**Brodick Ferry Terminal Redevelopment**
Caledonian Maritime Assets Limited (CMAL)
**Questions/issues raised during the design development phase public consultation, along with CMAL response/position.**
**Post Construction Follow-Up - May 2018**

| No. ref | Issue / Question Raised | CMAL Response / Position | Was the comment/issue incorporated in the final terminal. (Yes, No or N/A) | Post Construction Comments - May 2018 |
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| **Questions raised at CMAL public meeting of 03 December 2012** | | | | |
| 1. | Can escalators be provided in the terminal for people with bags? | Escalators are very expensive, but CMAL will review the access situation. Archial are reviewing ramps in the building. (Post meeting advice is that escalators are not very good/safe for people with large bags and therefore the outline terminal building design has been amended to include ramp access to the first floor, as well as stairs and lifts). | No | Escalators were not incorporated in the design/construction, for the reasons previously stated. |
| 2. | Have CMAL spoken to the helipad owners/operators in Brodick to ensure the proposed development does not interfere? | CMAL will contact owner/operator. (Post meeting note – the owner and operator of the helipad have confirmed that they have no concerns over the proposed development). | Yes | Liaison with the helipad owner and operator continued throughout the development. Bond Helicopters, who provide the service for Scottish Ambulance Service, stopped using the facility in April 2016 and now use a facility at Whiting Bay to be closer to Lamlash Hospital. |
| 3. | There doesn't appear to be much in the way of car parking, can there be some more provided? (based on Option 4B) | Halcrow are reviewing the size of the marshalling area and reclaim areas with a view to maximising the parking. (Post meeting note – the marshalling and parking areas have been optimised in Option 5C, with the provision of 87 parking spaces. 20 will be for staff, 6 disabled and the remainder for public parking). | Yes | The finalised terminal incorporates 88 total car parking space in the following formats: 43 standard spaces, 7 disabled spaces, 2 electric vehicle spaces and 10 staff spaces. The existing short stay carpark has approximately 16 further spaces.<br>The old terminal building will retain 10 dedicated spaces. |
| 4. | Can we stop traffic queuing on the public roads? (based on Option 4B) | Halcrow are reviewing the kiosk location and marshalling area in general. (Post meeting note – Option 5C incorporates a queuing lane that can accommodate 15+ cars). | Yes | An 85m entrance road has been constructed at the terminal that allows approximately 15 cars to queue off the public road. |
| 5. | Can there be ticketing at the kiosk to save people walking across the marshalling area to get tickets? | As per (4), Halcrow are reviewing the kiosk location, however their advice would be that ticketing at a kiosk at the entrance to the marshalling area would actually cause far more safety concerns by increasing queuing traffic on the roads. Any ticketing at a kiosk would be for CalMac to implement. | Yes | A ticket kiosk has been incorporated at the end of the entrance road, where ticketing is available. |
| 6. | Visit Arran requested if CMAL could consider using some of the old/existing infrastructure for a breakwater to a potential marina/moorings development? | CMAL are liaising with Visit Arran. | Yes (part) | The old pier will be demolished, however, the old breakwater will remain in place. The old terminal building will be marketed for future use. |
| 7. | Can we re-site the bus station closer to the new terminal? (based on Option 4B) | It was noted on the night that the new terminal may need to move closer to the bus station, which, once drawn up, may appease the issue. (Post meeting note – Option 5C has the terminal situated only 70m away from the terminal). | Yes | The new bus terminal was constructed adjacent to the new terminal building. |
| 8. | Are there any plans to take luggage on trailers to the vessel? | CMAL noted that this was predominantly an operational issue for CalMac to review/consider. | N/A | Operational issue for CalMac. |
| 9. | Is anything being done to improve Ardrossan? | CMAL noted that they have spoken to Clydeport, who have indicated that they are considering works. Liaison will continue. | N/A | Issue for Clydeport/Peel Ports. |
| 10. | If the new vessels are smaller, how will this cope with peak capacity? | CMAL noted that work would need to be done to try and adjust the timetable to spread the demand at peak periods. CMAL will liaise with CalMac and Transport Scotland in this respect. | N/A | Not relevant to terminal redevelopment project. |
| 11. | Based on (10), are CMAL coordinating with other providers of public transport, especially railways? | CMAL noted that they would work with Transport Scotland and CalMac to optimise the timetable, which may involve discussions regarding the railways. | N/A | Not relevant to terminal redevelopment project. |
| 12. | Will the new terminal have drop off and pick up points? (based on Option 4B) | Yes, there is a drop off and pick up area allowed for on the plans. | Yes | Drop-off/pick-up point have been constructed for multiple cars, coaches, taxis, etc. |
| 13. | What happens to the existing pier when the new facility is built? | As the existing pier is reaching the end of its serviceable life, CMAL noted that they would need to demolish the structures, as the ongoing maintenance costs would only increase. | N/A | The old pier will be demolished, however, the old breakwater will remain in place. The old terminal building will be marketed for future use. |

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| 14. | Will the new vessels be faster? | CMAL noted that beyond the current 15 to 15.5 knots any increase in speed would decrease the fuel economy exponentially. Therefore it is considered that the vessels will be designed to run at the same speed as existing, but with perhaps the capacity to go one or two knots faster to make up any lost time (the Caledonian Isles currently runs as 100%, so cannot make up time). | N/A | Not relevant to terminal redevelopment project.<br>The new vessel will operate at the same speed (14.5 knots) as the existing vessel, however will be able to run up to 16.5 knots. |
| 15. | Based on (14), will the journey time then be the same? | CMAL noted that the sailing time will be the same, but hopefully ship and port designs will allow for less loading and discharge time, which could potentially reduce overall journey time. | N/A | Not relevant to terminal redevelopment project. |
| 16. | Have CMAL considered auto mooring? | CMAL noted that they have previously done studies on auto mooring and believe the current systems available do not offer a cost effective solution for west of Scotland piers. This is mainly due to weather and tidal conditions, as well as capital cost of installation (vessel and pier), and many reports of having to use shore staff and ropes anyway. | No | Automooring was not incorporated into the design/construction, for the reasons originally stated. |
