

MSN 1823 REVISION – CONSULTATION 8 NOVEMBER TO 20 DECEMBER 2016

CONSULTEES' COMMENTS AND MCA RESPONSES

CONSULTEE & date of response	COMMENT/S - And any evidence presented in support	MCA RESPONSE
Passenger Boat Association (PBA) 21/12/2016	7.6.5 (4) – High pressure fuel lines Relaxation of requirements for jacketed fuel lines on engines < 375kW helpful. Cost of these on small engines is very high.	Noted
PBA	10.2.1 – Damage stability requirements Increase in passenger limit from 50 to 60 useful in terms of coach-capacity groups.	Noted

PBA

General – Bridge visibility

It is extremely likely we will be seeing the replacement of wing mirrors on cars start to happen at the end of 2017 with fixed (emphasis in fixed) cameras for rear vision. Working on the speed at which things happen on the road compared to the water I think this is a valid argument for the MCA to start looking at this technology and this is before you even start to look at benefit of things like night vision.

The MCA always aims to encourage innovation and the use of new technologies where possible. However, when making comparisons with road vehicles it must be borne in mind that the framework of operation is very different on the road. During many road operations vehicles operate within clear white lines delimiting the lane a vehicle can drive in, and in general vehicles follow nose-to-tail. There is also a clear responsibility on the vehicle behind to keep clear of the vehicle in front. Roads in built up areas are generally well lit and all vehicles carry headlights that offer bright illumination of the road ahead at least as far as the vehicles' braking distance.

During waterborne operations there are no white lines, vessels may operate on converging paths and do not follow neatly nose to tail; and tides and currents may also have an effect on the trajectory of the vessel. The onus is on both vessels to maintain a good look-out and ensure situational awareness all round. A ship needs good view aft to see a vessel coming up from behind and not obstruct her overtaking manoeuvre. Although ships move slowly compared to road vehicles they can have significantly more inertia so that failures of look out or situational awareness can lead to collisions a number of minutes later. Since the MARCHIONESS accident, it has also been the case that small domestic passenger ships are required to meet more onerous visibility requirements than cargo ships of the same size and operating area – because the consequences are much greater for the passenger ship and her passengers if there is a collision.

Mirrors and cameras can be affected by rain, mist, dazzling reflections and, because they distort scale and direction, they do not give an intuitive situational awareness which is essential when responding to high-stress situations such as an impending collision. For these reasons the MCA does not support the use of mirrors or cameras as a substitute for line of sight visibility. On the road the situation is different as the use of wing mirrors is well-established and replacement of a mirror with a camera is not the same as using a camera or mirror instead of a human for line of sight visibility on board a ship.

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PBA	<p>19.2.7 Cameras and mirrors</p> <p>It is felt that fixed good quality cameras have so much to offer to help in situations where meeting the current regulations of full rear vision is difficult to achieve in some smaller vessels. Fixed cameras with a display that is the same every time the skipper looks at it could be seen as better than just his eye working at normal resolution.</p> <p>It is not believed cameras should replace all natural rear visibility but to add additional support to a helmsman for instances where full compliance is difficult, surveyors should have a degree of discretion for A, B and C waters.</p>	<p>As discussed above the MCA does not consider cameras to provide an equivalent level of situational awareness to direct line of sight.</p> <p>In addition to the comments above it is noted that even a good commercial video system is not considered to match the maximum resolution of the human eye.</p> <p>There is already provision for alternative arrangements in the case of category A and B waters where there is restricted headroom, these could include the use of cameras if a case for such is presented to the satisfaction of the surveyor. Derogations on category C waters are not considered appropriate and would potentially leave 1823 vessels out of step with older vessels operating on tidal category C waters.</p>
PBA	<p>19.2.1 Bridge Visibility - Definitions</p> <p>Why does the MCA distinguish between a canopy and a solid roof supported on stanchions when they function in exactly the same manner? Some vessels chose a steel roof rather than a canopy for an open hull partly for reasons of safety when transiting bridges; if the vessel gets too close or has to stop while in the arch, a full-length steel roof will stop the vessel if it drifts sideways in the arch, and so protect the passengers. Will Surveyors be allowed to use discretion on a vessel by vessel basis?</p>	<p>The regulations do not define canopy and as such a solid roof with stanchion support might be accepted as a canopy. It is important to note, however, that the surveyor must be satisfied that the canopy is not an enclosure i.e. a space that was de facto enclosed by oversized 'stanchions' would be defined as enclosed.</p>
PBA	<p>19.2.1 (1) (a) – Bridge Visibility – Definition of “enclosed space”</p> <p>Although the principle of this section is understood - denying the use of side or end screens to ensure visibility forward is not impaired - surely this should be while underway. Why should a vessel be prevented from having side screens to a canopy, (or a roof), to keep the weather out when the vessel is out of service?</p>	<p>If a vessel is fitted with screens that can be deployed when the vessel is not underway it is considered that there is a distinct possibility that these may be deployed whilst underway by passengers if, for example there is inclement weather. The MCA position is that it is easier to ensure compliance if screens are absent from the vessel entirely. That said, there may be particular features of a vessels' operation that would give a strong case for special consideration in this regard, and owners should discuss with their surveyor.</p>

