



**Ministerial Statement**  
**By**  
**Lt. Col. the Hon. David A. Burch, OBE (Mil), ED, JP, MP**  
**Minister of Public Works**  
**Kings Wharf Rehabilitation**  
**17<sup>th</sup> May 2019**

Good Morning **Mr. Speaker**.

Last November I reported extensively on the plan for the complete refurbishment of King's Wharf at the Royal Naval Dockyard – one of our two deep water cruise berths built in 1987/88.

The main structure comprised a structural steel frame encased in reinforced concrete, with reinforced concrete slabs - constructed at a cost of \$9 Million dollars.

Following a comprehensive inspection in 2014 by the UK Engineering firm Mott Macdonald - deck problems were clearly identified and the report at that time estimated a replacement cost of the deck and terminal building at more than \$20M.

**Mr. Speaker**, in 2017 it was clear that the deck had deteriorated further and needed to be rebuilt during the 2018 off season from November 15<sup>th</sup> 2018 to April 9<sup>th</sup> 2019. Planning began immediately to explore options and new methods to meet that limited timeline.

So with that background – the Ministry initiated an accelerated replacement program in order to meet the critical deadline of April 10<sup>th</sup>, 2019 – the arrival of the 1<sup>st</sup> cruise ship of the season. The consequences of missing that deadline would have incurred a **US\$500,000** penalty for **every** visit that a ship could not dock.

**Mr. Speaker**, no one on the team could countenance such a circumstance – so in order to complete the project in such a short window, and to avoid potential delays due to the current high demand for concrete on island, a method of precast concrete slabs and beams was devised for the works. Using precast concrete would also increase the lifespan of the pier as low reactivity aggregates such as fly ash (commonly used in Europe and North America, but not Bermuda) could be added to the mix to minimise corrosion of the reinforcing steel.

Precast Systems, Inc. of New Jersey who had previously supplied 25 concrete slabs to create a temporary pedestrian walkway atop the compromised deck at King's Wharf earlier were selected. An agreement was reached with Bermuda International Shipping to transport a third of the dock on their weekly vessel and the remaining two thirds of the shipment, which included the slabs, would be transported to Bermuda on a cargo ship chartered specifically for this purpose and unloaded in the Royal Naval Dockyard and stored on Cross Island. This approach would meet the demands of the construction schedule and essentially produce a savings of approximately \$400,000.

**Mr. Speaker**, the lowest bidder, at \$2.97 million, Crisson Construction, were awarded the contract to demolish the existing building and concrete deck, and construct the new pier.

A number of other factors were implemented to enhance the construction and expand the life expectancy of the wharf - usually for long term corrosion protection one of the

following elements would be included in the design - Fly Ash, Cathodic Protection, Corrosion Inhibitor and Low reactivity aggregates. In this case – they were **ALL** used.

- Strict quality control was employed on and off site by an Independent lab.
- Top of the line 6,000 psi concrete was used.
- Corrosion inhibitor was added to the concrete to make sure we got the most durable concrete for our harsh environment.
- Cathodic protection was added to ensure a lifespan of at least 75 years for this new infrastructure.
- The new Wharf, was built with increased loading to accommodate the next generation of cruise ships.

**Mr. Speaker**, under this plan the replacement terminal could not be completed by the start of the 2019 cruise ship season – so a temporary structure is in place while construction continues apace with an anticipated July completion date.

The 2014 estimate for these works was \$20 Million but with savings from the reuse of some of the piles and the use of Precast slabs - the revised budget was set at \$15 Million including contingencies.

**Mr. Speaker**, the best news of this whole exercise is that the Project Manager was Bermudian Civil Engineer Ms. Carmen Trott, a trainee in the ministry a decade ago and since January 2018 - she has been on secondment to the ministry from the private sector. She along with key participants in the project – namely - Permanent Secretary, Mr. Randy Rochester, Chief Engineer Mr. Yves (Bob) Lortie, Wedco General Manager Mr. Andrew Dias, Structural Engineer Mr. Austin Kenny, Bursary Student Ms. Tabia Butterfield and contractor Mr. Charles Crisson all join us in the gallery today to witness this historic milestone.