| 17. | Could objections to the Harbour Revision Order (HRO) delay the project for years? | CMAL noted that this is possible, but they are committed to having open consultation with stakeholders/public to try and alleviate any concerns before the formal submission/consultation is started. | N/A | The delays at HRO stage were minimal. |
| **Questions raised between the CMAL public meeting in December 2012 and the next meeting on 04 March 2013** | | | | |
| 18. | What is being done to minimise the length of walk between the bus stances and the ferry? (based on Option 4B) | CMAL are liaising with SPT and Stagecoach about the site of the bus stances, but for Option 5C the stances have not been moved (refer to No.(7) above). The length of the new pier has been shortened as far as possible, which minimises the walking distance. It is considered that moving the bus stances further west into/across the terminal will significantly add to the traffic and pedestrian movement through the terminal, which could lead to delays and more importantly safety concerns. | Yes | As per Q7, the new bus terminal was constructed adjacent to the new terminal building, therefore minimising distances. |
| 19. | Is there a specific ambulance drop off point being included? | No. In emergency situations ambulances will be able to access most areas of the terminal. For patient transfer purposes, the ambulances will need to make contact with CalMac, as currently happens. | No | As noted in the original response, ambulances will be able to access most areas of the new terminal in emergency situations. |
| 20. | Can the passenger access to the vessel be outside instead of through the passenger "tunnels" and what is wrong with walking up a gangway? | Having a covered passenger walkway allows for weatherproof and comfortable access to the vessels and ensures vehicle and passenger segregation. While gangways are safe and commonly used means of access to a vessel, they often involve steeper gradients that a passenger access system and therefore can be difficult for people with reduced mobility and with luggage. | No | See original comments. |
| 21. | Will the new vessels be "Ardrossan proof"? | The new vessel will have greater sea keeping capabilities and improved manoeuvring characteristics than Caledonian Isles. Therefore the new vessel will be able to operate safely in worse weather conditions than the existing vessel. | N/A | Not relevant to terminal redevelopment project. |
| 22. | Will the new vessels have more open deck space for passengers? | The new vessel will have proportionally the same outside seating space as the Caledonian Isles. | N/A | Not relevant to terminal redevelopment project. |
| 23. | Can CMAL provide a two-storey car park with automated pay barrier access? | This is considered to be a very expensive option and perhaps not in keeping with the surroundings. Paying for parking at the terminal has been mentioned by a number of people (due to much of the current parking being taken up by non-ferry users) and may be considered by CMAL later in the project. | No | No multi-storey car park was constructed and at present CMAL do not charge for parking at any of their facilities. |
| 24. | Can the marshalling be positioned further away from the pier, to allow for the terminal building and car parking to be positioned closer to the pier? (based on Option 4B) | Many layouts have been considered and the two main concerns about having the marshalling area further away from the pier (i.e. – to the west of the site) is that it would be difficult to avoid queuing traffic on the main road (ref No. (4) above) and that segregation of the ferry traffic would be challenging, which has both safety and security implications. | No | The building was positioned as close to the pier as could be, whilst still allowing for operational space at the shore end of the pier. |

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| 25. | Can the staff car parks be positioned further away from the pier, to allow for the terminal building and car parking to be positioned closer to the pier? (suggested location was across Market Road in the short-term parking next to the garage). (based on Option 4B) | It is considered necessary for staff car parking to be relatively close to the terminal building, as the staff have to park there and walk to the terminal every day (and often they are in and out throughout the day as part of their duties) and all year round. While customer car parking also should be relatively close, the majority of customers will use the facilities far less than staff. | No | Staff parking has been constructed relatively close to the new terminal, but not at the detriment of public parking. |
| 26. | The traffic flow needs to be simplified (based on Option 4B). | Please refer to traffic flow revisions of Option 5C. | Yes | The constructed terminal has far simpler pedestrian and vehicle flows, in relation to early design options. |
| 27. | Can the existing linkspan and pier continue be used and perhaps enlarged? | The existing facility is reaching the end of its serviceable life and ongoing maintenance costs are increasing. It would not be economically viable to continue to maintain the existing facilities, once the new facilities have been constructed. | No | Refer Q13 |
| 28. | Is there a need for dredging, as this could lead to the requirement for maintenance dredging? (based on Option 4B) | The current outline design allows for dredging, which enables the pier to be situated as close to the shore as possible. This allows for suitably deep berths, whilst also minimising distance to vessels, minimising the depth of water at the end of the pier (reduced construction costs) and improves the wave climate. Halcrow will review the need for maintenance dredging during the detailed design phase and advise accordingly. | No | The construction necessitated dredging, which was primarily to ensure that the pier could be as close to the shore as possible. It is considered unlikely that maintenance dredging will be required, but CMAL will monitor. |
| 29. | Can the existing causeway be used as part of the new pier/causeway? | This was reviewed as one of the initial perpendicular options, but was discounted due to a number of issues, namely:<br>- difficulty of construction due to existing use<br>- difficulty of vessel access to existing pier during construction<br>- increased pedestrian/traffic conflict due to access/egress at terminal<br>- increased length of pier from shore<br>- increased depth of water (expensive construction)<br>- increased effects from wave climate | No | See original comments. |
| 30. | Can the bus stances be moved to the east of the port area? | This has been considered, however, there are a number of issues that are not favourable, namely:<br>- this introduces more vehicle and pedestrian traffic into/across the ferry terminal (raising safety and congestion concerns)<br>- a number of people have commented that they don't want to walk from the far side of the ferry terminal into the town<br>- given the clearances required on the passenger access system (PAS) over the pier approach road, the terminal building position in Option 5C allows for the optimum length of walkway. If the bus stances and terminal was closer to the end of the pier, the PAS would be too steep, or a third floor would be needed in the building, at considerable extra expense. | No | The bus stances were constructed east of the old terminal building, but not to the far eastern extent of the port area. |