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PBA	<p>19.2.3 Bridge visibility on category A and B waters The alternative arrangements mentioned in 19.2.3.2 for Cat A & B waters with restricted air draft allowing the surveyor to consider alternative arrangements does not apply to 19.2.2 (1), the siting of the wheelhouse</p> <p>Depending on the interpretation by the MCA this means that a new vessel for inland waterways with low air draft bridges may have to be one of the following:</p> <ol style="list-style-type: none"> 1. Completely open to the weather forward of a helmsman steering from a traditional midships position, providing a poorer standard of accommodation in the open for the passengers. 2. May have a canopy forward of a helmsman amidships, but cannot have any side screens when not in service, or at night, allowing the weather into an open boat increasing maintenance costs. 3. May have a full-length fixed roof but has to be helmed from the stern with a lookout stationed at the bow of the boat, providing worse working conditions in the open for the helmsman. <p>We suggest an open passenger deck with a fixed roof be allowed by the regulations where the helmsman is steering from a traditional position, as long as acceptable standards of visibility are met.</p> <p>We suggest the fitting of side and end screens to vessels with either a canopy forward or a fixed roof, where the helmsman is steering from a traditional position, be acceptable if they are not used when the vessel is underway.</p>	<p>Thank you for highlighting this, we will amend the MSN to allow surveyors of vessels in Category A and B waters with restricted air draft to consider alternative arrangements for all parts of 19.2.2.</p> <p>Whilst MSN 1823 provides objectives that must be met, in most cases it does not impose the solution to achieve these requirements within the design. It is hoped that, by allowing alternative arrangements against all parts of 19.2.2 for vessels operating on Category A and B waters where there is restricted air draft as discussed above, suitable design solutions can be achieved. It must also be borne in mind that boats need not be of traditional design.</p>

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London Ducktours (LDT) 21/12/2016	<p>General The APV working group met from January 2015 to January 2016 to agree on an annex to MSN 1823 for amphibious vessels. We note that the annex has not been included in the amendment.</p>	<p>In compiling Edition 2 of MSN 1823 the use of the annex developed with the Amphibious Passenger Vessel (APV) working group was carefully considered. When requirements were considered individually it was felt that most APV areas were equally applicable to any similarly sized passenger vessel with tight dimensional constraints and other areas (such as fire detection) could be applied to all small ships. Whilst there were a very small number of concerns that only affected APVs it was decided that a separate annex would be confusing and make MSN 1823 rather cumbersome as it would necessarily be read in conjunction with the main body of the code unless the code was duplicated. For these reasons and to give full context, the content of the annex and the APV requirements were embedded in the appropriate sections of MSN 1823 and not in a separate annex.</p>

