nobody was hurt as a result of the grounding & no oil or other pollutant escaped from the ship. At about 0920 on 17 May, New Reach was refloated under its own power &, after reporting to the Reef Centre, went to anchor south of Night Island, 17 nm to the north. The Aust authorities issued detention orders. At 1314 the vessel was given permission to move to Lloyd Bay, close to the Lockhart River Settlement & its airstrip. On 18 May, divers, surveyors & other officials boarded the vessel. A new pilot also joined New Reach to relieve the pilot on board. After an underwater inspection by the divers & an examination of the fore peak tank by the class society surveyor, the ship was cleared to resume its voyage. The vessel cleared Booby Island at 0530 on 19 May.

25/03/2000	Off Cape Direction	*Silver Bin*	Bulk Carrier	On the morning of 25 March 2000 the 39 015 tonnes deadweight, Liberian flag, geared bulk carrier Silver Bin was heading south to Townsville via the inner route of the Great Barrier Reef. An Australian Reef Pilot, who had boarded the vessel at Booby Island the previous evening, was conducting the navigation of the ship. The sea was slight, with an easterly breeze of less than 10 knots, and no swell. The ship was making headway at just under 12 knots. During the morning, visibility had been reduced by an occasional rain squall. On the bridge with the pilot were the master, third mate and a quartermaster who was hand-steering the vessel. At 1145, 5 miles1 north of Chapman Island, the pilot had a radio conversation with a yacht in the area. This conversation was overheard by the skipper of Chinderah Star, a prawn trawler, approximately 3.6 miles south of Chapman Island, heading north at 9.2 knots inthe shipping channel. The skipper, in the wheelhouse of the trawler, identified the ship on his radar and visually, but did not make radio contact. His two deck hands were asleep in the cabin below. After the course change, a rain squall moved into the shipping channel from east of Chapman Island, and enveloped Silver Bin in heavy rain. The crew of the ship estimated the range of visibility in the heavy rain at 160 m. Chinderah Star was also enveloped by the squall and the skipper lost sight of Silver Bin both visually and on radar as a result of rain clutter. The crew on Silver Bin's bridge were still unaware of the northbound trawler in the channel despite their visual and radar watch. Neither vessel altered speed or course.Silver Bin and Chinderah Star collided at 1209, 0.5 miles west of the Chapman Island light, the fishing trawler's starboard side making contact with the ship's starboard shoulder under the flare of the bow. The fishing vessel sustained significant damage to the wheelhouse, the starboard trawl boom and along its starboard side. There were no injuries as a result of the collision.The decision was made to return to Cairns to repair the collision damage.

16/06/2001	Stainer Island	*Kota Wangi*		AusSAR Telefax Message: Close quarter incident. The following report from reefcentre is passed for your information. The pilot requested that reef centre is passed for your information. The pilot requested that reefcentre note the incident as the Kota Wangi had to take action to avoid a collision. Operator remarks: This report to add request by pilot to report a close quarter situation with a fishing vessel at Stainer Island. Vessel did not anser on VHF and no ID possible. Sitation dangerous. Also second fishing vessel in a no fishing zone in the same area.
26/06/2002	Piper Reef, GBR	*Doric Chariot*	Bulk Carrier	On 26 July 2002 Doric Chariot sailed from Hay Point, Queensland on a voyage to India via the Great Barrier Reef inner passage and Singapore. A pilot was engaged for the Reef passage. The voyage initially proceeded normally and, as the ship approached Eel Reef light, the pilot requested a slight course alteration to allow more sea room for passing a south bound ship. After passing this ship the pilot requested another course adjustment to bring the ship back toward the planned track. He then spoke with the OOW about the time he should next be called and sat on the daybed at the side of the wheelhouse to take a rest before the ship arrived at the next reporting position near Piper Reef. The ship continued under the direction of the OOW until the pilot was next called. When the pilot stood up and looked at the ship's position with reference to the two beacons ahead at Piper and Inset Reefs, he immediately realised that the ship was to the west of the two-way route and approaching the southern end of Piper Reef. He ordered 'hard a starboard' and, shortly afterward 'full astern' but it was too late. The ship started to swing to starboard but, within about one and a half minutes, the ship ran aground to the south of Piper Reef light.

5/01/2004	3nm SSE of Creech Reef in LADS Passage	Coastal waters (within 12 miles)	*Bunga Orkid Tiga*	Bulk Carrier	Bunga Orkid Tiga had discharged a cargo of grain in Tanjon Priok, Jakarta Indonesia, and was enroute in ballast to Brisbane where it was going to load approximately 30,000 tonnes of blended coal for Hawaii. At 1012 on Sunday 4 January 2004, a Great Barrier Reef pilot boarded the ship at the pilot boarding ground at Booby Island (to the west of the Torres Strait). Throughout the 4th, the voyage proceeded uneventfully, following the passage plan through the Inner Route. The weather during the day was very good, with excellent visibility and light winds. Bunga Orkid Tiga entered Lads Passage just after midnight on 5 January. The pilot left the bridge to rest at about 0215. He provided a thorough hand-over to the Officer of the Watch (OOW) concerning tidal set, an alteration of course off Creech Reef and left clear instructions for calling him if, and when, required. Stella VII sailed from Port Douglas on the evening of 3 January. On sailing, the crew switched on the lights for a power driven vessel underway and also the lights (red over white) of a fishing vessel engaged in fishing, other than trawling. Whilst on board, the seven man crew maintained two-hour sea watches. Only one of the crew members, the skipper, had qualifications for standing a navigational watch. At 0327, Stella VII was sighted visually by the OOW and lookout on Bunga Orkid Tiga and was estimated to be one point (11¼°) on the port bow. At about the same time, the fisherman on watch on Stella VII detected the bulk carrier on radar just to starboard of the heading line. Stella VII was seen to cross from the port bow to fine on the starboard bow, thereafter both vessels were on nearly reciprocal courses. The relative bearing of Stella VII remained steady at about two degrees over the next 30 minutes or so during which time the OOW on the bulk carrier made two small course adjustments to port and, at about 0354, a small alteration to starboard. On board Stella VII, four or five small adjustments to starboard were made, from the time the fisherman on watch first saw the ship to just before impact. At about 0402 the two vessels collided. At the moment of the collision, Bunga Orkid Tiga was under full port rudder and Stella VII was altering substantially to starboard. Nobody was injured as a result of the collision but Stella VII sustained significant damage. Following the collision Bunga Orkid Tiga stood by Stella VII until the fishing vessel's crew had established that it could return safely to port.

22/08/2005	Near Pipon reporting position		*Bunga Teratai*	Container ship	Bunga Teratai southbound, ARF pilot on board. HMAS Townsville northbound. Townsville made a sharp port turn across in front of Bunga when 1.5 miles ahead. No radio communication.
23/05/2006	Great Barrier Reef Inner Route South East of Hannibal Islands	Coastal waters (within 12 miles)	*Nexoe Maersk*	Container ship	Nexoe Maersk's bridge watch consisted of the first mate, a helmsman and a lookout. The coastal pilot on board the northbound Nexoe Maersk was resting at the time in the pilot's cabin below. If conditions permit, it is usual for coastal pilots to rest in the area where the incident occured. The ship's speed was about 22 knots in good visibility and other weather conditions. The deck hand of the southbound Discovery III was alone in the wheelhouse and the fishing vessel's speed was about 7.5 knots. The information from statements and records obtained from persons involved is consistent with the following conclusions. The collision was caused by the Nexoe Maersk altering course to starboard and the Discovery III altering course to port in a head on situation. The Discovery III suffered minor damage on the starboard side. The Nexoe Maersk attempted to attract the attention of the fishing vessel by using the daylight signalling lamp and the radio-telephone. The deck hand on the fishing vessel may not have heard or understood the calls of Nexoe Maersk due to language difficulties. His view may have been restricted by a deck crane on the fishing vessel's foredeck. The steering console on the fishing vessel is on the starboard side of the wheelhouse. Not allowing for parallax when in this position when lining up Nexoe Maersk could have caused the deck hand to visualise Nexoe Maesrk to be on his starboard side instead of dead ahead. The Nexoe Maersk contacted the Discovery III after the collision to confirm the fishing vessel and crew were safe. Both vessels continued on their respective voyages. The Australian Martime Safety Authority and Marine Safety Queensland conducted interviews and obtained information used in this report.

Annexure C

McCoy Review Report

AMSA COASTAL PILOTAGE REGULATION REVIEW

Reviewer – John McCoy

Mr Mick Kinley
General Manager
Maritime Operations
The Australian Maritime Safety Authority
GPO Box 2181
Canberra
ACT 2601

Dear Mr Kinley,

GREAT BARRIER REEF COASTAL PILOTAGE REGULATION REVIEW

I now have pleasure in forwarding to you the report of my review into the adequacy of AMSA's safety regulation and related systems for coastal pilotage.

John McCoy

John McCoy

4 December, 2005

CONTENTS

1 INTRODUCTION/BACKGROUND

1.1 This report is submitted to the Australian Maritime Safety Authority (AMSA) and describes the conduct, examination, findings and assessments consequent upon the completion of the review commissioned by AMSA in May 2005.

1.2 AMSA is responsible for the licensing and safety regulation of coastal pilots in Australian waters. Coastal pilotage services are presently only required in the Great Barrier Reef (GBR) region, including Torres Strait, and, since 1993, these services have been provided by the private sector.