| 31. | Can the existing terminal building be demolished to increase the area available for the new development? | CMAL have not discounted this, although there as the building has potential for use by others, the decision to demolish it would not be taken lightly. Option 5C does not involve the demolition of the existing terminal building. | No | The old terminal building will be marketed for future use. |
| 32. | Is the Arran Transport land to the east of CMAL land available for the development? | CMAL have met with Arran Transport and believe that it may be available. None of the options reviewed to date utilise this land. | Yes (part) | The land to the east of CMAL's land was made available to the contractor during construction. |
| 33. | Can the new terminal building be situated on the east of the new pier? (based on Option 4B). | This has been reviewed as part of the design development, but has been discounted primarily due to vehicle and pedestrian management issues, but also due to proximity to the bus stances and the town in general. | No | The new terminal building's final position was optimised from option 4B, but it could not be moved to the far east of the site. |
| **Questions/comments raised at CMAL public meeting of 04 March 2013** | | | | |

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| 34. | Concern was raised about vehicular ferry traffic being directed between the terminal building and the drop-off/pick-up/parking areas (based on layout Option 5C), hence meaning that pedestrians would need to cross the flow of traffic. | CMAL noted that the layout shown on Option 5C had been developed after close consultation with CalMac and review of many alternatives.<br>- There is a requirement to separate ferry traffic from all other traffic.<br>- The flow of traffic at to the marshalling lanes would be slow due to speed control measures and as all vehicles would need to report to the repositioned kiosk.<br>- Although not shown on the drawing, the marshalling lane would incorporate a number of large raised pedestrian crossings, with priority to the pedestrians.<br>- It is considered that a large proportion of the pedestrian traffic would come from the town or from the bus stances along a footpath with no crossings. (It was, however, noted that the location of the bus stances was currently under review).<br>- It is virtually impossible to eliminate all pedestrian/vehicle interfaces, so to limit the crossing points to slow moving one-way traffic is the best compromise. | Yes | The constructed terminal building is between the marshalling area and the drop-off/pick-up/parking areas, therefore eliminating this concern. |
| 35. | Are there facilities for disabled drop off? | Yes. There are drop-off points some 15m from the entrance to the terminal building. | Yes | Drop-off/pick-up point have been constructed for multiple cars, coaches, taxis, etc., approximately 5m from the terminal entrance. |
| 36. | Concern was raised about the distance to walk to the vessel from both the bus stances and from the terminal building. | CMAL noted that they are reviewing the location of the bus stances with SPT, Stagecoach and CalMac. It may be possible to move the stances closer to the terminal, and this is being reviewed.<br>The distance from the terminal to the pier is limited by a number of factors such as the slope of the walkway (1:20), the height of the linkspan approach clearance (5.5m) and the depth of water the piers needs to be in. CMAL will review the location of the terminal relative to the pier and try to minimise where possible.<br>CMAL did however note that while the proposed walking distance was longer than existing, it was comparable or shorter than many other public transport interchanges (such as train stations, bus stations and airports). | Yes (part) | Refer Q7 & Q18 in relation to the bus stances.<br>Original response still stands in relation to distance to/from vessel. |
| 37. | Is there a specific ambulance drop off point being included? | Refer to Q19, above. | No | Refer Q19 |
| 38. | Does the redevelopment of Brodick offer good value for the taxpayer? Should the money not be spent elsewhere, such as Ardrossan or another "port of refuge" on the mainland? | CMAL noted that the current pier at Brodick is reaching the end of its serviceable life, is costing a lot of money to maintain and cannot be maintained indefinitely. The existing pier and facilities also do not offer adequate: passenger waiting space, vehicle marshalling area, depth of berth, flexibility of berth, drop off areas, regular parking, disabled parking, staff parking, covered access to the vessel, etc. As such, CMAL feel that the new proposals do offer good value for the taxpayer.<br>In terms of whether money should be spent at Ardrossan or any other mainland port to improve the service, CMAL will endeavour to bring the concerns to the attention of Clydeport (who own Ardrossan) and Transport Scotland (who are responsible for setting the route). | N/A | See original comments. |
| 39. | Will the new pier have facilities for cruise ship tender vessels? | CMAL noted that at this stage of the project accommodating cruise ship tender vessels has not been specifically reviewed, but it will be considered as part of the detailed design. It was however noted that the pier will be big enough to accommodate vessels of up to circa 100m in length, including cruise ships. | Yes | The new facilities have been constructed in a manner that will accommodate small to medium cruise vessels (up to circa 130m). Cruise tenders can be accommodated at the new facilities. |

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| 40. | Will the Passenger Access System be able to accommodate a range of ferries? | CMAL noted that the Passenger Access System (PAS) will be designed to accommodate as large a window of fit as possible. At the design stage, Halcrow will review the door position of all the large vessels in the fleet, as well as any potential new build and aim to provide a PAS with as much flexibility longitudinally and horizontally as possible. Consideration will also be given to whether the PAS can be used on the east berth. | Yes | The PAS has been constructed to serve a large range of vessels on the western (linkspan) berth. |
| 41. | Questions were asked about the port of refuge for the Arran ferry service. | CMAL noted that they are contractually obliged to maintain Gourock as a port of refuge for the Clyde ferry services (predominantly Arran and Bute services). In times of adverse weather, the decision on whether or not to sail or to use Gourock as a port of refuge is entirely down to CalMac as port and ferry operator. | N/A | Not relevant to terminal redevelopment project. |
| 42. | Will the new pier be wide enough for large trucks to fit down, to allow the unloading of bulk materials? | Yes. The pier is tentatively designed at 15m wide, which will allow access for large trucks, despite the presence of the PAS. However, the pier will not be wide enough to allow trucks to turn around. | Yes | The pier was constructed 20m wide, which is sufficient to allow access for large trucks, and modest size mobile cranes or loaders. |
| **Questions/Comments received following the CMAL public meeting on 04 March 2013** | | | | |