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LDT	<p>General During the review of APVs (and in particular our Class V vessels) MSN 1823 v MSN 1699 were considered in detail by external consultants Fraser Nash in their report 'A Review of Regulations Pertaining to the Stability and Survivability of Amphibious DUKWs'. The report concluded that there was no need to change the regulations from MSN 1699 to MSN 1823. The MCA accepted the recommendations. It is disappointing to note that the MCA are not accepting such advice for a new MSN 1823 version for an APV. The solution for the APV industry rests with the email to the MCA dated 15th April 2014 (attached). The MCA have never rejected these constructive proposals which would create a safer, more balanced, appropriate regulatory environment for the APV industry.</p>	<p>One of the key aims of MSN 1823 (and indeed all regulation) is to create a level playing field for all operators of passenger vessels on categorised waters. A separate and different set of requirements for amphibious vessels would not achieve this level playing field across all small vessels, in particular those with constrained dimensions. Whilst the ability to operate on land and water differentiates APVs from other waterborne vessels, when operating on water there is no material difference between an APV and any other small ship. The constraints imposed on an APV caused by the need to operate on the road are not sufficient justification for a separate standard for waterborne operations.</p> <p>The MCA does not agree with the stated conclusion of the Frazer Nash report 'that there was no need to change the regulations from MSN 1699 to MSN 1823'. The conclusions of the Frazer Nash report were complex and do not alter the MCA position regarding the need or otherwise for a separate APV standard.</p> <p>Further it is important to note that any new APV built after 2010 operating in categorised waters should already be in compliance with MSN 1823 Edition 1. Edition 2 represents an easing of prescriptive requirements in many areas and includes considerations from the APV working group so should represent an improvement for APVs over Edition 1.</p> <p>With regards to the email of 15th April 2014 we note that this email was sent to Frazer Nash – not MCA and MCA did not, therefore, receive the proposals.</p>
LDT	<p>General – Stability We refer you to the report (attached) ...which shows how APV Class V vessels cannot comply with MSN 1823 Intact Stability for Category C waters and above.</p>	<p>Please see reply to stability related comments in section 10.</p>
LDT	<p>General We still believe a separate APV Class would sit better within the whole regulatory framework (land and water)</p>	<p>Noted. Please see above comments.</p>

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LDT	<p>General – Grandfather rights review project We are concerned that the amended MSN 1823 regulations will form the benchmark for the grandfather rights discussions currently underway.</p>	<p>Noted. Although as above please note that Edition 2 of MSN 1823 represents an easing of prescriptive requirements over Edition 1 – which would be the alternative benchmark.</p>
LDT	<p>General – APV Throughout the APV working group meetings, APV operators have consistently demonstrated how vessels can operate safely to the appropriate legislation and when conflicts have arisen, due to incompatibility of land and water regulations, an equivalent level of safety has been proven.</p> <p>Considering APV safety concerns have been addressed, it is regrettable that the MCA have sought to act in a manner that closes down the opportunity of a new APV industry instead of looking forward by allowing for the development of a potential specialist, high value industry sector, creating jobs and prosperity at a crucial time for the UK economy...</p>	<p>Agreed</p> <p>The MCA do not agree with the assertion that APVs cannot be built to MSN 1823 and believe that designers can come up with innovative and creative designs that meet the latest standards. The MCA believes that clear high standards encourage innovation and investment in new products.</p>
LDT	<p>Consultation Question 1 If this was the case, we believe the MCA would be taking a proactive role in looking at new technology particularly in regard to bridge visibility. Rather than taking a retrograde step in using a human as a look out, the MCA should be embracing new technology as is your sister organisation, the DVSA, with paperless licensing and driverless cars.</p>	<p>The MCA continually monitors market situation and technological development. However the MCA continues to believe that for primary navigational sight lines it is not possible to achieve the same level of situational awareness of a human lookout using other means. The regulatory and operational framework on the roads is very different to the maritime environment and innovations in one sector do not necessarily map across to the other easily.</p>
LDT	<p>3.1.2 Application ...the regulations as they stand prohibit new APVs from being certified, particularly for Category C and D waters, so by definition the Code does not support the industry and has failed to offer “proportionate requirements that are better focussed on the probable level/s of risk for a given ship’s operation/s” as you ask in your survey.</p>	<p>There is no intention to prevent the building of APVs. MCA believe that, whilst it is undoubtedly a challenge, with careful design it is possible to build APV vessels to meet MSN 1823. The level of safety achieved by compliance with MSN 1823 is deemed proportionate to the risk faced.</p>