1.3 Prior to July 1993 the Queensland Government was responsible for the licensing, operational administration and tariff structure of marine pilotage in the GBR – Torres Strait region. After this time, the safety regulatory functions were transferred to the Australian Government, at which time control over the administration and pricing of pilotage services was relinquished. This encouraged competition in the provision of pilotage services with 3 companies now competing to provide these services. Competition for custom between the 3 pilotage providers has considerably reduced pilotage rates paid by the various client shipping companies requiring a pilot for transit of the Inner route of the GBR, Torres Strait and Hydrographers Passage.

1.4 Concern over the impact that privatization of pilotage may have on safety standards has been raised, with suggestions that commercial pressures tend to override safety issues and reduce capacity to fund capital replacement and reduced pilot income affects the attractiveness of the industry to encourage new entrants.

1.5 Previous studies found that implementation of appropriate safety audit and control mechanisms were sufficient to maintain safety outcomes and that there was no evidence to suggest that the absence of direct regulation of commercial aspects affects safety. As a safety regulator, AMSA is concerned to ensure that safety regulations and systems for monitoring trends and enhancing safety outcomes in coastal pilotage remain appropriate to contemporary circumstances and conditions. This review has been commissioned as an independent review of coastal pilotage regulation and associated pilotage safety systems.

1.6 Accordingly, AMSA has established the following terms of reference for this review:

'The independent reviewer will examine and assess:

- *The adequacy of AMSA's safety regulation and related systems for coastal pilotage, including requirements for:*
  - *Training and licensing of pilots;*
  - *Safety standards for pilot service providers;*
  - *Safety management systems and codes;*
  - *Check pilots;*
  - *Audit and monitoring programs;*
  - *Appropriate information systems and guidance materials;*
  - *Technologies for providing safety information to pilots and pilot service providers; and*
  - *Monitoring of pilot and pilot service provider activities.*

- *The extent to which coastal pilots and pilot providers effectively use printed and electronic information provided by AMSA, including real time information provided by REEF CENTRE; and*
- *Whether and to what extent, if any, commercial pressures are impacting on compliance with safety regulation and systems or on the ability of the industry to recruit suitably qualified persons into the Australian coastal pilotage industry.*

In undertaking the review, the reviewer will consult with each of the pilot service provider organisations, shipping industry organisations and a representative sample of Great Barrier Reef coastal pilots.'

1.7 The terms of reference in the paragraph above establish the limits of the review. These terms of reference were supplied to each of the organisations and persons required to be consulted in the course of the review. During the required consultation a great deal of information was obtained by the reviewer, both orally and in written submissions. Not all this information was necessarily relevant to the AMSA terms of reference and the relevance of the information to the terms of reference was determined by the reviewer.

1.8 The major issue for pilots appears to be the competitive provision of pilotage but this reviewer is principally directed to examine and assess the adequacy of AMSA's safety regulation and related systems for coastal pilotage, and the extent to which coastal pilots and pilot providers effectively use printed and electronic information provided by AMSA, including real time information provided by REEFCENTRE. And, whether and to what extent, if any, commercial pressures are impacting on compliance with safety regulation and systems, or on the ability of the industry to recruit suitably qualified persons into the Australian coastal pilotage industry.

1.9 The plain meaning of the terms of reference is clear. The reviewer has taken note of the environment in which regulation of pilotage takes place and considered possible alternatives (see Appendix I) but, in accordance with its terms of reference, this review does not further consider the benefits or disadvantages of any **alternatives** to the current system of providing pilotage services in the GBR, whether in relation to safety outcomes or other matters. Nor does this review make recommendations nor draw conclusions with respect to this issue. As it must be, this report is strictly confined to addressing those matters contained in the terms of reference in the way those terms are expressed.

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[1] AMPA supplied the review with the results of a questionnaire circulated to all GBR pilots. No pilot expressed satisfaction with the current system of supplying pilotage in the GBR and all wanted change. 70% of pilots preferred the option of serving as a pilot of a pilot owned company providing services under contract to the Government under conditions of serial competition with 20% preferring the pre 1993 option with only one company with exclusive rights. The balance preferred other variations. Pilots saw no advantage to the current system other than to the ship-owner. All replies received agreed to AMPA acting for pilots if a non-competitive scheme could be negotiated.

[2] A member of ASA also contacted the reviewer. This member is a major Australian user of one of the GBR providers who was totally satisfied with the service the company's ships received from pilots of one provider which he considered "exemplary". He also said that he would be totally opposed to any change.

2 EXECUTIVE SUMMARY OF ASSESSMENTS

2.1 Any assessment of alternatives to the current competitive arrangements for supplying pilotage services to the Great Barrier Reef (GBR) is outside the terms of reference of this review. (Paragraphs 1.7 to 1.9 and Appendix I)

2.2 There is no major issue with the scheme of AMSA's safety regulation but there is a major issue with how pilotage is provided - this issue is outside the terms of reference of this review. (Paragraph 5.2)

2.3 Draft Marine Order 54 (Draft MO 54) contains the most comprehensive system of safety regulation of pilotage by a regulator in Australia. (Paragraphs 4.9 and 5.2)

2.4 Some areas of the safety management system of providers are deficient and do not meet the objectives of AMSA's Great Barrier Reef Safety Management Code (GBRSMC) and detract from safety. (Paragraphs 5.1, 5.4 and 5.6)

2.5 The agreed bench mark standards in Annex A of Draft Marine Order 54 should be amended to include a requirement that a crew member and pilot should be provided with an effective means of being secured to the launch when proceeding from the accommodation forward to the pilot transfer position. (Paragraph 5.7 and Appendix II)

2.6 The standards for pilot vessels appearing in Annex 1 of the GBRSMC should be considered minimum standards for all pilot vessels and the "grand-fathering" provision of paragraph 1 of Annex A to Draft MO 54, which applies the pilot vessel standards only to vessels acquired as replacement vessels after 1 July 2001, should be removed. (Paragraph 5.7 and Appendix II)

2.7 Where the Safety Management System (SMS) does not incorporate standard operating procedures for the operation of the pilot vessels and the training of their crews, they should be revised and amended to incorporate such procedures. (Paragraph 5.7 and Appendix II)

2.8 There appears to be no requirement for safety training for helicopter transfer - Pilots being transported by helicopter are entitled to the same level of protection and safety training as applies in other industries, including a requirement for a "HUET" course if that is the industry standard. (Paragraph 5.8 and Appendix II)

2.9 The conduct of pilotage operations in the GBR is not *prima facie* unsafe - However, there are significant gaps in the safety management system (SMS) at both the organizational and operational levels. (Paragraphs 5.10 to 5.11)

2.10 There is a gap in the SMS in that there appears to be an undesirable disconnection between the pilot on the bridge and the organization so that the SMS does not extend from the "board room to the bridge" of the ship as it should. (Paragraph 5.13)

2.11 The provider has a number of responsibilities under the GBRMSC, one of which is to develop and maintain an SMS which *inter alia* includes instructions and procedures to promote the safe pilotage of ships. Such instructions and procedures as may be available seemed to be somewhat ephemeral and, if they exist, pilots do not seem to be aware of them. There is no place for such gaps in an effective SMS. One example of an apparent gap in the SMS is that a number of pilots do not accept the layered defence theory in the management of risk and mitigation of the consequences of pilot error.

This review has identified at least 5 defences, some of which are recognized by pilots and some of which are not. All those defences are currently available and are valued and employed by some pilots – The provider has a responsibility to ensure that ALL pilots are aware of and effectively employ these defences when engaged in pilotage operations. In an effective SMS, operating procedures should be standardized (i.e. SOP's), uniform and not optional. There are other areas for SOP's and standard check lists. These include (but are not limited to) preparation of passage plans, interaction with the bridge team and emergencies. (Paragraphs 5.15 to 5.23)

2.12 There appears to be no formal mechanism used by providers for the purpose of continual appraisal and review of the SMS although this is a requirement of the GBRSMC. (Paragraph 5.24)

2.13 The quality of launches used for pilot transfer appears to be well below an acceptable standard and this is likely to be as a result of the commercial pressures impacting on providers. (Paragraphs 6.3 to 6.7 and Appendix II)

2.14 Although a number of pilots said that they felt it necessary to maximize the number of pilotage acts they engaged in for commercial reasons, no pilot admitted to being pressured by a provider to breach the requirements of the fatigue management plan, nor did they admit to any such breaches. (Paragraphs 6.8 to 6.10)

2.15 There is no evidence to support the proposition that commercial pressures impact on the recruitment of suitable persons to become pilots in the GBR. (Paragraphs 6.11 to 6.14)

2.16 To encourage the proper exchange of information by VHF between piloted ships and assist reconstruction in the event of a casualty, VHF exchanges should be recorded by REEFCENTRE, if the technology to do so is available. (Paragraphs 7.2 to 7.4)

2.17 Prescriptive requirements for the training and licensing of pilots are adequate for the purpose. (Paragraph 8.2)

2.18 Many pilots see training in terms of costs and not benefits and this is exacerbated by concerns regarding the quality of the professional development course. (Paragraph 8.3)

2.19 With the exception of those deficiencies identified above, AMSA's safety standards were generally considered to be satisfactory. (Paragraph 8.5)

2.20 Whilst assessing AMSA's system of safety regulation as adequate and the most comprehensive in Australia, a number of areas of what are assessed as non-compliance were found. This meant that the safety management systems of providers were assessed as deficient in several important aspects, with a consequent possible reduction of safety outcomes. (Paragraph 8.6)

2.21 AMSA's scheme for check pilots received general endorsement and in some cases enthusiastic support. This review assesses it as adequate for the purpose. (Paragraph 8.7)