| 43. | The revised layout of the terminal building includes a long ramp to the first floor. This increases the distance people need to walk to access the vessel. | The ramp option in the terminal was included after a large number of comments were received regarding the initial layout that had stairs and two lifts (refer Q1, above). While the ramp option does allow access to the first floor without the use of a lift or stairs, it does inevitably increase the distance to walk, as it has to be limited to a gradient of 1:20. The ramp also increases the size of the building. CMAL will take into account all the queries raised in respect of the building and continue to work with CalMac, Halcrow and Archial to reach a suitable solution. | Yes | Further to Q1, the ramp was not constructed, therefore the building size and the length of walk reduced. |
| 44. | The increased distance to walk from the bus stances and the terminal building to the ferry will take longer than existing, therefore may affect the bus and ferry turnaround time. | As noted in Q18, 36 and 43, CMAL are continuing to review the layout to minimise the distance to walk to the ferry. CMAL will also continue to liaise with CalMac, SPT and Stagecoach regarding the turnaround times. | N/A | The constructed terminal minimised the walking distances.<br>Since operations started at the new facilities on 20th March 2018, CMAL are not aware of any timetabling issues relating directly to the redevelopment. |
| 45. | Further to Q43 and 44, it was noted that the long walk to the ferry would be especially difficult due to the high percentage of elderly people that live on the island. | CMAL will work with the design team to minimise the length of the walk to ferry and to ensure that the gradients of ramps and walkways provide equal opportunities and access for all. | N/A | As per Q44 and Q36, the constructed terminal minimises the walking distances within the constraints of the needs of the facility.<br>CalMac still offer assistance to those that require it.<br>Also refer to Q28. |
| 46. | Further to Q43 and 45, elderly people would find climbing 5.5m by stairs too much and the lift could well be slow or out of action. | Noted, although it is unlikely that any stairs would go the full 5.5m in height. Should the ramp alternative not be progressed, it would be the intention to install 2 lifts with a capacity of 13 persons. This lift capacity over just one floor is considered adequate and modern lifts are generally quick and reliable. | Yes | The terminal building was constructed with two 13 person lifts. Both main staircases have half landings. |
| 47. | Can a taxi rank be situated near to the terminal. | There is an existing taxi rank directly opposite the terminal at present. There will be a drop-off and pick-up area provided close to the terminal, which can be used for this purpose. | Yes | Whilst not a formal taxi rank, the drop-off/pick-up area adjacent to the new terminal can be used by taxis. The existing NAC licenced taxi rank is still in place. |
| 48. | Can a roundabout be incorporated at the main entrance to Market Road? | At present the specific type of junction has not yet been considered. This will be reviewed at detailed design stage and then discussed with North Ayrshire Council. | No | A number of junction options were considered during the design, but ultimately our designers and the council agreed to have a "give way" T-junction, which is what was constructed. |
| 49. | There has been concern raised about the "escalating costs of the project", which appears to be "open ended". | At present there is only a high level outline cost estimate, because the port masterplan layout has not yet been completed. Once the masterplan has been set, a detailed cost estimate will be generated and at that time the affordability of various items will be considered. While the overall cost of construction will be far cheaper in one exercise, it is recognised that phasing the development may be necessary. CMAL firmly believe that adopting the right masterplan is essential to enable the port to be properly developed, even if (like Port Ellen and Kennacraig) some of the items need to be phased. CMAL are also actively looking to other sources of funding the redevelopment of the terminal, as it could potentially bring far more than just a ferry to the island. | N/A | The project budget has not changed since construction tenders were received in mid 2015. Whilst to date (May 2018) there are still some project costs outstanding, the budget is not expected to be exceeded. |

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| 50. | Why would two ships (ferries) need to load simultaneously? If only one is loaded at a time, it would be possible to eliminate the 5.5m high pedestrian walkway and ramp, with traffic and passengers loading side by side. | Two ferries would almost certainly not need to load simultaneously. Despite only one ferry normally being loaded/unloaded at any one time, the 5.5m walkway crossing is considered essential, as any vessel can use either side of the pier, therefore regardless of where the terminal building is, there is a potential conflict of foot passengers crossing the approach to one side of the pier or the other. This conflict would be prevalent during most normal ferry operations, where foot passengers load at the same time as vehicles, and was considered too high a risk to not be "designed out". Essentially, the PAS provides a safe walkway across the flow of traffic and an elevated access to the vessel (at gradients of circa 1:20). | N/A | See original comments. |
| 51. | The ships are shown on the CMAL plans as being stern in to the shore, meaning that it will need to turn 180 degrees to manoeuvre into the berth. Given this, it is believed that that the docking will be more difficult than that currently required at Ardrossan. | Firstly, the pier will be able to accommodate the ferries both stern in and bow in, as well as on both sides of the pier (albeit with tidal restrictions on the fixed ramp on the eastern side).<br>CMAL employed Clydeport to set up and run vessel simulation models to review the berthing at the proposed new pier, using the MV Caledonian Isles. The simulator was run by experienced Clydeport Pilots and a number of CalMac Masters with many varied wind conditions (including the more exposed winds from the north round to the east). Using the simulator, it was possible to berth in conditions that were considered adverse and challenging. The pier orientation has been altered to 25 degrees from north following the vessel simulation trials. | N/A | The pier was constructed to 25degrees from north following the vessel simulations.<br>As per the results of the simulator, the berthing in Arran does take marginally longer than at the old facility, but leaving the berth is quicker, therefore the timetable is not affected. |
| 52. | There is a lack of queuing space at the ticket area in Brodick, and this does not appear to have been addressed in the proposals. | The space allowed for queuing for tickets in the proposed terminal building layout is considerably larger than that of the existing terminal building. | Yes | The space provided for passengers to queue for tickets in the new terminal is considerably bigger than that in the old facilities. |