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LDT	<p>4B9.1 Special Considerations</p> <p>We acknowledge that some form of protection may be required. However, we feel, in the case of APVs, to focus on propeller guards is too prescriptive. We would suggest that the wording is changed to remove propeller guards specifically. Many of the solutions could be done with careful design and strengthening of key areas.</p>	<p>It is considered that the primary source of protection should be the appropriate design and scantlings of the area. Hull structure in way of the propeller would only be considered high risk in the event that the scantlings are light, as stated in 4B9.1. 'other arrangements considered'. It is not intended to preclude other solutions.</p>
LDT	<p>6.6.1 – Windows/deadlights</p> <p>Disproportionate requirement. Deadlights on APV's are impractical given restrictive beam due to land regulations e.g. How can they be closed externally by crew when the vessel is underway? We would suggest the requirement is only there if there is a significant possibility of bad weather flooding e.g. category D waters far from shore and not in enclosed river environments.</p>	<p>Deadlights are only required on windows in superstructure contributing to stability or protecting openings on the freeboard deck. It is considered unlikely that an APV would have such arrangements. Deadlights are necessary in these locations to preserve watertight integrity in the event of a window loss or high risk of window loss.</p>
LDT	<p>6.6.2 & 6.6.3 - Windows</p> <p>Confusing requirement for Category C (tidal) and above for APV's. For APV's, there is a potential conflict as the ISO standards on water and land are different (ISO 122126 on water and BS 857:1967 on land). During APV working group discussions, it was the MCA's view that the more stringent regulation should apply. However, this is not mentioned in your current draft and we would suggest this is clarified.</p>	<p>It is considered unlikely that an APV on tidal category C waters would have 'weathertight' windows as understood in shipping terms. However, any such windows would need to conform to Classification Society rules. A note shall be added to the Code to clarify that where any requirement overlaps with other requirements external to the Code the more onerous standard should be used.</p>
LDT	<p>6.7.2 – Watertight integrity</p> <p>Not sufficient for APV's. The seven day inspection period of APVs is too long and could result in incidents. There should be a daily check implemented and a requirement for a system to be included in the DSM/ISM Code to ensure that the operator is complying to surveyor's satisfaction.</p>	<p>Agree. A sentence will be added to the Code to clarify that where vessels remain out of water for a period of time and are launched with passengers on board then a check of all hull fittings etc. shall be carried out daily before first entering the water.</p>

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LDT	<p>8.2.2 & 8.2.3 – Emergency power source Disproportionate Requirement. Given limited space and complex intact stability for APVs, we feel this requirement is disproportionate for APVs and will result in having a significant number of batteries above the bulkhead deck. You have relaxed requirements for Cat A and B waters within 80m of an accessible bank. Given excessive weight additional batteries would add to an APV, it would seem reasonable to include the ‘30 minute’ requirement for APV’s operating in Cat C waters too. In the case of the Thames an accessible pier could also be used in lieu of an accessible bank. Given the rationale in 8.2.5.1 for catamarans we believe there is a precedent for a similarly styled rational for APVs.</p>	<p>Due to the nature of catamarans there is a built in redundancy due to separation of the two hulls and duplication of the electrical system. It is not considered that the rationale applies to APVs as they are monohull vessels. It is considered that category C waters should not enjoy relaxed requirements in this area. There is no justification for differentiating APVs from any other vessel operating on category C waters.</p>
LDT	<p>9.4.1 & 9.8.1 – Bilge pumps and bilge suctions Clarification required. Some submersible pumps may not be self-priming yet the wording here implies that they may be approved. We suggest the regulation is clarified.</p>	<p>Submersible pumps prime themselves when they are submerged.</p>
LDT	<p>10.1 – Intact Stability Disproportionate Requirement. As was outlined in the APV working group this regulation will rule out any new APV’s from being certified and kill the industry.</p>	<p>The requirements for high angle stability have been relaxed significantly for certain small vessels in MSN 1823 Edition 2 but the MCA believe that there is no justification for further relaxations for low angle stability requirements for any small vessel. It is acknowledged that for small vessels with constrained dimensions it can be challenging to achieve the stability requirements within the design constraints, however, this in itself is not an argument for relaxing the stability standards.</p>
LDT	<p>10.1.2 (1) (ii) – Righting lever criteria Meter-radians are too high for APV’s due to land regulations maximum vehicle width of 2.5 metres.</p>	<p>As above, with regard to stability, there is no justification for relaxed requirements for APVs as a subset of passenger vessels. MSN 1823 sets the requirements necessary for waterborne operation and stability is a fundamental part of that and cannot be relaxed without justification. A constraint not linked to the waterborne operation of a craft and presented without mitigating circumstances does not provide this justification.</p>

