

Planning/Programme

Kevin Hobbs and Jim Anderson were invited to a meeting at FMEL on the 24th March 2017 in the newly established “War Room” with the presence of the FMEL Senior Management Team; Chaired by Jim McColl.

There are a number of aspects to report:

- The War Room is fully set up and functioning
- There has been a large effort from the Planning Team to look at the project to date with a view to remedy the time lost
- There has been a **significant change in strategy**
- Vessel 1 (801) will be launched on 24th August 2017
- Vessel 1 (801) will be completed alongside at FMEL, Port Glasgow – target date 28th May 2018
- The full accommodation block for Vessel 2 (802) will be constructed at Inchgreen Dock
- The yard are targeting the launch of Vessel 2 (802) on 17th November 2017
- Vessel 2 (802) will be towed to Inchgreen Dock to be joined up with the accommodation module
- Vessel 2 (802) will be completed alongside at Inchgreen Dock – target date 27th July 2018

We can see that there is new energy and commitment around this project from FMEL. The 2 Senior Project Managers from CBC are driving this improvement and the Senior Management Team are fully behind both Projects.

With the new strategy to outfit, commission and complete the 2 Vessels at 2 different sites; the Plans, on paper are credible for an experienced shipyard for a project of this size and complexity. To achieve the delivery dates will require substantial resources (availability of skilled workforce, additional costs) and the very best planning, project management and co-ordination of shipyard workers & sub-contractors. Equally all the sub-contractors and the major equipment must be full resourced and delivered when planned.

There is no provision in the programme for unforeseen events. Planning, completion and approval of the LNG aspects being one of the biggest challenges to the programme at the latter stages of the project.

There is an allowable 80 days under contract for extend the delivery date. FMEL are still targeting the original delivery dates.

Fabrication/Equipment

Shipyard are concentrating on the fabrication and erection of units on Vessel 1.

Vessel 1: Fabrication 77% achieved

Vessel 2: Fabrication 56% achieved

LNG Tank, Factory Acceptance Test for Vessel 1 Completed on the 05th April 2017.



Current scheduling for 801 requires the LNG tank on site at FMEL on the 14th June 2017

The LNG Tank for 802 is not due on site until the 4th September 2017.

Contract Milestones

Vessel 1 - 75% Fabrication milestone achieved 31st March 2017 month. 3 half months later than originally scheduled.

Vessel 2 - Next contract milestone is 75% fabrication. As of 13th April 2017 – 56% achieved.

Delivery Dates

Contract dates for Vessel 801 and 802 are 25th May 2018 and 26th July 2018 respectively. The Contract allows the dates to be exceeded by 120 days, giving a delivery date of 22nd September 2018 for Vessel 1 and 23rd November 2018 for Vessel 2, and can be further extended for specific events.

Manoeuvring and Berthing Simulation Tests

Further Simulation trials were carried out at the state of the art simulator suite at the City of Glasgow College on the 27th March 2017. The latest tests were to include the correct vessel dynamic responses. Unfortunately, the correct dynamic responses had not been fed in to the simulator model. The college themselves cannot change the software (the model is built and updated using an external company), as such the tests were not completed, further tests to be carried, date awaited.

Launch and Vessel Names

Vessel 1 – Launch date: 24th August 2017.

List of proposed Vessel Names:

- Glen Sannox
- Goatfell
- Hutton
- Glen Iorsa

These names are currently available and have been reserved by CMAL,

Vessel 2 – Launch date: 17th November 2017.

Vessel Names: Pioneer and Columba are currently available and have been reserved by CMAL. Claymore and Caledonia are not available.

Crew Attendance at Shipyard

Requirements for crew attendance at shipyard pre-delivery of vessels to be determined and budgets agreed