| 53. | Why does the passenger walkway have to start of the second storey? Surely it could start at ground level and slope up as required by the time it reaches the traffic cross over. | The traffic crossing has been set as 5.5m to ensure there are no restrictions to large vehicles using the pier. To get to 5.5m the ramp length (at a gradient of 1:20) needs to be 110 metres. It is therefore considered that having an alternative to a 110m ramp of using stairs or lifts in the building to gain most of the height is sensible. Whilst a two storey building is more expensive than a single storey building, it is considered more economic when the consideration of land reclamation is taken into account, as that can be very expensive. | No | See original comments. |
| 54. | If you are not improving the service, why spend vast amounts of money? | As noted in Q38, the pier is reaching the end of its serviceable life and requires replacement. As well as the continuation of the service in general, the redevelopment will offer the following improvements to the service: more passenger waiting space, more vehicle marshalling area, greater depth of berth (allowing ferries to be designed with deeper draft , hence better sea-keeping) flexibility of two berths, formal drop off areas, formal parking, disabled parking, covered access from terminal to the vessel, queuing lane to get ferry traffic off the public roads, etc. The development in general will also have enhanced working areas for staff, formal staff parking, a second berth for third party vessels (e.g. - cruise/leisure vessels, freight vessels, timber vessels) and will act as a gateway to Arran. | Yes | As per the original comments, the redevelopment has improved the facilities for the ferry service. |
| 55. | Why do arriving passengers end up on the second storey? And why do they only have a set of stairs to descend to the ground floor? | As per Q 53, all foot passengers need to cross over the vehicle traffic safely, therefore arriving into the terminal building is the safest means of egress. Arriving passengers will have the option of using stairs, a lift or a ramp (if the ramp option is progressed) to descend from the first floor to the ground floor. | N/A | See original comments. |
| 56. | Further to Q55, why are there not escalators? | Refer to Q1. | No | See original comments. |

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| 57. | What is the requirement for a complete floor of offices etc.? | The staff area in the existing terminal building is too small for office staff and pier staff that use it. The new terminal generally allows for more appropriate sizes of staff areas, with the only additions being; a modest size of meeting room, changing/shower rooms and drying room. Approximately one third of the usable space on the ground floor is taken up by a foyer for passengers queuing for tickets, a left luggage area and the ticket desks. It should also be noted that the ground floor houses the plant room and the pier store. | N/A | See original comments. |
| 58. | I am frankly appalled by the lack of passenger convenience in this design. | CMAL are disappointed in this view, as it considers the following to be improvements in passenger convenience over the existing facilities: more passenger waiting space, more passenger seating, more vehicle marshalling area, formal drop off areas, formal parking, disabled parking, covered access from terminal to the vessel, queuing lane to get ferry traffic off the public roads, larger left luggage area, larger area for queuing for tickets, covered outside areas and potentially three ways to access the first floor of the building. There are also the "soft" issues to consider, such as the views from the waiting area etc. | N/A | See original comments. |
| 59. | A lot of foot passengers currently have to park some distance away from the terminal and walk. Can there be more parking provided and can this be pay parking? | It is CMAL's intention to provide as much parking as possible within the space available. As per Q23 CMAL have not discounted charging a nominal parking fee, which may discourage non-ferry cars being parked at the terminal. | Yes (part) | As per Q3 & Q23, parking has been provided with the redevelopment.<br>At this time CMAL do not charge for parking in any of their facilities. |
| 60. | In relation to Q50, why is there a need for two linkspans. | There will only be one linkspan provided at Brodick, on the west side of the pier. The east side will have a fixed concrete ramp, which will allow a limited service (with tidal restrictions) to be run from it at times when the linkspan requires servicing etc. It does also offer the vessel Master an option of using the eastern side of the pier in certain wind/tide conditions. | N/A | See original comments. |
| 61. | The connection from the vessel to the pier will need to accommodate different ships, with differing access points. How will this be done? | Refer Q40. The Passenger Access System (PAS) will form a series of fixed tunnels from the terminal building, out to a hinge point along the pier. At this hinge point, the PAS will be able to move up and down mechanically to accommodate differing vessels and differing states of the tide, whilst still maintaining acceptable gradients. The PAS will also be able to move longitudinally on the pier, to accommodate various vessels. Whilst the Brodick PAS is likely to be more advanced than any existing PAS used on the Clyde and Hebridean Ferry Service, there are a number of examples of these at ports such as: Wemyss Bay and Oban(2). Most modern ferry ports have a PAS. | N/A | In addition to the original comments, the PAS constructed at Brodick is similar to the two PAS installed in Stornoway and Ullapool. |
| 62. | As per Q38, many questions/suggestions have been put to CMAL in respect of Ardrossan (break waters, improvements to the "Irish Berth", etc.) , alternative ports of refuge on the mainland, etc. | Refer to Q38. It is believed that many of these points have also been taken directly to Clydeport (as owners of Ardrossan). | N/A | Not relevant to terminal redevelopment project. |
| **Questions/comments raised at CMAL public meeting of 07 May 2013** | | | | |
| 63. | Concern expressed about the distance to walk between the terminal building and the vessel. | As per Q18, 36 & 43 CMAL have cut the walking distance from the terminal building to a minimum. | N/A | Refer Q28 and original comments. |
| 64. | Suggestion that the terminal building should be located on the plot to the east of the CMAL land. | This has been considered, but it would require pedestrians to cross the main exit lane from the pier, which could lead to both safety concerns and congestion/delays. | No | As per Q32 and original comments, this was not possible. |
| 65. | Concerns raised about the confined nature of the passenger access system "tunnel" including sudden illness, claustrophobia. | The PAS tunnels will have many windows and will likely be in the region of at least 2m wide. The PAS will have a number of escape/access stairs along the route, in accordance with the latest regulations. | N/A | The constructed PAS has more windows than originally designed, and CMAL have not been made aware of anyone considering it claustrophobic.<br>CalMac have emergency plans in place for the whole facility. |