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LDT	<p>10.1.2 (1) (iii) – All ships required to meet righting lever criteria Downflooding angles for APVs will be in region of 25° and we believe new criteria should be created in an annex for APVs.</p>	<p>A 25° angle would not meet modern expectations of safety.</p>
LDT	<p>10.2.3 – Collision and aft peak bulkheads (ii) APVs will always be less than 24m in length due to road regulations. The maximum distance for a collision bulkhead being less than 10% of the full length of the ship is too restrictive to front engine APVs. We would suggest the requirement in 10.2.3 of 3 metres plus 5% would be achievable for front engine APVs provided that the 3% requirement is still kept.</p> <p>(ii) If you change above to ‘reasonable and practical’ this would add additional flexibility when designing new APVs.</p>	<p>Equipment essential for safety, including the main propulsion machinery cannot be fitted forward of the collision bulkhead. A 3m collision space is excessive on a small vessel.</p> <p>The current dimensions provide ample flexibility.</p>
LDT	<p>10.2.8 (vii) - Damage stability We believe righting lever is excessive, and needs to be proved for APVs. Given a significant number of passengers will be sitting down and unable to move across the ship, we feel the righting lever model would be different to that of conventional Class V vessel.</p>	<p>There are many passenger vessels of similar size where all passengers are seated. There is no justification for APV specific relaxations. The righting lever required is equivalent to only two people moving from one side to the other of a 2.5m wide 12 tonne vessel.</p>
LDT	<p>13.2.1 – Means of escape If there is a requirement for an emergency exit on each side of the vehicle and yet regulations require just a single ORL, then there must be a requirement for the ORL to be accessed from either side otherwise dry shod evacuation is not possible.</p>	<p>It is correct that where a single raft is fitted it should ideally be capable of being launched and boarded from either side of the vessel.</p>
LDT	<p>13.2.2, 13.2.2Bis – Means of Escape & 23.5 – Minimum seat dimensions 750mm is a disproportionate requirement. It was agreed at the APV meeting that 600mm was a sufficient gangway width for APVs where passengers remained seated. This should be included in the promised APV Annex.</p>	<p>Section 23.6 provides for aisles of 600mm on small vessels. Doors, corridors and stairs shall be 750mm.</p>

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LDT	<p>13.2.4 – Means of escape (windows) For APVs minimum window areas 600mm x 600mm are not constant with road regulations. Such a standard should be harmonised.</p>	<p>These are the minimum dimensions, if there are other requirements then the most onerous must take precedence. The minimum emergency window size for a bus is 500x700mm, therefore a window of 600x700mm will meet both standards.</p>
LDT	<p>15.6 – Fire protection of Machinery and Auxiliary Machinery Spaces Fire insulation. The relaxed requirement has not specified a maximum height for the insulation material to be installed from the bottom of a machinery space. We suggest 'as low as reasonably practicable' but have a limit of 300mm. 300mm is what is recommended in SOLAS and should be sufficient to prevent oily bilge water from contaminating insulation foam.</p>	<p>The guidance referred to above is based on MCA Guidance on SOLAS Chapter II-2 and is applicable to international passenger vessels which are generally much larger than domestic vessels.</p> <p>The insulation of bilge areas on domestic passenger vessels is dependent on the specific arrangement of the machinery spaces. The insulation requirements in way of bilges should be discussed with the attending surveyor and dealt with on a case-by-case basis.</p>
LDT	<p>17.2.1 – Guardrails and stanchions Heights should be recommended for APVs where passengers are always seated.</p>	<p>This could be applied to many vessels, there is a real danger of passengers, especially children standing on the seats of vessels</p>
LDT	<p>19.2 – Bridge Visibility Disproportionate Requirement. Due to the impact of the intact stability calculation, the regulations as written on enclosed passenger spaces de-facto imply the helmsman would have a head height above 3m. This implies the driver of the APV will be roughly at the height of the top deck on a double decker bus, thus creating significant dangers on the road. It is also a significant deviation of philosophy within road regulations regarding visibility.</p>	<p>Helmsman need not be raised a full deck height above passengers. As already noted – the road environment is very different to waterborne operations, particularly with regard to visibility considerations.</p>
LDT	<p>19.2.7 – Cameras and mirrors This assumes a human is a better visual aid than cameras and mirrors, and will limit the introduction of new technology such as computer navigated 'driverless' boats.</p>	<p>The MCA does not consider that cameras and mirrors are a substitute for primary line of sight. MCA believe that mirrors cannot give the same level of situational awareness as primary line of sight and it has been suggested that the resolution of even good quality camera systems does not come close to that achieved by the human eye.</p>