2.22 It was generally felt that AMSA's prescription for audit and monitoring programmes was adequate but insufficient resources were devoted to maintaining such programmes and so ensuring compliance. Those areas which this reviewer feels could benefit by increased attention in an audit, have been identified in a number of the assessments above. (Paragraphs 8.8)

2.23 AMSA information systems are more than adequate for the purpose, as is the technology for passing on safety information. (Paragraphs 8.9 and 8.11)

2.24 It is suggested that the benefits of quarterly meetings be re-evaluated. (Paragraph 8.10)

2.25 Whilst pilots make effective use of printed and electronic information provided by AMSA, the same cannot by said about REEFCENTRE with a number of pilots stating that REEFCENTRE has no useful role – this point needs attention in view of the safety implications. (Paragraph 8.13, paragraphs 5.20 to 5.21 and paragraph 7.1)

3 CONDUCT OF THE REVIEW

3.1 In undertaking the review, the reviewer was required to consult with each of the pilot service provider organisations, shipping industry organisations and a representative sample of GBR coastal pilots. During the course of the review this requirement was varied to include 2 particular members of the Australian Marine Pilots Association (AMPA) with a special interest in the issue of GBR pilotage, an officer of Marine Safety Queensland, AMSA's manager maritime operations (Brisbane), an officer of the Great Barrier Reef Marine Park Authority (GBRMPA), a visit to REEFCENTRE and an interview with an officer of the Port Phillip Sea Pilots, Pty Ltd.

3.2 The required consultation took place over 2 periods. From 1 June to 3 June (inclusive) the reviewer interviewed, in Brisbane, company officers of Torres Pilots Australia and Australian Reef Pilots Ltd, two of the present three pilotage providers. Also interviewed in Brisbane was one nominated member of AMPA, the nominated officer of AMSA and an ex GBR pilot (a member of AMPA) who expressed an interest in the matters being considered in the course of the review.

3.3 0n 21 June, the reviewer met with officers of Shipping Australia Ltd (SAL) to discuss the issues associated with the review and subsequently met with the other nominated member of AMPA.

3.4 From 22 June to 27 June (inclusive) the reviewer interviewed licensed GBR pilots (from both providers) as they passed through pilot accommodation on Thursday Island, prior to, and subsequent to, those pilots boarding or leaving piloted ships. Further additional interviews with licensed GBR pilots took place under similar circumstances in Cairns (29 June) and Mackay (1 and 2 July). A small number of interviews took place by telephone. Two pilots provided written submissions to the review addressing the terms of reference and other pilots sent emails with attachments containing relevant previous correspondence. It is considered a representative sample of pilots was interviewed. The details of the numbers and percentages of pilots interviewed are included hereunder:

	Number of Pilots	Provider	Provider % Pilots*	Total % Pilots*
	16	ARP	55%	27%
	9	TORRES	35%	15%
	3	HYDRO	75%	5%
TOTAL	28			47%

NOTE: Percentages of pilot population for providers and total pilots depend on numbers of licensed pilots as at 28 February 2005

3.5 A meeting with an officer of GBRMPA took place in Townsville on 30 June and a visit to REEFCENTRE at Hay Point was made on 1 July.

3.6 Officers of Hydro Pilots Australia were interviewed in Mackay on 1 July – these officers were also licensed GBR pilots for Hydrographers Passage.

3.7 Finally, a meeting took place with an officer of the Australian Shipowners Association and a separate meeting with an officer of the Port Phillip Sea Pilots P/L, in Melbourne on 4 July.

3.8 The review had the benefit of previous reports and relevant information on the AMSA web site, including the *Crone Report* (May 1994) and the *Holden Review* (March 2000), as well as certain correspondence supplied by AMSA and other parties interested in the review.

3.9 All interviews with pilots and certain other persons took place on a confidential basis and an assurance was given to persons who consented to be interviewed that any opinion, statement or material offered was given on the basis that it would not be attributed to the person providing it. This assurance was given in the belief that any other course of action would unnecessarily restrict the information available. For the most part interviews followed the form of questions directly addressing those matters within the terms of reference with an invitation to provide more general comment if desired.

3.10 Where the opinions or statements of others are quoted or referred to in this report without attribution, it is in the belief that it is an accurate recollection of what was said in the course of the review. However, the assessments and conclusions of this report are entirely those of the reviewer.

4 AMSA'S SCHEME OF SAFETY REGULATION

4.1 Marine Order 54 provides the basis of AMSA's safety regulation of pilot arrangements in the GBR. Heads of power for the content and making of this Marine Order are found in the *Navigation Act 1912* (Cth), (the Act) ss 425(1), 425(1AA) and Part IIIA (inclusive). S 186E of the Act provides the offence provision with respect to unqualified persons performing the duties of a licensed pilot and s 186B defines a licensed pilot. There have been 3 issues of this Marine Order since 1994, with the current issue being Issue 3, Order Number 6 of 2001, as amended by Order Number 11 of 2002. A further draft Marine Order 54 has been made available to this review and, it is understood, this draft Order will not be issued until the completion of this review. However, although the system and content of both current and draft Marine Order 54 are similar, they are not the same. The safety regulation system considered by this review is that expressed in the draft Marine Order 54 and not the current Marine Order 54. While parties interviewed in the course of the review knew about the draft Marine Order, it is likely that comments received in a number of areas relate to the content of the current Marine Order.

4.2 Draft Marine Order (Draft MO 54) *inter alia* defines compulsory pilotage areas of Hydrographers Passage, the inner route of the GBR and the Whitsundays and voluntary pilotage areas of Hydrographers, the inner route of the GBR and the Great North East Channel[3]. It provides necessary definitions and the machinery provisions for its application and review of administrative decisions[4].

4.3 Draft MO 54 provides for the licensing of pilots according to a range of areas, conditions, duration and vessels, with appropriate limitations and provision for renewal. There are licensing provisions for pilot licences, restricted pilot licences and trainee pilot licences and provision for their cancellation or suspension[5]. There are also discretionary provisions specifying the manner in which they are to be exercised[6].

4.4 An important section defines the function and liability of a pilot as ***"The function of a pilot on board a ship is to provide information and advice to assist the master and the ship's navigating officers to make safe passage through the areas for which the pilot is engaged....Despite the presence of a pilot on a ship, the master of the ship continues to be responsible for the conduct and navigation of the ship in all respects...."*** and this applies ***"irrespective of whether the engagement of the pilot is compulsory or voluntary."*** [7]

4.5 Draft MO 54 also prescribes certain requirements in relation to the conduct of a pilot including a requirement for a Code of Conduct[8].

4.6 Whilst determining the requirements for appointment, training, licensing and performance of pilots, Draft MO 54 also takes into account the role of the provider of pilotage services. The draft Order defines a pilotage provider as a ***"person who assigns***

[3] Draft MO 54, s 2
[4] ibid s 5
[5] ibid s 7
[6] ibid
[7] Draft MO 54, ss 7.2 – 7.4
[8] ibid s 8

or allocates a pilot to a particular transit, irrespective of the legal relationship, contractual or otherwise, between that person and the pilot" [9]. The model of regulation used to regulate the behavior and performance of the provider is based on the ISM Code [10]. The ISM Code places responsibility on a shipowner for the development and implementation of systems and procedures for the safe operation of ships. Draft MO 54 places the responsibility on a pilotage provider with respect to pilotage [11]. As is the case with shipowners, the Marine Order requires a pilotage provider to have a valid document of compliance which certifies compliance with a Safety Management Code (SMC)[12]. This Code is incorporated into Draft MO 54 as an Appendix entitled the "Great Barrier Reef Pilotage Safety Management Code (GBRPSMC). Systems and procedures are subject to audit[13].

4.7 The GBRPSMC *inter alia* requires that the provider develop, implement and maintain a Safety Management System (SMS)[14]. The provider has defined responsibilities, one of these being to designate a person with access to the highest level of management who is required to provide a link between the provider and a pilot on board and appoint a training pilot and check pilots[15]. The responsibilities of the "designated person", check pilots and training pilots are also defined, as is the responsibility of pilots[16].

4.8 Annexes "A" and "B" of the GBRPSMC provide for "benchmark" standards for pilot transfer arrangements and guidelines for check pilots respectively.

4.9 Paragraphs 4.1 to 4.8 above summarise the scheme of safety regulation used by AMSA to maintain safety of pilotage operations in the GBR. **It is the assessment of this reviewer that Draft MO 54, its Appendix and Annexes, contain the most comprehensive system of safety regulation of pilotage by a regulator in Australia.**

5

[9] Great Barrier Reef Pilotage Safety Management Code (GBRPSMC), s 1
[10] International Safety Management Code for the Safe Operation of ships and the Prevention of Pollution
[11] GBRPSMC, ss 1.4
[12] ibid s11
[13] ibid
[14] ibid ss 1.4
[15] ibid s 3
[16] GBRPSMC, ss 4,5, 6 &7

PERCEIVED DEFICIENCIES OF THE EXISTING SAFETY MANAGEMENT SYSTEM

5.1 The previous section summarized the requirements of AMSA's scheme of safety regulation. A key part of the scheme is a safety management system (SMS) with important responsibilities being assigned to providers, other persons and pilots. This section identifies and discusses certain perceived deficiencies of the SMS, assessed on the basis of information received in the course of the review.