| 66. | Concerns raised about the design of the passenger access system including exposure to high winds, watertightness, ice build-up. | The PAS will be designed for the local conditions at Brodick, to the latest design standards. There are many PAS's in very exposed situations around the world. | Yes | The PAS was designed to the latest design standards. |

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| 67. | Suggestion that terminal building and passenger access system doors should be automatic opening electrically powered | CMAL noted that this would be sensible and will be incorporated. | Yes (part) | Several of the key entrance doors in the terminal are automatic. It is worth noting that the majority of other doors for departing and arriving passenger are normally held open during opertaional times. |
| 68. | What will be the arrangements for access by people with mobility restrictions/ambulance? | CalMac confirmed that this would be via car deck as currently. | N/A | As well as original comments, CalMac do offer assistance to passengers in the terminal building. Also refer Q45. |
| 69. | What will be the height clearance under the passenger access system elevated walkways? | 5.5m. | N/A | The PAS has been constructed with 5.5m of clearance, although the warning signs erected by CMAL note that the clearance is 5.3m (giving a small factor of safety). Refer also to Q53. |
| 70. | Will there be a problem with operating the passenger access system if delivery of the new vessel is delayed? (Current issue with not being able to use the gangway with Isle of Arran refers). | The PAS will be designed to accommodate a large range of vessels. | N/A | Refer Q40 & Q61, and see original comments. |
| 71. | Could the queuing lane for ferry traffic be made two-lane? | This was considered, but the land availability was an issue. The designed lane can accommodate circa 15 cars. | No | Refer Q4 and original comments. |
| 72. | Concern raised about congestion at the lifts at times when both arriving and departing passengers are trying to use them. | The lifts will be high capacity (13people), will be programmed for efficient operation of both up and down use, and will have separate doors on the first floor for arriving and departing passengers. | N/A | The two lifts installed in the building allow for taking passengers up to the departure lounge or down to the foyer. The first floor doors allow for segregation of arriving and departing passengers. |
| 73. | Will the passenger access system be two-way allowing passengers to embark and disembark at the same time? | Some parts of the PAS will be two way. | Yes (part) | As per original comments, the building end of the PAS allows for "two-way" passenger movements. |
| 74. | What will be the weather operational limits for the new terminal? | The operation limits for the pier will largely be governed by the vessel. | N/A | See original comments. |
| 75. | Will the fixed ramp be tidal? | Yes. The fixed ramp will allow limited use, depending on the tide level. It will be designed to give as wide a range as possible. | N/A | See original comments. |
| 76. | Concern raised that when the marshalling area is full traffic will back up on to the main road and along the front. | The size of the marshalling area is designed to give the equivalent of nearly two full vessels of traffic. | N/A | See original comments. |
| 77. | Will vessels always be stern-in as indicated on the drawing? | This is at the discretion of the vessel master. | N/A | See original comments. |
| 78. | Could the passenger access to vessels be via the stern? | This was considered during the design development, but none of the current vessels in the fleet are designed to accommodate stern passenger loading, and it would also preclude bow loading if the vessel were to berth bow in. | No | See original comments. |
| 79. | What is to happen to the existing terminal building? | This has yet to be determined. | N/A | Refer to Q13. |
| 80. | Why are the proposals "subject to securing funding"? | CMAL have a limited budget for undertaking all its harbours and vessels works, and any Scottish Government/Transport Scotland grant funding required on top of CMAL's fund has yet to be confirmed. | N/A | Funding for the project was secured through: Transport Scotland (Grant-in-Aid); North Ayrshire Council; Strathclyde Partnership for Transport; Coastal Community Funding; and CMAL's own reserves. |
| 81. | Can it be arranged for cyclists to be disembarked before vehicles? | This is a decision for the ferry and port operator. | N/A | See original comments. |
| 82. | Is the car-parking for long term or short term parking? Current problem for drivers picking up foot passengers. | There are both car parking and drop-off/pick-up points included in the design. | N/A | Refer to Q3 & Q59. |
| 83. | Are there any plans to incorporate a means of extracting power from the sea in the new pier? | At present no. (Post meeting note – CMAL are working with various partners at the possibility of a pier mounted energy generation system). | N/A | No sea generated power has been incorporated into the new facilities. However, the building does have photovoltaic cells on the roof that generate electricity (hence offsetting use of grid power). |
| 84. | What is to happen to the existing pier? | The existing pier will be demolished. The existing causeway may be maintained to act as a breakwater for pontoons. | N/A | Refer to Q13 & Q27. |
| 85. | How is the pick-up/drop off area to be managed to avoid congestion with vehicles waiting for arriving foot passengers? | This will be for the port operator to determine. | N/A | See original comments. |
| **Questions/comments raised at CMAL public meeting of 06 Nov 2013** | | | | |
| 86. | Stairs. Concern expressed over the volumes of people wanting to use lifts rather than stairs. Concerns expressed that the capacity of the lifts might be a constraint and prevent the ability to turn the vessels around in 20 minutes. | It was explained that each lift had a capacity for 13 people. This aspect was being fully reviewed by the design team, but initial reviews have not shown it to be an issue. | N/A | As per Q72, the lifts have been designed to reduce congestion.<br>To date (May 2018) CMAL are not aware of any issues relating to the lifts that have affected the vessel turnaround time. |
| 87. | Power cuts. Will there be backup power, to power the lifts? | No. The linkspan will have backup power. | No | The terminal building does not have a stand-by generator. However, the terminal building has a plug-in point for an external generator in the event of long term (or island wide) power cuts.<br>The PAS and the linkspan have both been fitted with back up generators. |

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| 88. | How will wheelchair users who won't or can't use a lift be accommodated? | It is assumed that they will be assisted onto the vessel by the port/ferry operator by means of the car deck, however, they would still have to use the lift once on the vessel. | N/A | See original comments. |
| 89. | Vehicle access. Concern expressed about queues backing up for the kiosk onto the public highway and restricting access (particularly HGV access) to other businesses in the vicinity of the ferry terminal. | This is not thought to be an issue, and is certainly far better than the current arrangements. This will be formally investigated during design. A Traffic Assessment (a third party review of the design) has to be undertaken to satisfy North Ayrshire Council). | Yes | Refer Q4. |
