

Glen Sannox & Hull 802 Monthly Report – [August 2022]

1.0 General

Executive Summary

This assessment of the overall progress for each vessel is made against the programme dates and building sequence set out within the revised level 0 programmes issued on March 23rd, 2022. The advised delivery dates remain unchanged: 801 between March and May 2023, and 802 between October and December 2023, although we were advised by the FMPG management that some slippage in 802 is expected.

For Glen Sannox (Hull 801) there is slippage in the pipework installation, electrical installation and commissioning programmes, the yard are working on a recovery plan to accelerate. Timely completion of installation activities, commissioning and closeout of design gap issues remain the leading indicators in the critical path analysis. This is highlighted by the Shipyard advising that the main propulsion equipment supplier has recently advised that the Main Engine and Generator turbochargers require upgrade works, which has impacted on the commissioning dates for the “first run” of main propulsion, from October into December.

The performance of the electrical contractor remains a concern and is being closely monitored by the Shipyards senior management and CMAL with the order of magnitude of delay faced in the electrical installation reported by the Yard for this period as 38% “cables pulled in” against a planned programme attainment level of 93%. The number of electricians on site has been increased, including additional nightshift working. The shipyard and electrical contractor are currently developing an updated programme to align with the delivery of the vessel.

Outstanding Owners' observation issues and technical design office queries remain under the scrutiny of senior management.

Hull 802 Programme is under review by FMPG senior management team. There are several challenges for the shipyard to meet the programme, which are recognised by the shipyard.

Owners Observation Reports 801

The information below has been updated in conjunction with FMPG to reflect the joint review conducted during this reporting period. Significant efforts have been made to ensure that the scope of all issues, as well as the cost of implementation and the impact on the programme are fully understood.

	All Categories	Category 1	Category 2	Category 3
Total Raised	605	368	224	13
Total Closed	464	275	183	6
Total Committed	48	39	8	1
Total to close when work complete	49	39	8	2
Total still to resolve	44	15	25	5

Figures updated by Yard 31st August 2022

Cat 1 - Items, which relate to Safety, Quality, Maintainability and Specification requirements.

Cat 2 - Item, which relate to poor design, quality or production.

Key Challenges for the Shipyard

Hull 801 - Key known Challenges for the shipyard to meet the programme:

- Installation and termination of the ship's cables.
- Completion of pipework to meet commissioning dates, including addressing pipe clashes.
- Close out of OORs.
- Closure of design gaps.
- Rework.
- Delivery and completion of production drawings and accuracy of production drawings.
- Availability of experienced supervisors.
- Shortage of experience trades.
- Availability of OEM commissioning engineers.
- Coordination of multiple activities in the engine rooms.
- Availability of materials.
- Verify Hull 801 Deadweight.
- Commissioning of LNG System.
- Lack of familiarity with final stages of finishing the vessels, surveys, documentation, certification.

2.0 Changes to Site Supervision Team

The core head count remains the same.

3.0 Design Changes Approved

Ongoing design changes affecting the constructability of the vessels design are driven exclusively within the Shipyard process to meet regulatory and contracted specification requirements and are not driven by CMAL request for change. All are related to outstanding technical queries and previously unidentified works. Closure of final design gaps is needed, which at this late stage of the project remains a significant risk to the project.

4.0 Agreed Changes to Delivery Date

Updated programme delivery dates are set out in section one above.

5.0 Agreed Changes to Price

(Note of changes; changes to be authorised & recorded in Contract Variation Register)

6.0 Changes Awaiting the Owner's Approval

(Note of changes outstanding for approval by the Owner in excess of Buyer's Representative authority as stated in Consultancy Agreement Cl. 3.4)

7.0 Surveys / Inspections

Verification surveys of the as-built standard are listed below.

- OOR survey checks with the view to closing.
- Pre-Survey of FO tanks P&S before ^[redacted] call in Wk34
- Part areas surveys continue in 05/06k areas for fitting of Insulation.