5.2 By way of general comment, it must be said that even where issues exist between AMSA and the pilots, for the most part there is no major issue with AMSA's safety regulation. Rather, the major issue is with how pilotage is provided and the fact that it is provided under conditions of aggressive competition by 3 different providers. This is said by pilots to be the major issue affecting the achievement of an optimal safety outcome with respect to pilotage in the GBR. It has already been concluded (paragraph 1.9) that any assessment of alternative systems of pilotage provision in the GBR is outside the terms of reference of the review which will confine itself to an assessment of AMSA's safety regulation of the existing system. This will not satisfy a great number of the persons who contributed to the review and, not least, AMPA, or IMPA.

5.3 Pilotage services may be acquired by the shipowner in two entirely different ways. Pilotage may be voluntary and a pilot will be taken on board for local knowledge and skill and with a view to reducing the risk of adverse events occurring, such as stranding or collision. Government may choose, as a matter of policy, to licence the persons offering their services as a pilot in order to ensure minimum standards of skill and competency. The decision on whether to take a pilot however, is a matter for the shipowner. Services in the GBR prior to 1993 were of this category as indeed are services in parts of the GBR today. On the other hand, as well as licensing pilots, legislation may make pilotage compulsory and the shipowner has no choice on whether to carry a pilot. Parts of the GBR are compulsory pilotage areas. Compulsory pilotage is part of the risk management strategy for the area. Shipowners can externalize the cost of risk to some extent and a policy which makes pilotage compulsory operates to reduce risk to life, property and the environment at the cost of the shipowner. Pilotage, both voluntary and compulsory, is therefore about risk management and safety.

5.4 This approach is made clear in Draft MO 54 which states: ***This Part makes provision for the licensing of coastal pilots and the manner in which they carry out their duties and, to promote the safe operation of ships under pilotage, the manner in which they are assigned or allocated to ships.*** (Paragraph 1.1 of Draft MO 54). And in paragraph 1.2 of the Annex to Draft MO 54 which states:

1.2.1 The objectives of this Code are to promote:

(a) Safety at sea in the GBR region;

(b) Prevention of injury or loss of life; and

(c) Avoidance of damage to the marine environment and to property, by ensuring that all persons, procedures and operations involved in coastal pilotage are covered by an approved Safety Management System (SMS).

1.2.2 The objectives of each SMS include:

(a) The observance of safe working practices;

(b) The identification of risks and provision of suitable safeguards; and

(c) The provision of continuous improvement.

While the above objectives of the Great Barrier Reef Pilotage Safety Management Code are admirable, some areas of pilotage service delivery fall short of these objectives - There are two separate operations in the delivery of pilotage services. There are the pilot transfer arrangements whereby a pilot is placed on board the vessel to be piloted and then taken off that vessel after the completion of the pilotage operation. Then there is the performance of the pilotage operation on the bridge from the requisite communication and interaction with the bridge team, performance of the pilot's tasks and functions to the eventual completion of the pilotage operation and departure from the vessel. This review has concluded that certain deficiencies which detract from the safety of both pilot transfer operations and the performance of the pilotage function on the bridge are present in current arrangements for the delivery of GBR pilotage services.

5.5 Pilot Transfer Arrangements

5.6 Pilots use launches for transfer from most boarding grounds in the GBR and helicopters for transfer in Hydrographers Passage. It is something of an understatement to say that most pilots are dissatisfied with the vessels and the arrangements provided for transfer by launch. Pilots related to this reviewer a number of examples of what they perceived as deficiencies with the launches, operational procedures and training of crews. One written submission received from a pilot regarded the condition of the launches used for transfer by both providers as being "deplorable". In addition there has been a recent death of a crew member during an operation. The reviewer was urged to examine launches during the course of this review but declined. It was not the task of the reviewer to 'survey' launches nor would it necessarily have been useful in coming to any conclusions – the pilots use the launches under actual conditions of operation all the time. They see the operational deficiencies. There is no reason to doubt the truth of their perceptions and the reviewer does not.

5.7 While there is an agreed benchmark standard for pilot vessel standards contained in Annex A to Draft Marine Order 54, the vessels used for pilot transfer are subject to the survey of Maritime Safety Queensland (MSQ) as to safety, construction and manning. This report reviews AMSA's safety regulation of coastal pilots. Certain assessments which have been made regarding pilot vessel standards, as prescribed by draft MO 54 and the associated safety management systems, are included in Section 2 of this report, (Executive Summary Of Assessments). Detail supporting these assessments is included in Appendix II.

5.8 There are additional issues associated with helicopter transfer of pilots, particularly in Hydrographers Passage. These issues are also considered in Appendix II.

5.9 The Conduct of the Pilotage Operation

5.10 At the outset it must be said that the conduct of pilotage operations in the GBR is not *prima facie* unsafe nor is there a high risk based on the probability of an occurrence of an adverse event. Indeed, given the safety regulation, the training, the experience and the qualifications of the pilots who perform the task, it would be remarkable if the operation carried with it anything other than a low probability of failure. Det Norske Veritas determined the annual frequency of groundings of piloted vessels to be 0.7 and collisions to be 0.4[17]. Of course, risk is not just about the probability of an event occurring. It is also about consequences and the consequences to the GBR of a grounding, or collision, can be severe[18]. The real issue is whether the risk is being managed as effectively as it might be or alternatively, how effective is the SMS?

5.11 In any operation where the business and purpose of an organization is safety, a safety culture should be pervasive throughout the organization and at all levels. Accordingly, in the supply of pilotage services in the GBR a provider should ensure that the SMS extends to all operations of the organization from the board room to the bridge of the ship. However, it is far from clear to this reviewer that this is the case for pilotage providers in the GBR. It is the assessment of this review that there are significant gaps at both the organizational and operational levels and that these gaps increase risk and reduce the level of safety which could, and should, be achieved.

5.12 There are obviously 3 separate areas of risk management of pilotage operations in the GBR. There are the pilots, the pilotage providers and the regulator, AMSA. The regulator's position is always a difficult one. Modern regulation means less prescriptive requirements and more performance based requirements. This presents difficulty for a regulator in monitoring and enforcement. Of course, the regulator can deal with the Document of Compliance (DOC) of a provider and this may be thought to be a sanction which would compel adherence to the highest standards. But there are obvious and strategic implications to such a heavy handed course and suspension of a DOC may not necessarily result in a good safety outcome. There are issues of whether regulation is applied with a light or heavy hand. AMSA's model is one which is used in the wider shipping industry. This review accepts (in common with most pilots[19]) that AMSA's model is a good regulatory model and considers how it translates into the performance of pilots and provider in managing risk through their SMS.

5.13 Insofar as the organization (i.e. the provider) is concerned, effective management of risk requires commitment, certain competencies within the organization and an ability to recognize risk. One might suppose that the pilots could provide this competency and ability to the organization. Yet this does not appear to be the case. Most pilots appear to see the performance of pilotage operations as entirely pilot centered and discrete. The role of the provider, as seen by a number of pilots, is to arrange the job with a client shipowner, place the pilot on board and eventually see the pilot is paid what he is due. The provider appears to see the operation in exactly the same terms. The provider does not see a role in intervention with or, monitoring of, the performance of a pilot other than to conform with the provider's obligations under the GBRPSMC. To that extent

[17] DNV GBR Pilotage fatigue Risk Assessment 1999 p 7
[18] ibid
[19] Pilots views are restricted to the operational requirements of MO 54 – they are mostly of the opinion that there should be increased regulation of the commercial aspects of pilotage as discussed elsewhere in this report

there appears to be an undesirable disconnection between the pilot on the bridge and the organization. It follows that **the SMS does not appear to extend from the board room to the bridge of the ship**. This means that the safety of the operation on the bridge is entirely in the hands of the pilot insofar as the organization is concerned. One provider informed this review that it offers "insurance" in the case of a pilot error resulting in a casualty. The payout is $100,000 against payment of an initial "premium" which is additional to the pilotage fee. Although insurance is part of risk management this insurance, is not really part of the SMS envisaged by the GBRPSMC. An opinion was expressed in the course of the review that the provider was little more than an agent who obtained the work and saw a pilot was placed on board a vessel. But this is not what the GBRPSMC requires. Whatever the practice is, the GBRPSMC places the responsibility of the development and implementation of the SMS squarely on the provider. If insufficient expertise is available to the providers at present to fulfill this responsibility, such expertise should be acquired. The GBRPSMC requires the provider to designate a person or persons in the provider's office with access to the highest level of management to provide a link between the pilot and provider[20] and this person has defined responsibilities[21].

5.14 Pilots are professional and rightly take pride in their skills, knowledge and performance on the bridge. Many pilots see the task in terms of their ability to take the ship through the GBR using a mental picture of the Reef gained through long experience. Many see the management of pilotage risks as being largely about the quality and experience of the pilot. That is to say, exclude the "bad" pilot by maintaining the requirements which existed prior to 1993 and recruit "better" pilots by a much higher level of remuneration. This assumes that the "good" pilot will not make any error. Unfortunately this is a heresy in terms of error management. As James Reason says, "One of the basic principles of error management is that the best people make the worst mistakes"[22]. It is certain that effective risk management accepts that all human beings are fallible, errors may be made and endeavours to avert the consequences of single person error by putting in appropriate defences. Even "super pilots" (if they exist) are human and thus fallible. A safety management system which relies on a pilot **not** making an error, is not a system at all.