Vessel 1 - Production milestones - Actual progress compared with schedule

| YARD NO. 801 | | | | | | |
|---|---------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|-----------------------------|---|
| Milestone | Original Scheduled Date See Note 1 | Revised Scheduled Date See Note 2 | Revised Scheduled Date See Note 3 | Revised Scheduled Date See Note 4 | Actual Date | Comments |
| Cutting of Steel | 15 Dec 2015 | 15 Dec 2015 | - | | 15 Dec 2015 | Achieved on original scheduled date Rev 01 |
| 10% Fabrication | 18 Apr 2016 | 13 Jun 2016 | - | | 10 Jun 2016 | Achieved 2 months later than original schedule Rev 01 Achieved in line with revised schedule Rev 03 |
| 25% Fabrication | 14 Jun 2016 | 26 Jul 2016 | - | | 04 Aug 2016 | Achieved 2 months later than original schedule Rev 01 Achieved in line with revised schedule date rev 03 |
| 35% Fabrication | 15 Aug 2016 | 12 Sep 2016 | - | | 06 Oct 2016 | Achieved 8 weeks later than original schedule Rev 01 Achieved 4 weeks later than revised schedule Rev 03 |
| 50% Fabrication | 14 Oct 2016 | 14 Oct 2016 | | | 09 Dec 2016 | Achieved 2 months later than original and revised schedules |
| Major Equipment and Lock Out Items Installations | 14 Nov 2016 | 13 Mar 2017 to 18 Jan 2018 | - | | | “Installation” of all the “Major Equipment” has not been commenced on the 14th November 2016 as per original plan. Major items of Main Propulsion were delivered (not installed) on the 19th December 2016; these are the Main Engines, Auxiliary Engines and Shaft Alternators. |
| 75% Fabrication | 15 Dec 2016 | 15 Dec 2016 | 10 Feb 2017 | | 31 st March 2017 | Achieved 3 and a half months later than originally scheduled. |
| 100% Fabrication | 16 Jan 2017 | 16 Jan 2017 | 16 June 2017 | | | Awaiting new dates from FMEL |
| Berth Join Up | 14 Mar 2017 | 28 Apr 2017 | 14 Jul 2017 | | | Awaiting new dates from FMEL |
| Hull Inspection Prior to Paint | 17 Apr 2017 | 26 May 2017 | 21 Apr 2017 | | | - Awaiting new dates from FMEL |
| Launch | 14 Aug 2017 | 24 Aug 2017 | 24 Aug 2017 | | | We expect that the vessel will be ready to launch by this date. However the status of the drawings, outfitting and installation will be several months behind schedule. |
| Delivery | 25 May 2018 | 29 Jun 2018 | 25 May 2018 | | | The Contract allows for a delivery date of 22nd September and can be extended for specific events. |

Note 1: From Cardinal Programme Rev 01 dated 14 Dec 2015

Note 2: From Cardinal Programme Rev 03 dated 16 May 2016

Note 3: Email from FMEL 09 Dec 2016

Note 4: Awaiting update from FMEL

Vessel 2 - Production milestones - Actual progress compared with schedule

| YARD NO. 802 | | | | | | |
|---|---------------------------------------|--------------------------------------|--------------------------------------|---|-------------|---|
| Milestone | Original Scheduled Date See Note 1 | Revised Scheduled Date See Note 2 | Revised Scheduled Date See Note 3 | Revised Scheduled Date Date See Note 4 | Actual Date | Comments |
| Cutting of Steel | 15 Dec 2015 | 15 Dec 2015 | - | | 15 Dec 2015 | Achieved on original scheduled date Rev 01 |
| 10% Fabrication | 18 Apr 2016 | 13 Jun 2016 | - | | 10 Jun 2016 | Achieved 2 months later than original schedule Rev 01 Achieved in line with revised schedule Rev 03 |
| 25% Fabrication | 14 Jun 2016 | 02 Aug 2016 | - | | 04 Aug 2016 | Achieved 2 months later than original schedule Rev 01 Achieved in line with revised schedule date rev 03 |
| 35% Fabrication | 15 Aug 2016 | 26 Sep 2016 | - | | 06 Oct 2016 | Achieved 8 weeks later than original schedule Rev 01 Achieved 2 weeks later than revised schedule Rev 03 |
| 50% Fabrication | 14 Oct 2016 | 18 Nov 2016 | 20 Jan 2017 | | 13 Jan 2017 | Achieved 3 months later than original schedule Rev 01 |
| Major Equipment and Lock Out Items Installations | 14 Nov 2016 | | TBA | | | “Installation” of all the “Major Equipment” has not been commenced on the 14th November 2016 as per original plan. Major items of Main Propulsion were delivered (not installed) on the 19th December 2016; these are the Main Engines, Auxiliary Engines and Shaft Alternators. |
| 75% Fabrication | 15 Dec 2016 | 19 Jan 2017 | 05 May 2017 | | | Awaiting new dates from FMEL. |
| 100% Fabrication | 16 Jan 2017 | 20 Feb 2017 | 20 Oct 2017 | | | Awaiting new dates from FMEL |
| Berth Join Up | 14 Mar 2017 | 05 Jan 2018 | 14 Dec 2017 | | | Awaiting new dates from FMEL |
| Hull Inspection Prior to Paint | 17 Apr 2017 | 02 Feb 2018 | 24 Nov 2017 | | | Awaiting new dates from FMEL |
| Launch | 12 Oct 2017 | 20 Mar 2018 | 12 Jan 2018 | | 17 Nov 2017 | |
| Delivery | 26 Jul 2018 | 29 Aug 2018 | 26 Jul 2018 | | | The Contract allows for a delivery date of 23rd November 2018 and can be extended for specific events. |

Note 1: From Cardinal Programme Rev 01 dated 14 Dec 2015
 Note 2: From Cardinal Programme Rev 03 dated 16 May 2016
 Note 3: Email from FMEL 09 Dec 2016
 Note 4: Awaiting update from FMEL