| 90. | How many long stay parking spaces will be available? | 65 - 70 | N/A | Refer Q3. |
| 91. | Will there be parking available adjacent to the existing terminal building? | Yes, but this may be assigned for use only with the existing building (in its new capacity). | Yes | As per Q3, 10 spaces have been constructed for use with the old terminal building. |
| 92. | Will terminal building and ferry have WIFI? | The terminal will be designed to accommodate a customer wifi network. It is the port operator's decision whether to install customer wifi. | N/A | See original comments. |
| 93. | Would pitched roof fit in with surrounding pitched roofs better? Also, will the proposed roof drain well? | A pitched roof would make the already tall building even taller. The proposed roof will be well designed to drain and be maintained easily. | N/A | See original comments. |
| 94. | 13 Person Lift. Is this 13 people with or without luggage? | Without. | N/A | See original comments. |
| 95. | Will access doors be electrically operated? Question due to difficulties using doors at current terminal with luggage. | Refer Q 67. | Yes | Refer Q67 |
| 96. | Linkspan Capacity. Request made for the linkspan capacity at Arran to be maintained, rather than reducing the capacity to match Ardrossan. | The linkspan will be designed to have a capacity of 120tonnes. (Current linkspan has a capacity of 90tonnes). | Yes | See original comments. |
| 97. | Passenger Access System. Will it be 2 way and sheltered? | Refer Q 73. | Yes (part) | Refer Q73.<br>The PAS is fully sheltered its entire length. |
| 98. | Interest expressed in the HGV access to the fixed berth. Question raised over whether the PAS might limit access to this. | There will be HGV access to the fixed berth. The PAS will not constrain this. There is a long load route being designed at the terminal. | Yes | As per the original comments, the PAS will not limit access to the fixed ramp berth for normal HGVs.<br>Also as per the original comments, as "long load" route has been designed to get abnormal loads out of the terminal. |
| 99. | Was consideration given to multi-hull use of the facilities? | Yes. Multi-hull vessels tend to be wider than traditional hulled vessels, and the pier/linkspan has been designed to accommodate up to 25m wide vessels (current vessels are circa 16m wide). | Yes | The linkspan and pier have been designed and constructed to accommodate a wide range of vessels. |
| 100. | How does the PAS connect with the vessel? | This detail has not yet been designed, but it is likely to be by means of a brow (a small gangway). | N/A | The PAS has been constructed with an extending brow section that lands inside the vessel doorway. |
| 101. | What contingency plan is there if the PAS should fail? | As with the current arrangement, passengers would have to embark on the car deck. The designers are also reviewing the possibility of gangway access from the pier. | N/A | See original comments. |
| 102. | Has energy efficiency been considered in the design of the building? | Yes. The building is has many features incorporated to maximise efficiency. (Post meeting note – the building is being designed with a biomass boiler and in line with Scottish Government guidelines will be BREEAM rated. See www.breeam.org). | Yes | The building has been constructed with many energy efficient considerations, including: biomass heating boiler; photovoltaic cells for electricity generation; louvres on south facing windows to limit solar gain; and natural ventilation.<br>The constructed building is on target (May 2018) to gain a Very Good BREEAM status. |
| 103. | How will the change from the current facilities to the new ones be handled? | This will be determined once a contractor is appointed, and will be discussed and agreed by CalMac, CMAL and the Contractor. | N/A | The swap between facilities was managed by CalMac, with significant input from CMAL and our contractors. The swap over (and the interim construction phase moves) all went very well and did not disrupt the ferry or bus services. |
| 104. | Will material for constructing the reclamation area be sourced from Arran? | Possibly. The source of construction materials will be for the contractor to determine. | Yes (part) | The majority of the materials used for the reclaimed land was sourced locally on Arran (much of this was the dredged material from the area of the new berth).<br>The only imported material used for the reclaim area was the large rock armour, which was sourced from Furnace quarry, as the size/type/quantity of rock was not available on Arran. |
| 105. | Has consideration been given to sediment movement and silting? | Yes. This is being reviewed as part of the design. Initial reviews have not shown any concerns. | Yes | Refer Q28 and original comments. |

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| 106. | During the construction period, will works be limited to day working only. | It is envisaged that the vast majority of the works will be day works. Any out of hours working will be subject to the contractor seeking approval from North Ayrshire Council's Environmental Health Department. | Yes (part) | As anticipated, the vast majority of the construction works were carried out during the day.<br>There was only one night of works that were undertaken during the development, which was for some surfacing works. These works were completed by circa 1am. |
| **Questions/comments raised at CMAL public meeting of 03 Dec 2015** | | | | |
| 107. | Where are the LNG fuel tanks going to be on the new dual fuel vessels? | Below the car deck | N/A | Not relevant to terminal redevelopment project. |
| 108. | In relation to Q107. Has venting been considered? Should these tanks not be located on an open deck? | CMAL are confident that adequate venting can be accommodated in the proposed position | N/A | Not relevant to terminal redevelopment project.<br>Venting is included. |
| 109. | Some of the Baltic countries specify that when refuelling LNG vessels, only the refuelling crew are present. | A risk based approach will be taken to operation such as refuelling, the detail of which is still to be confirmed | N/A | Not relevant to terminal redevelopment project. |
| 110. | (in relation to Q109) Will passengers be allowed to be in the vicinity? | A risk based approach will be taken to operation such as refuelling, the detail of which is still to be confirmed | N/A | Not relevant to terminal redevelopment project. |
| 111. | At low revs, how will an LNG engine manage to generate enough torque? | CMAL have performance data available on the proposed engine and are confident that the vessel manoeuvrability will not be compromised. | N/A | Not relevant to terminal redevelopment project. |
| 112. | What are the redundancies on bow thrusting and stern control? | The provision here is substantial – at the bow there will be three 800kW thrusters | N/A | Not relevant to terminal redevelopment project.<br>The vessel is being constructed with 3 x 620kW bow thrusters and 1 x 480kW stern thruster. |
| 113. | Will there be higher wind limits at the Ardrossan end of the route? | The vessel will be designed to hold station in winds up to 50 knots | N/A | Not relevant to terminal redevelopment project. |