5.15 Since 1993 there have been a number of casualties in the GBR. It was alleged, in the course of the review, that a major cause of these casualties could be found in the competitive nature of pilotage which has led to a reduction in the standard of the pilots. There is, of course, seldom a single cause of any accident. Indeed, where a single cause is identified, it is likely that other causative factors were present but have not been identified. Yet a number of things are clear. No pilot involved in groundings intended the consequences. Other than noting the preponderance of less experienced pilots involved, no lack of skill or knowledge was identified as a causal factor. Rather, available skill and knowledge was not employed on the day. In simple terms, there was a lapse or an error which contributed to the incident. Where the actions or omissions of a pilot were identified as a causative factor, it was likely a challenge from the watchkeeper on the bridge would have averted the consequences of pilot error.

[20] GBRPSMC, ss 3.8
[21] ibid s 4
[22] J. Reason, *Managing the Risks of Organisational Accidents,* Ashgate, 1997, p. 127

Unfortunately, there was no simple "heads up" from others on the bridge and groundings followed. This was identified in the Australian Transport Safety Bureau (ATSB) reports as a failure to properly implement Bridge Resource Management, (BRM).

5.16 Many pilots interviewed pointed to the variable standards in skills, knowledge and ability of both watchkeepers and masters as a reason not to bother with BRM. Yet the same vessels, with the same crews, go to all ports in the Commonwealth – Pilot services in Brisbane, Sydney, Fremantle and Melbourne are jointly developing and implementing procedures to actively involve the bridge team in the pilotage of the vessel, whatever the individual standard of the members of the team. This is the first defence against the consequences of pilot error. How and whether it is implemented should not be left to the individual pilot no matter what his opinion of the bridge team's abilities are. The provider should develop and implement standard procedures to ensure the bridge team is involved in the navigation of the vessel. It is surely insufficient to recognize the problem and a solution and then adopt the attitude that it will not work because some members of the bridge team are useless. From time to time suggestions are made that 2 pilots are carried to allow for periods of rest – however, in developing procedures, consideration could perhaps be given to the role the vessel's master might play, in order to allow 2 people on the bridge at all times.

5.17 It has been held that a good pilotage plan is central to the safety of the pilotage operation. Whilst this proposition was generally agreed, agreement was not unanimous, with one pilot stating that a passage plan was "all rubbish and required just to satisfy bureaucrats at the IMO". Given that this one view of a plan may be considered extreme, it was noted and ignored by the review. Involvement of the bridge team would be assisted by standard operating procedures (SOP's), standard check lists, standard plans etc. Uniform procedures reduce risk of error. This has been the experience of other pilot services. It has also been the experience in many organisations (e.g. airlines, hospitals, power stations) who wish to effectively manage risk. One pilot interviewed said he emailed his plan 2 days in advance to the ship, so that meaningful discussion could take place and the plan be amended as necessary. This seems like a good idea. If it is, it should be capable of adoption by all pilots. Pilots have a variety of methods and ideas. Facilitation of discussion about methods and techniques and the adoption of 'good ideas' is the responsibility of the provider under the GBRSMC. It is part and parcel of an effective SMS.

5.18 Most pilots appear to make use of a lap top computer combined with GPS in their conduct of the pilotage operation. It is another aid to assist navigation and is used with other aids and methods. It can also be combined with an alarm system to warn of deviations from the plan. The alarm can (and is) set during a pilot's necessary absences from the bridge for sleep etc as well as when he has conduct of the vessel. If unplanned deviations occur, the pilot and watchkeeper may be warned and corrective action can take place. This is another line of defence against error. The issue is why such a defence is not used by all pilots? The effective use of the device requires a protocol to be developed incorporating defined procedures (an SOP) to be followed by all pilots. Once again there appears to be a role for the provider as part of the SMS.

5.19 The attitude of pilots to REEFCENTRE varies. Two written submissions suggested that it was unnecessary and should be closed down because traffic information could be

obtained using other technology. The pilots making the written submissions, and some other pilots, considered REEFCENTRE had no role in monitoring navigation through the GBR. This opinion was not shared by all pilots who saw REEFCENTRE as having a useful role in terms of warning of deviations from the track leading to danger. That is to say another "heads up" akin to a challenge from a watchkeeper aboard a vessel. One pilot volunteered the information that a warning from REEFCENTRE to his vessel had averted a possible grounding. Pilots who saw REEFCENTRE as having no useful function, either in supplying traffic information or in monitoring navigation through the GBR, also saw the training of REEFCENTRE operators as deficient in some way. That is, they thought operators should possess a marine certificate of competency as Master. With great respect to this view, it is not shared by this reviewer, nor a number of their colleagues who were involved in assisting REEFCENTRE to develop a system to monitor navigation. The capacity of REEFCENTRE operators to provide useful information does not require specific nautical training, qualifications or background. The system software provides the warning and operators pass it on.

5.20 The different opinion of pilots concerning REEFCENTRE functions is of concern with respect to the effectiveness of a SMS. It seems to this review that REEFCENTRE provides another line of defence to mitigate the consequences of pilot error. But all pilots must "sing from the same song sheet" to make this defence fully effective. There seems to be a case for the provider and AMSA to either convince or compel pilots to accept this defence. If the defence does no good it certainly will do no harm.

5.21 There appears to be at least 4 defences which either are, or should be, available to mitigate the consequences of pilot error. These are summarised as follows:

- The development by each provider and the pilots of standard operating systems and their adoption by each pilot.
- The development by each provider and the pilots of a standard operating system to encourage/compel maximum and effective involvement of a vessel's bridge team in the pilotage task.
- The development by each provider and the pilots of an effective protocol for the use of the lap top computer and alarm system.
- The development by each provider and the pilots of an effective protocol to make best use of information provided by REEFCENTRE.

5.22 Defined procedures should both recognize the above defences and get pilots to accept and use them. This layered defensive approach builds redundancy into the system. While any one of the defences can fail due to operator error or equipment failure, the probability of failure of every defence simultaneously is extremely low.

5.23 But what of failure which results in a grounding or collision? Are there procedures which pilots follow for containment of the consequences of the collision or grounding? The short answer to this question is that there does not appear to be. There does not appear to be uniform guidelines on what to do in case of emergencies. Pilots had individual solutions to deal with this problem but individual solutions have no place in emergency management. Decisions taken under stress are unlikely to be the best decision to fit the circumstances. Defined standard operating procedures (SOP's) to be

followed following an incident will inform effective decision making and reduce the risk of a poor decision being made. Once again this should be part of the provider's SMS. The relevant SOP's should be part of the pilot's kit.

5.24 Paragraphs 5.16 to 5.23 deal with what this review perceives as deficiencies in the SMS. But every risk and "hole" in defences is not always readily discernible, particularly systemic risk in the organisation. Accordingly, SMS's require continual appraisal and review and this is also required by the GBRPSMC[23]. It is not clear how pilotage providers fulfil this responsibility. While there may be informal arrangements at the level of pilots and also within provider management, there appears to be no formal mechanism for the provision of continual appraisal and review.

[23] GBRPSMC, s 10

6 THE IMPACT OF COMMERCIAL PRESSURES ON COMPLIANCE AND SAFETY REGULATION AND ON RECRUITMENT OF SUITABLE PERSONS TO PILOTAGE IN THE GBR

6.1 Pilots and others contributing to this review had strong opinions on this issue. Given the history of the present arrangements for supply of pilotage services in the GBR, this is understandable.

6.2 Pilots alleged that commercial pressure impacted on safety in two areas. These areas were the pilot transfer arrangements and in the area of recruitment of pilots. Some pilots also alleged that commercial pressures impacted on safety in other areas. One allegation related to "some" pilots continuing a passage through the GBR at less than minimum Under Keel Clearance (UKC) because they personally felt some commercial pressure to do so as a result of competition. Another allegation related to pilots of one provider ignoring the effects of "squat" when proceeding with minimum UKC. A written submission received, alleged that persons with no aptitude for pilotage were being licensed and their performance was subsequently observed to be incompetent[24]. Under its terms of reference and without statutory powers and protection, this review cannot deal with such allegations and moves from them. Another allegation involved the commercial pressure a pilot may feel to maximize income by making trips in excess of those permitted under fatigue management requirements – this is considered further below.

6.3 Paragraphs 5.7 to 5.9 and Appendix II considered the transfer arrangements and identified what the reviewer perceived as deficiencies. The issue for this section is whether commercial pressures played a part in those perceived deficiencies?

6.4 For the most part launches are old. Moreover, most do not conform to the standards contained in Annex A of Draft MO 54. Indeed this is recognized explicitly in the standards with a "grand fathering" provision for existing vessels. Rationally, investment in plant for transfer of pilots is dictated by available revenue. Revenue is shared by 3 providers according to the number of vessels piloted. Competition between providers means that helicopter transfer is provided in triplicate and launch transfer in duplicate.

6.5 Transfer takes place in a number of places in the GBR. It is obvious unit costs of transfer would be less if the amount of plant was reduced and utilization of the remainder increased. If it is obvious to the reviewer it must be very obvious to the businesses acting as pilotage providers. Yet agreement to share plant has not taken place - It is difficult to conclude otherwise than this is because of strategic commercial decisions associated with aggressive competition.

6.6 Deficiencies in floating plant used for transfer have safety implications. It follows, that commercial pressures appear to impact on the safety of transfer arrangements.

[24] In the term of the reviewer's stewardship of the Marine Board of Victoria a number of pilots were not considered to possess the necessary aptitude to be pilots – some chose to leave. This certainly had nothing to do with competition, nor pilot remuneration! There are really no psychometric tests for pilots which have the necessary level of reliability as a predictor of actual performance on the job. The serving pilots in Melbourne selected their unsuitable colleagues in much the same way some pilots argued to the review is appropriate for the GBR – i.e. the best method was argued to be "select from people we know".