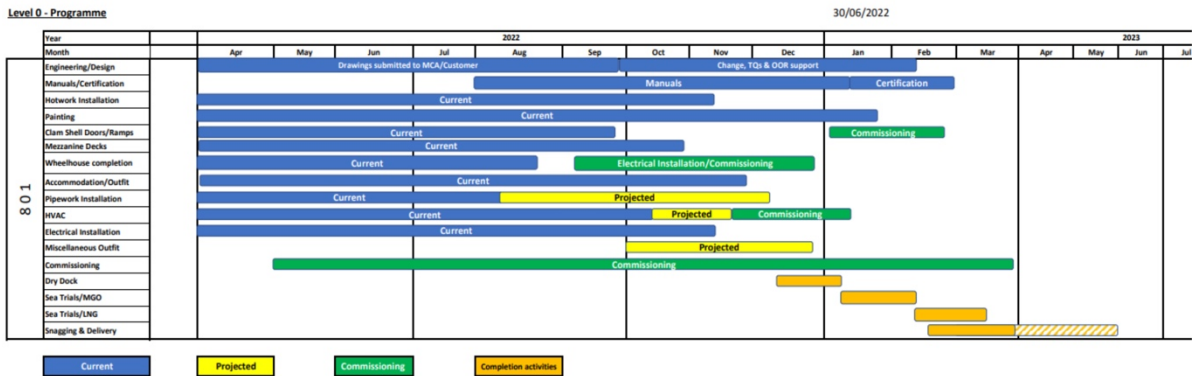
- Pressure test of Hydraulic piping for Stbd MGO Bunker door system with [redacted] in attendance.
- Side shell overboard shell pipe penetrations set up before welding and witnessed by [redacted].

8.0 Progress Against Programme – Glen Sannox & Hull 802

Reference – 03rd August 2022 FMPG Project Report



Level 0 Programme



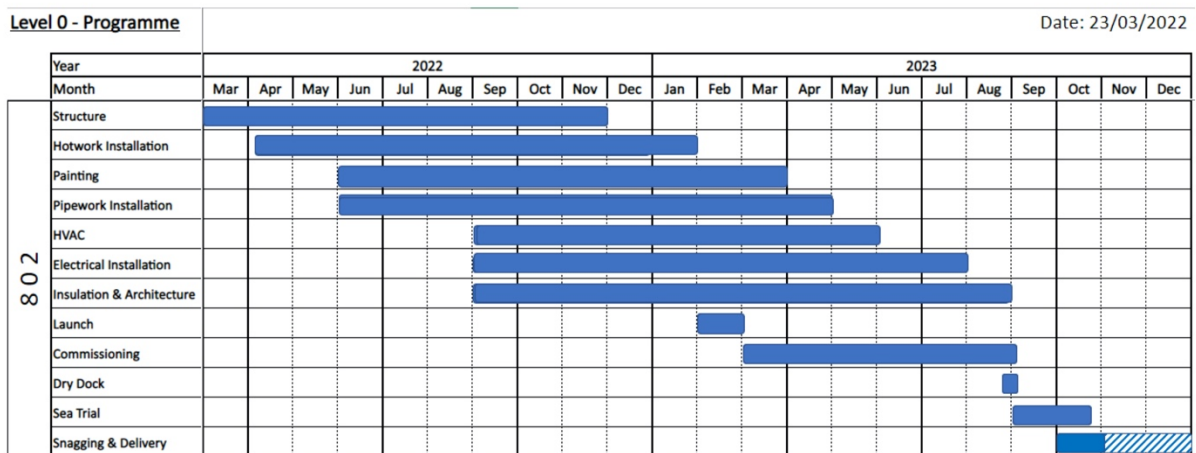
The 801 project is making progress toward its objectives. However, completing background outfitting, cable installation, pipe installation and pre-commissioning activities remains intensely time-consuming and behind schedule.

Commissioning has commenced and is moving in the right direction, although the start is much slower than planned.

Progress Against Programme - 802



802 Cardinal Date Programme



Reference - March 2022 FMPG Project Report

The overall programme for 802 is under review.