| 114. | Why have no escalators or travellators been included in the design of the terminal building? | Refer to Q1 and 56. A decision was taken early on in the design process not to include escalators due to their space requirements, their large capital and maintenance costs and also for safety reasons (they are not suitable for carrying bulky luggage) | No | See original comments. |
| 115. | (in relation to Q114) What about ramps? | Refer to Q46 and 55. Ramps were considered as an option but their inclusion doubled the width of the terminal building and added 80m to the length of the journey to the vessel. Feedback was sought from the public and it was found that stairs and a lift were preferred | No | See original comments. |
| 116. | The lifts proposed for the terminal building carry only 12 people at a time and fewer with luggage. How are they expected to cope with the volume of traffic? | Refer to Q72. The lifts can transport half the numbers of passengers for a full vessel in 20 mins. It is not anticipated that all passengers will arrive at the ferry terminal at the same time | N/A | Refer to Q72, Q86 and original response. |
| 117. | An observation: the current vessels in the fleet have windows that are too high to see out of when sitting, even in the observation lounges. | The Seaforth is a good example of what can be done in future. The observation lounge offers excellent views even when sitting. CMAL will be consulting on this matter | N/A | Not relevant to terminal redevelopment project.<br>The vessel is being constructed with full height windows in the upper observation lounge. All other windows will allow clear views when sitting. |
| 118. | What infill is being used in the reclamation? | Rockfill from outwith the site and mostly sand dredged from around the new pier. This will be overlaid by compacted 'type 1' granular material | N/A | Refer Q104 and original response. |
| 119. | How does the ship link with the passenger access system? | Refer to Q100. A fixed walkway will take passengers out to a walkway which can be moved to meet the doors on the vessel. It will be a covered walkway in its entirety. For an example, see system used at Ullapool | N/A | See original comments. |
| 120. | Why do passengers have to ascend a level to board the ferries? | Refer to Q53. The walkway out to the vessels has to cross a road for which there needs to be a 5.5m clearance. This requirement has set the level of the first floor of the terminal building | N/A | Refer Q53, Q69 and original comments. |
| 121. | How are disabled people being catered for in the design of the new vessel? | CMAL are trying to accommodate 7/8 disabled spaces and 3/4 lifts into the new vessel. A first aid room will also be available on the car deck | N/A | Whilst the question was related to the new vessel, the terminal has been constructed with the following: 7 disabled car parking spaces; 2 disabled public toilets; 1 "changing places" toilet; 1 disabled staff toilet; 2 lifts; and all slopes in PAS ramps have flat rest areas at regulation intervals.<br>The main section of the question relating to the new vessel is not relevant to terminal redevelopment project. |

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| 122. | What stage of eradication are you at for the Japanese knotweed? | CMAL have sprayed the plant for three years. The remains have been excavated and buried on site in a controlled cell under the location of the new car park. If it reappears, it will be dealt with by CMAL | N/A | There have been no signs of the Japanese Knotweed since the eradication works were undertaken in early 2015. Should it reappear, CMAL will deal with it. |
| 123. | Recently, passengers have been told to stay close to luggage at all times whilst on board vessels. This may have considerable implications to the design of the vessel to ensure luggage can be appropriately stowed in all areas and not on seats, which are already at a premium. | Noted | N/A | See original comments. |
| 124. | Where in the development is the provision for timber storage? | There is no provision for a timber storage area as such. The pier is 20m wide and there is no reason why timber could not be loaded from it. The decision will be up to CalMac as the operator to decide how much space they can afford to give over to commercial activities | N/A | See original comments. |
| 125. | How many car parking spaces are provided? | Exact number not indicated at meeting. Post meeting note – Car parking is less than previously indicated to accommodate the taxi rank and bus drop off points. There will be a total of 72 car spaces on the new Terminal development site. 43 are standard car spaces, 7 are disabled and 2 are electric car charging spaces all are located in front of the new Terminal building. 10 of the 72 are staff spaces adjacent to the main car park and 10 car spaces will be provided at the existing terminal building but these may be assigned to that building for use by future occupants. The 72 spaces are in addition to the existing car parking spaces at the petrol station. | N/A | Refer Q3. |
| 126. | How many spaces are provided for taxis? | 2 ranks with 4-5 spaces in each will be provided opposite the 2 bus drop off spaces in front of the Terminal building. This provision and usage will be reviewed after the Terminal becomes operational | N/A | Refer Q47. |
| 127. | When the new vessel comes into service, will the Ardrossan – Brodick route be limited to one vessel? | No, it is understood that the vessel will work in tandem with the Caledonian Isles | N/A | Not relevant to terminal redevelopment project. |
| 128. | Will cruise ships be able to be taken at the new terminal? | Vessels up to 130m can be accommodated on the east side of the pier e.g. Hebridean Princess or slightly bigger. Potential for Cruise ships visiting is being discussed and CalMac is working with the Arran Economic Group. The new terminal has been designed with International Ship and Port Security (ISPS) in mind. | Yes | Refer Q39 |
| 129. | Both the Caledonian Isles and the Isle of Arran do not cope well with Ardrossan despite being specifically designed for the route. Will the new vessel improve reliability? | Peel Ports have this week agreed to allow CMAL to undertake a review of the facilities at Ardrossan with a view to accommodating the new vessel | N/A | Not relevant to terminal redevelopment project. |
| 130. | (in relation to Q129) A breakwater was in the original design for Ardrossan harbour but was never built. | As Q129, we are working with Peel Ports to identify where reliability could be improved. A breakwater is one option, though if the main problem transpires to be wind, a breakwater may not be effective | N/A | Not relevant to terminal redevelopment project. |
| 131. | In order to improve reliability on the route, has an alternate port been considered for berthing in adverse conditions, e.g. Gourock? | This is a decision for the operator, CalMac. CMAL make Gourock available as a Port of Refuge. | N/A | Not relevant to terminal redevelopment project. |
| 132. | (in relation to 131) The Caledonian Isles can no longer berth at Gourock due to a change in the berthing facilities. | CMAL have made no changes to Gourock in the past 8 years that have changed/compromised the ability to berth there. | N/A | Not relevant to terminal redevelopment project. |