6.7 To say that commercial pressures impact on the safety of pilot transfer is not the same as advocating regulation of the commercial aspects of pilotage. Commercial pressures always impact on business decision-making. AMSA, as the regulator, could achieve an improved safety outcome (despite prevailing commercial pressures) by appropriate regulation of vessel standards accompanied by an effective compliance programme.

6.8 There is an apparent belief that pilots are forced to work by providers to the extent that fatigue management requirements are breached. There is no doubt that many pilots feel the need to work to maximize their income which is a function of the number of pilotage acts they perform.

6.9 Effective fatigue management is important to AMSA. It is subject to a separate review concurrently and the nature of any fatigue management plan is not an issue for this review. It is assumed by this review that compliance is carefully monitored by AMSA. It was indicated by providers that the exercise of a favourable discretion by AMSA is sought for any variation of the requirements. The frequency of requests was estimated by one provider to be of the order of 20 times per annum and the other provider estimated the number of requests to be 12 times per annum. It appears these requests are routinely granted. While initially being made by telephone, both providers said the requests and the indulgence from AMSA were memorialized. There does not seem to be a significant difference between providers, such that a commercial advantage is given to one provider by an excessive imbalance in the number of concessions from AMSA. In addition, there is no evidence to show that the exercise of the discretion impacted unfavourably on safety.

6.10 An examination of the number of trips undertaken by pilots of the two major providers in the three pilotage areas of the GBR was made for the period 1 March 2004 to 28 February 2005. It appears that the average number of trips made per Torres pilot in Hydrographers Passage, the Inner Route and overall exceeded the ARP pilots' average by over 25%. Great North East Channel pilotages were about the same for both sets of pilots. This is consistent with a claim from Torres that in the March quarter 2005, Torres had 53% of the market and ARP 38%, with approximately the same number of pilots. Provided that fatigue management guidelines were not breached, this may mean no more than Torres pilots earned more money. Certainly, although pilots said that they felt a "commercial pressure" to maximize their remuneration, none said that they were pressured to breach fatigue management requirements by the provider and none admitted to any such breach.

6.11 Since 1993 pilots have suffered a dramatic reduction of income as a result of competition for pilotage business in the GBR. In addition pilots said that the number of trips they made to earn even that reduced income, had increased by about 50%. Pilots who piloted prior to the change allege that present income levels impact on the ability of providers to recruit suitable people to act as pilots in the GBR. Moreover, they say that changes to the threshold qualifications for entry into GBR pilotage have lowered the standard of pilots. Both these factors are said to diminish the pilotage safety outcome. The only evidence other than opinion offered in support of these assertions was reference to the number of incidents, involving vessels under pilotage charge, since 1993. This review regards such "evidence" as equivocal at best – this "evidence" is considered in the paragraph which follows. Some more strident observations were made. One of the more extreme observations likened the situation in the GBR to that

currently confronting the Queensland Government in the Health Service[25]. It will be ignored in the process of coming to any conclusions in this review. It is recorded for the purpose of illustrating the necessity for the review to separate fact from mere assertion.

6.12 It is always easy to raise the safety question and in many cases it may even be justified. Many anecdotes of alleged safety breaches, incompetence and unverifiable sources were offered in the course of this review. Effective investigation requires statutory powers to obtain useable information and both protect witnesses and investigators. No details of specific incidents were given to this review. In fact, as most people are aware, if they have evidence it should be reported to AMSA, ATSB or Federal and State police, so that those organisations with statutory responsibilities and powers can take effective action. As stated in the previous paragraph, the only specific "evidence" offered as to the effect of competition on the safety of GBR pilotage was the number of incidents since 1993. How relevant is this factor as evidence? In paragraph 5.10 a Det Norske Veritas report to AMSA was quoted as determining the annual frequency of groundings of piloted vessels to be 0.7. This figure is for around 4000 acts of pilotage per annum. In judging the relevance of this figure, this reviewer compared another pilotage (a port pilotage) where the remuneration of pilots was the highest in Australia and until 1999 no competition was present. From 1984 to 1999 that pilotage averaged one grounding per year with the number of pilotage acts around 6000[26]. These groundings were generally in the vicinity of marked channels. Given that GBR pilotage acts are considerably longer than the port pilotage acts under consideration, the rate of groundings in the GBR does not seem excessive by comparison with the port considered. Of course, it is said that the rate of incidents increased in the GBR post 1993 from that pre 1993. However vessels grounded under pilotage charge before 1993. Given that it is logical to say that the rate of pilotage incidents will be partially a function of the number of pilotages, it is not possible to conclude that if there has been any increase in the number of incidents since 1993, that increase can be attributed to the effects of competition. Moreover, drawing specific conclusions as to trends and attempting correlations from an analysis of a relatively small number of incidents is unwise. Therefore, the "evidence" of the number of incidents since 1993 is concluded to be equivocal at best. Correlating it with the effects of competition is very tenuous.

6.13 In contradicting the views of pilots, providers believed that they receive sufficient applications to effectively make a choice of suitable applicants for appointment as a GBR pilot. Interviews with Australian shipping organisations indicated that they had no complaints with the quality of pilots currently piloting in the GBR.

6.14 From statements made in the course of this review it is clear pilots in the GBR are not over remunerated for their services by comparison with the levels of remuneration in port pilotage throughout Australia. Pilot income depends on the number of vessels piloted. Pilots are contracted to a provider and while they are not conscripted, it may be that a certain amount of contractual imbalance is present. However, to say that this is the relationship of the pilot to the provider is one thing. To then say that this

[25] The comment was made that a number of "Dr Patels" now serve as GBR pilots. The comment was extremely unfortunate and beyond being able to be described as mere hyperbole. It is unsupported by evidence and should not have been made.

[26] Annual Reviews and Reports of the Marine Board of Victoria 1984 to 1999

relationship necessarily impacts on safety is quite another. There is a global and developing shortage[27] of available persons with Master Class 1 which also applies in Australia[28]. Pilotage providers need to compete for available persons. The providers in the GBR say they have sufficient pilots to make a choice. In examining the contradictory information obtained from various parties in the course of the review, the assessment of this reviewer is that there is no evidence to support the proposition that commercial pressures impact on the recruitment of suitable persons to become pilots in the GBR.

[27] Thompson Clarke Shipping P/L, *Maritime Skills Availability Study*, 2002, p. 4
[28] ibid, p. 6

7 REEFCENTRE

7.1 Paragraphs 5.19 and 5.2 considered certain matters associated with REEFCENTRE. It is unfortunate that a number of pilots believe that REEFCENTRE should be closed down since they apparently believe that its sole use is to supply details of vessel traffic. In this context they believe that the information on traffic could, and should, be obtained directly on board the ship and not via REEFCENTRE operators. But REEFCENTRE has a role in emergency management and is a line of defence in mitigating the consequences of pilot error.

7.2 Another issue, which concerned the exchange of information by VHF during passing situations in the GBR, was raised by pilots. Incidents were related of either inadequate exchange of information to assist a safe passing or even aggressive exchanges on the VHF. These were said to have been promoted by the regime of aggressive competition which translated into bitterness between certain pilots of rival organisations. It was also said that the frequency of such incidents had decreased over time but although now unusual, on occasion they still took place. This must be cause for concern. Apart from a possible breach of the *Navigation (Collision) Regulations 1982* (Cth) by a person responsible for the navigation of a ship[29] there are considerations of what such lapses mean for safety generally.

7.3 REEFCENTRE records VHF exchanges between ships at Hay Point during manoeuvring from the anchorage to berth and *vice versa*. It also records its own exchanges between itself and ships proceeding through the GBR. It does not have the technology to similarly record VHF exchanges between ships in the GBR.

7.4 In order to determine if undesirable VHF exchanges between piloted ships still take place and the frequency of such exchanges, it would assist if such exchanges could be recorded by REEFCENTRE. Moreover, recording would both encourage the proper exchange of information by VHF and assist reconstruction in the event of a casualty.

[29] e.g. Possible breaches of Rules 2, 5 and 7(a) of the International Regulations for Preventing Collisions

8 ADDRESSING THE TERMS OF REFERENCE

8.1 The following paragraphs examine and assess all the issues set out in the terms of reference *seriatim*. They also address certain additional issues not covered in sections 3 to 7 above.

8.2 The Training and Licensing of Pilots

Older pilots viewed AMSA's standards as deficient by comparison with those prevailing prior to 1993. They identified the deficiencies as being the much reduced experience as master of vessels using the GBR before entry into the GBR pilotage service. They also felt that the current trip requirements prior to licensing were far from being an effective substitute for such service. This opinion was by no means shared by all the pilots. Despite a connection being drawn between the number of casualties and this aspect of training and licensing, this review is unable to draw any such connection and, apparently, neither did the reports of ATSB. So far as this review is concerned it assesses the requirements of Draft MO 54 as adequate for the purpose.

8.3 Pilots had a major issue with respect to how the costs of training, particularly continuing training, are met. They noted the collection by the provider of a training levy, for professional development training. They felt that the amount of the levy devoted to training was insufficient, given the collections. One pilot suggested the establishment of a trust fund in which the training levy would be deposited and from which payments would be made, with the sole purpose of funding a variety of pilot training. Currently the pilots of one major provider directly pay all training costs themselves, with the exception of the costs of the professional development courses required by AMSA. The other provider pays all training costs. This, of course, does not mean pilots do not pay them in the form of reduced remuneration after costs are deducted. The reviewer considers that this issue is outside the terms of reference and accordingly moves from it. However, there appears to be a wider issue and that is that pilots apparently see training as a cost and not a benefit. This issue was exacerbated by a common view that the content and delivery of the professional development course was largely irrelevant to the task of pilotage in the GBR and hence of limited benefit.