Hull 801 Pipe Spool Installation (FMPG reported)

Installation of pipework spools is behind schedule. In August reporting there is a significant increase in the planned number of pipe spools to be fitted, which is reported by the yard as due to rework and modification.

The rate of installation of pipework requires to be increased to meet planned completion dates.

Hull 801 Electrical Works

Cable pulling has continued throughout the vessel in both the machinery and passenger accommodation areas. The shipyard reports that 38% of the planned 93% of cables have been pulled in. The rate of installation of cables requires to be increased to meet planned completion dates. The impact of this delay is significant as it effects all completion works throughout the vessel. The yard are working on a recovery plan, reference previous commentary.

Hull 801 Clam Shell Doors

External scaffold for Clam shell doors is being designed to support the completion of the mechanical installation of the doors.

Hull 801 Commissioning

- Start up of Main Starting Air Compressors
- Main Air Receivers charged to 30 Bar.
- Seawater main crossover pressure tested
- Emergency generator fuel oil pipework pressure tested, cleaned and flushed
- Main 415V/230 V Transformers energised

- Emergency 415V/230 V Transformers energised
- Alarm and Monitoring System UPS energised x 2
- 24V DC UPS energised x 2

Hull 801 - Accommodation Outfitting

1. Background/Deckhead insulation works in bridge area continues.
2. 07dk ceiling perimeter supports are well progressed, and some ceiling carriageway has also been progressed.
3. 06dk ceiling perimeters are progressing well along with some ceiling carriageway.
4. Stairs to bridge deck now installed and welded.
5. Protection of recently poured sub flooring compound is now being fitted.
6. Deck 6 – Cabin doors continue being fitted.
7. Deck 6 – Vertical panels defining the volume of the gym and changing room now fitted and well progressed.

Hull 801 HVAC Installation

The first fix is now largely complete on decks 5,6 and 7. 6 & 7; the standard of installation remains satisfactory.

Hull 802

Block Fabrication

8. Consolidation work to complete erection joints of Bow Units 49/50/51 continues.
9. Deck five aluminium unit A6/5 erection onboard continues also now continues.
10. The three units forming block A8/5 have now been surveyed.
11. Fit up now complete for the port and starboard 'A' frame brackets.
12. Construction of the Forward Mooring area bulwark units 87/88 continues.
13. Fitting of Panama eyes now underway
14. Fabrication of aluminium unit A7-6 has started.

Hull 802 Hot Works

Structural Works Continue in the following areas:

1. Many more sub-assemblies have been lifted onboard pre fitted with pipe penetration compensation pieces already fitted despite the review process currently underway with the principal design contractor.
2. Ongoing modifications to bulkhead L11 are in progress.
3. Erection joint program continues for units A3-5 & A4/5.
4. Fitting of bimetallic interface joint to base of unit A6/5 in progress.
5. Prep-work continues base areas of Unit A4-5/A5-5/A6-5
6. Construction of units 85/86 is ongoing.
7. Unit A7-5 x3 lifted onto the vessel.
8. Fabrication of unit A9-5 nearing completion, awaiting call for survey.
9. Fabrication of unit A10-5 nearing completion, awaiting call for survey.
10. Units A5-6 now part lifted on to vessel
11. Unit A6-5 lifted onboard vessel.

9.0 Next Stage Payment Due

n/a

10.0 Forthcoming Period Events

11.0 Tests & Trials Due

Hull 801

- Testing of Integrated Control and Monitoring System Alarm and Monitoring Channels to commence.
- Sea Water system to be run sea to sea.
- Load Test Emergency Generator.
- First run Harbour Generator (subject to maker availability)
- Fill HT/LT system
- Test Quick closing valves on fuel tanks

12.0 Risk Register Update

CMAL attended the shipyard monthly project risk review meeting on Monday 05 September.

13.0 Safety & Environmental

No issue to report this period

Print Name [redacted]

[redacted]

Signature:

Date: [13 September 2022]