Some significant highlights of this project are worth noting:

- It is the first time that we have used precast for maritime work in Bermuda and it was done to the highest professional standards - 100 % Bermudian.
- No major injury occurred on site for the entire construction period
- All work completed with the highest quality control standards, at all levels.
- Expected life of the new deck is 75 years
- Work completed on time
- Work completed on budget
- Construction of new terminal building is well under way
- Precast was made in New Jersey but all the rest of the wharf was assembled and constructed locally. It is quite amazing.

#### Crisson Construction

**Mr. Speaker**, Mr. Charles Crisson is a smart businessman with a lot of experience and he is a very good contractor. He and his workers were simply amazing - Welders, Crane operators, Labourers – all working 6-7 days a week since December.

Pre Cast System of New Jersey, USA, Ramboll Engineering UK - the main designer, Brunel – a local engineering company hired by Crisson to support the construction on site, Onsite Engineering - another local engineering company -were in charge of all quality control on site. Overnight Construction who are building the new building and are in charge of the finish work on the Slabs.

All these craftsmen and women were proactive, dedicated, took ownership of this project and worked very hard to meet the deadline and are to be commended.

#### Wedco

Outstanding cooperation was received from Wedco. Everything that was asked of them - the reply was simply – “*YES we will make it work!*” The GM and his team were totally dedicated and committed to this project.

And of course, **Mr. Speaker**, I could not be more impressed with Carmen and the Ministry team of Austin and Tabia based at Dockyard for the past 5 months. Their professionalism, team work, camaraderie and commitment shone through in every aspect of this project. We received daily reports of progress or not as the case may be as the weather on occasion wreaked havoc with progress. Even when we were 3 weeks behind – no panic whatsoever – at least none I saw. They simply put their heads together to agree a plan to address the challenge of the day. I cannot commend them highly enough – so I’ll let the Chief Engineer say it – he wrote *“During my 30 years of experience as an engineer, I was privileged to work in different countries like Chile, Canada , France, Algeria, Morocco , Angola, Saudi Arabia, Dubai (UAE ) and Bermuda. I have been around and I worked with many project managers. After all these years, if anybody in the future asks me - who is the best project manager that you worked with in the last 30 years?”*

*I will have one answer - Just one name - Carmen Trott.*

**Mr. Speaker**, we are all so proud of them and it really is an honour to work with such professionals in the truest sense of the word.

**Mr. Speaker**, I must emphasize that this aspect of the rebuild is Phase 1 – the next phase – the costing of which has not been finalized, is to provide for the extension of the dock by 100 ft. on either side of the Terminal building to accommodate larger ships with 4 gangways and provide a better service area for grey water, sewage and garbage disposal.

**Mr. Speaker**, as you will appreciate – an exercise of this magnitude requires not only a host of participants but it is critical for success that they all work together for the common goal. I can say that was the case here.

**Mr. Speaker**, to say this was a phenomenal accomplishment is an understatement. The entire team lead by Carmen did an outstanding job and have been designated as the new **‘Gold Standard’** for the Ministry of Public Works in meeting deadlines - On time and on budget.

They had several back up plans in order to accomplish this including a ‘nuclear option’ if all else failed. They are in this House today so colleagues who wish to join me in publicly thanking them - on behalf of the people of Bermuda for setting a standard of excellence that others will follow for years to come. I tabling several photographs that catalogue this incredible almost 5 month journey.

**Mr. Speaker**, it was an immensely proud moment, for both the PS and I, on the morning of April 10<sup>th</sup> to witness the Carnival Pride breaking through the sunrise, to stand next to this Bermudian team, on the newly rebuilt dock and even more proud when the ship docked safely and the Captain gave the thumbs up for his passengers to disembark.

At the end of day, the work needs to be done by real people. These real people sitting in our gallery today, not only did the work but they did it with professionalism, integrity, tenacity and flair - they were simply awesome!

Thank you to them and thank you, **Mr. Speaker**.