8.4 One pilot provided a written submission drawing attention to what he saw as anomalies of Draft MO 54 (licensing of pilots). That is, where no period of grace was allowed to obtain a medical certificate for renewal of a licence and thus the period of validity of a medical certificate was thereby reduced. That pilot also saw it as anomalous that persons who had been ashore for a number of years were allowed to have their service deemed equivalent to service at sea.

8.5 Safety standards for pilot service providers

The standards prescribed by Draft MO 54 were generally considered to be satisfactory. Any reservations or complaints were directed towards the level of compliance and the "grand fathering" exemption for existing vessels. This report concurs with that view and also suggests that the standards for pilot transfer arrangements require some amendment. These were examined and assessed as being

deficient in some respects. This issue is discussed in paragraphs 5.7 and 5.8 above and in Appendix II.

8.6 Safety management systems and codes

This report has assessed that safety management systems are deficient in a number of important aspects. This is discussed at length in Section 5 above.

8.7 Check pilots

Pilots were, in general, content with the standards prescribed for a check pilot and the way the system operates. Whilst some pilots believed that check pilots may be subject to pressure, one written submission said "There is sufficient anecdotal evidence to support the claim that the check pilot system in operation for coastal pilots is far superior to the vast majority of port pilotage check pilot systems". Some pilots felt that check pilots should be appointed from the competitor, presumably to verify the integrity of the program. It was noted by the review that the check pilot system used by airlines does not use pilots of competitor airlines as check pilots. Given the intensity of feeling between some pilots of the two major providers, one would be somewhat hesitant to have then checking each other. The review therefore endorses the approach used by AMSA.

8.8 Audit and monitoring programs

It was generally felt by pilots that Draft MO 54 was adequate in its prescription. However, it was also felt that some improvements could be made in the way audit and monitoring is actually carried out in practice, particularly insofar as providers are concerned. There was a general perception amongst pilots that compliance by providers with standards was more of a problem than the standards and increased and effective audit would combat this perception. This review expresses no opinion on this, other than to refer to the opinions, previously expressed in section 5, as to perceived deficiencies in the SMS which should be detected and remedied by audit.

8.9 Appropriate information systems and guidance materials

The vast majority of pilots and providers felt that the information systems and guidance materials provided to pilots and providers were more than adequate. In fact the only criticism, if criticism it was, was of too much material and information being supplied.

8.10 To the extent that AMSA's information communication system with pilots and providers involves some reliance on the quarterly meetings, then it must be said that many pilots interviewed expressed some dissatisfaction with both process and achievement. This dissatisfaction appeared to lie in what was perceived as unresponsiveness by AMSA to any arguments or suggestions put by pilots. The process was not seen as consultative but seen as AMSA coming to the table with a prepared position with any amendment or deviation unacceptable. An alternative process of dialogue with pilots was suggested by two pilots. It was suggested that a peak consultative group of pilots be formed (possibly elected) with the function of facilitating communication between AMSA and pilots and *vice versa.* The group would

be expected and able to influence and have input to policy, change and development. There was no place for providers in this consultative group. To this reviewer at least, this idea seems not without some merit.

8.11 Technologies for providing safety information to pilots and pilot service providers

Pilots and providers were content with the technology for providing safety information.

8.12 Monitoring of pilot and pilot service provider activities

See paragraph 8.8 above.

8.13 The extent to which coastal pilots and pilot providers effectively use printed and electronic information provided by AMSA, including real time information provided by REEFCENTRE

Paragraphs 5.20, 5.21 and Section 7 have considered certain issues associated with REEFCENTRE. If the expressed views of a number of pilots are any guide to the use they make of real time information from REEFCENTRE, then it must be concluded that those pilots are **not** making effective use of that information. However, it was generally agreed that pilots and providers made effective use of printed and electronic information provided by AMSA although a number of pilots felt they were somewhat inundated with information.

8.14 Whether and to what extent, if any, commercial pressures are impacting on compliance with safety regulation and systems or on the ability of the industry to recruit suitably qualified persons into the Australian coastal pilotage industry.

See section 6 above.

9 CONCLUSION

9.1 The assessments of this review are included in the sections above and summarized in section 2. The reviewer is aware, and regrets, that for many pilots, the assessments contained in this review will not be all they expected.

9.2 In closing, the reviewer thanks all the persons and organisations contributing to this review for their time, information and unfailing courtesy. For those who do not see every point they made addressed in this report, the reviewer points out that reports seldom contain every item of information gathered, nor include every issue or point made in the course of a review. Moreover, any report is required to be compiled and submitted according to its terms of reference. This reviewer has attempted a summary of relevant information gathered. If there are any inaccuracies or errors in this report they are the responsibility of the reviewer.

9.3 The reviewer also acknowledges and particularly thanks the GBR pilots who extended their hospitality in the course of this review.

John McCoy

John McCoy

At Hobart

4 December, 2005

APPENDIX I

CONSIDERATION OF SOME ALTERNATIVES TO CURRENT ARRANGEMENTS FOR PROVISION OF PILOTAGE SERVICES IN THE GBR

1.1 The purpose of this Appendix is to consider an issue continually raised by the majority of pilots interviewed, which was the issue of what is the most appropriate organization to provide pilot services in the GBR having regard to safety? The corollary to this was that most pilots thought that the present system of 3 competitive pilotage providers was unsatisfactory and did not produce an optimal safety outcome. Having acknowledged the issue and considered it in the context of the terms of reference, the reviewer moved from it, since it was clearly outside the terms of reference.

1.2 One pilot provided a written submission to the effect that he did not believe most of his colleagues could give an informed opinion on the effect of competition on safety since most had not experienced the system prior to 1993! Notwithstanding, the great majority of pilots favoured a single organization of pilots. This was also supported by the Australian Marine Pilots Association (AMPA). One model advanced by AMPA proposed a single organization of serving pilots, together with 2 companies providing pilot transfer infrastructure for those pilots – it was averred that competition for pilot custom between those companies would provide efficiencies. It was further proposed that the single pilot organization would provide exclusive pilotage services in the GBR by agreement with an agency of the Australian Government, which agreement would control the rates of pilotage charged to clients – the agreement could allow for serial competition by tender to make the market periodically contestable.

1.3 Pilotage services to the ports of Australia are provided in a number of ways. They are provided by pilots who are port employees or employees of some other government agency or by limited companies composed of pilot shareholders, with an agreement with the responsible government agency to provide pilotage services on an exclusive basis, subject to serial competition - these pilot companies control their own plant for pilot transfer. For this option pilotage is provided under what is effectively a condition of monopoly for the period between tenders. Pilotage rates are controlled by the agreement. Finally, there exists another option which has been adopted for the ports of Victoria.

1.4 In Victoria, there is no legislative capacity to permit exclusive agreements for the provision of pilotage services. Nominally, at least, the responsible government agency, Marine Safety Victoria (MSV), encourages competition[30]. Pilotage providers may not operate without registration and are subject to certain legislative requirements as are pilots. There is no statutory or contractual control of pilotage rates. On its face, the Victorian system appears to be similar to the way pilotage is provided in the GBR. The regulatory role of MSV is similar to AMSA and does not regulate the commercial aspects of pilotage. However, although competition is *de jure,* permitted and encouraged none actually exists in fact, with pilotage for the ports of Port Phillip, Melbourne, Geelong and Westernport being provided by a single provider and another sole provider providing pilotage in the port of Portland. The single provider for Port Phillip, Melbourne, Geelong and Westernport is a company with the equity firmly in the hands of the serving pilots.

1.5 In the previous paragraph, reference was made to the similarities between the GBR and the ports of Victoria with respect to the provision of pilotage services. In principle the

[30] see MSV web site - Hwww.marinesafety.vic.gov.auH (pilotage services)

same conditions of competition which characterize the provision of pilotage services in the GBR could exist in Victoria. However, those conditions do not currently exist in fact. No competitor has chosen to enter the market in Victoria although it is possible. The conclusion is that significant barriers to entry exist in Victoria which may not currently exist in the GBR. These barriers may lie in the difficulty of obtaining licensed pilots or the costs of providing transfer arrangements. Other differences also exist. The equity of the principal Victorian pilotage provider is held by the serving pilots. With some exceptions, the equity of the pilotage provider companies in the GBR is not held by serving pilots. While there has been no suggestion at present that the possibility of competitive provision of pilotage services detracts from operational safety in Victoria, that is not the case in the GBR – many pilots, AMPA and its international affiliated body, the International Marine Pilots Association (IMPA) allege that competitive provision by the 3 pilotage providers does detract from an optimal safety outcome. Finally, there is considerable differences in the operation of coastal and port pilotage, both in duration and functions with the skills and knowledge required being different in many respects.

1.6 Paragraphs 1.1 to 1.5 (inclusive) of Appendix I make it clear that there are a range of alternatives which have been adopted for the provision of pilotage services in Australia. Competition in the GBR has lowered the price for pilotage by over 50% with (as the now defunct Prices Surveillance Authority found) a consequent benefit to ship-owners – it appears that this benefit has largely been purchased at the expense of the pilots with pilot remuneration being also cut by over 50%. It also appears that cost pressures as a result of competition have other effects, most probably in the area of the investment in plant used for pilot transfer. It is understandable that many pilots bitterly resent the dramatic reduction in their remuneration and working conditions which have occurred as a result of competition. It has been said that the consequences (apart from the obvious direct effect on lifestyle) have been personal and marital difficulties as well as bankruptcy. It has also been said that considerable tension exists between the two major competitors and this does not engender the proper environment for safe pilotage. There is no doubt that the two major organisations (and many pilots within those organisations) have a history and carry baggage associated with the formation of, and aggressive competition between, the two groups. Indeed, such tensions were manifested in issues which required resolution by the Court of Appeal of the Supreme Court of Queensland[31]. However, neither this review nor this report is the proper place to agitate these issues.

1.7 The Australian Marine Pilots Association (AMPA) and the International Marine Pilots Association (IMPA) argue that there is no place for competition between pilotage services in the same pilotage area. AMPA also says that all licensed GBR pilots are in agreement with this position[32]. Moreover, it is also understood by this reviewer that the policy of IMPA is to oppose the competitive provision of pilotage services in any case. In expressing the converse view, the Australian Shipowners Association (ASA) and

[31] Richardson & Ors v Radford & Ors [1996] QCA 554 (on www.austlii.edu.au)

[32] AMPA supplied the review with the results of a questionnaire circulated to all GBR pilots. No pilot expressed satisfaction with the current system of supplying pilotage in the GBR and all wanted change. 70% of pilots preferred the option of serving as a pilot of a pilot owned company providing services under contract to the Government under conditions of serial competition with 20% preferring the pre 1993 option with only one company with exclusive rights. The balance preferred other variations. Pilots saw no advantage to the current system other than to the ship-owner. All replies received agreed to AMPA acting for pilots if a non-competitive scheme could be negotiated.

Shipping Australia Ltd (SAL) prefer to see the present competitive arrangements remain with regulation achieving appropriate safety outcomes from providers.[33] A change in the way pilotage is provided in the GBR would require a change in policy by AMSA, changes to legislation and a variation in government policy. The rational and respectable way to proceed with such changes is by an analysis of the costs of options with respect to the safety benefits to be derived. If a cost/benefit analysis of the various options with respect to safety has been done by any party, it is not available to this reviewer. In any case, no such analysis was offered by the parties advocating a change from the current arrangements.

1.8 This Appendix has been included to acknowledge a major issue which was continually raised by pilots in the course of this review. Having recognized this wider issue, it must be reiterated that any recommendation to change the current arrangements for the provision of pilotage in the GBR is completely outside the terms of reference of this review.

[33] A member of ASA also contacted the reviewer. This member is a major Australian user of one of the GBR providers who was totally satisfied with the service the company's ships received from pilots of one provider which he considered "exemplary". He also said that he would be totally opposed to any change.

APPENDIX II

PILOT TRANSFER ARRANGEMENTS

1.1 Boarding and leaving vessels from pilot launches is a hazardous business.[34] Some hazards are difficult to control such as weather and tide but other hazards can be controlled. One hazard capable of control is the risk to pilots and pilot launch crews caused by unsuitable plant or deficiencies in plant operating procedures or the training of crews.

1.2 An agreed benchmark standard for pilot vessel standards is contained in Annex A to Draft Marine Order 54. This standard appears to be satisfactory with the exception that it does not appear to require that any person (i.e. pilot or deck hand) be provided with an effective means of being secured to the launch when proceeding from the accommodation forward to the pilot transfer position. Other pilot vessels throughout Australia are fitted with equipment which allow pilot and assisting crew to "hook on" when going forward. Most often this consists of sail track going either side of the launch from the entrance of the accommodation to the pilot transfer position. A snap hook, line and safety harness secures any person proceeding forward to the sail track. The assessment of the reviewer is that the standards should be amended to incorporate a similar requirement for pilot and deck hand to wear a safety harness and "hook on", particularly in view of the recent death.

1.3 It appears that much of the plant used for launch transfer is "getting on". Indeed this is recognized by a "grand-fathering" provision in paragraph 1 of Annex A to Draft MO 54. This provision applies the standard only to vessels acquired as replacement vessels after 1 July 2001[35]. It is understood that this provision operates to exempt most of the pilot launches from almost all the requirements of the pilot vessel standards contained in Annex A. What of the provisions of Annex A that do apply to existing vessels in service prior to July 2001? There appears to be only 3 provisions which apply to existing vessels. These are:

- Adequate fendering[36]
- Adequate safety handrails on deck and inside accommodation[37] (One pilot interviewed reported an incident where he grabbed a "safety rail" inside the accommodation and it came away – the provider said that the "safety rail" was a "towel rail". Another pilot said that he had experienced the detachment of a safety rail outside the accommodation when screws pulled out – apparently the rail was not bolted through)
- Windscreen wipers that are effective in rough weather and a system for applying fresh water to the area of the forward windows covered by the wipers[38] (This has been alleged to have been waived or at least not enforced on certain vessels).

[34] The author of this report has some experience of the dangers associated with pilot transfer arrangements. In Port Phillip (Victoria) in the period of the reviewer's stewardship of the Marine Board of Victoria, one pilot and both crew of a pilot launch were lost when the launch was overwhelmed by the sea in the Rip Entrance to Port Phillip. In a previous incident a pilot was lost when he fell overboard from a launch after leaving a vessel he had piloted. In addition, there were other incidents of pilots falling into the sea and deficiencies with boarding ladders causing injury but not death.
[35] Annex A, s 1
[36] ibid s 6(a)
[37] Ibid s 6(f)
[38] Ibid s 6 (h)

1.4 So much for the requirements of the pilot vessel standards that are supposed to be applied to all vessels, both existing and replacements. If it is accepted that the standard does not apply for the most part to existing vessels, what parts of the standard are not met by existing vessels? Pilots reported that existing vessels (and even some replacement vessels) did not meet the following standards – That is, the vessels did not have[40]:

- Adequate impact-absorbing seating for both crew and pilots situated to allow comfortable access to all necessary controls and equipment required to be used by both crew and pilots;
- Adequate on-board lighting including a search light operable from the coxswain's position and access lighting from the cabin;
- Adequate safety handrails on deck and inside accommodation;
- Adequate rescue and associated equipment to a proven system to enable a person to be recovered from the water;
- Windscreen wipers that are effective in rough weather and a system for applying fresh water to the area of the forward windows covered by the wipers;
- Air-conditioning (heating and/or cooling) which can be used for demisting.

1.5 This reviewer does not regard the pilot vessel standards of Draft MO 54 as excessive. Indeed, the standards should be considered to be the minimum standards for ANY pilot vessel used in the GBR, both existing and replacement. Why is this so? Transferring pilots is a hazardous operation. To reduce the risk and ensure a pilot arrives for the pilotage operation rested and without stress[41] the best possible transfer arrangements are required. "Grand-fathering" provisions are necessary to ensure an orderly and reasonable implementation of prescriptive safety requirements. Notwithstanding, 4 years appears to be a reasonable time to implement the pilot vessel standards of Draft MO 54 for all vessels, both replacement and existing and the concession in the standards for vessels in service prior to 1 July 2001 should be removed.

1.6 The reviewer is aware that such a change may have significant cost implications and difficulties of maintenance, refit and repair may exist in the area of operation of the GBR pilot vessels. Nevertheless, it is also considered that the safety implications outweigh the cost implications.

1.7 Pilots of one provider also alleged that defined procedures for the safe operation of the launches did not exist, or at least both pilots and launch crews were unaware of them. An adequate SMS should ensure that such procedures exist and pilots and launch crews are both aware and compliant. Such standard operating procedures (SOP's) should encompass all parts of the operation including prescribed equipment and enforcement. Indeed, these are no more than safe working practices and should be covered by any SMS[42]. To the extent that such procedures are not covered by a provider's SMS, the SMS should be changed to incorporate such procedures. If such procedures are part of a provider's SMS, audit should determine to what extent pilots or launch crews are unaware of such

[39] Annex A, s 6(h)
[40] ibid s 6
[41] Annex A, ss 2.1(b)
[42] GBRPSMC, ss 1.2.2(a), (b) & (c)

procedures or are non-compliant. In either case there are obvious holes in the SMS as it relates to pilot transfer arrangements[43].

1.8 Finally, this section of the review turns to matters which were raised in connection with the use of helicopters for pilot transfer. One issue raised referred to the situation which was said to regularly occur in the Hydrographers Passage pilotage, where 3 different helicopters from 3 different pilotage providers operated in close proximity to each other. This was said to be unsafe. This matter is clearly one for the Civil Aviation Safety Authority (CASA) and not for this review.

1.9 Another issue raised concerned the helicopters operated by one provider used for pilot transfer in Hydrographers Passage.. In effect, the issue related to CASA's regulation where the business structure of the provider allowed a helicopter of a different standard to be used in pilot transfer operations and this standard presented a significant cost advantage to that provider. The matter of the standard to be imposed for helicopter transfer operations is, again, clearly one for CASA and not for this review.

1.10 A third issue raised involved the lack of safety training for pilots using helicopters for transfer. It was pointed out by pilots that personnel routinely using helicopters for transfer over water in a variety of occupations, undergo a HUET course. Certain pilots said that they had undertaken such a course at their own expense. It is suggested that this needs to be further investigated to ensure that pilots being transported by helicopter receive the same level of protection and safety training as applies in other industries.

[43] An example of a deficiency appears to be in an alleged lack of training and defined procedures for emergency events. The possibility of a pilot or deck hand falling from a launch is real. What recovery procedures are in place? Pilots interviewed had not seen regular exercises to recover persons from the water. In other Australian pilotage operations crews of launches are regularly exercised in recovering a mannequin from the water.