



Document	Glen Sannox & 802 Monthly Report
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## Glen Sannox & 802 Monthly Report – [October 2021]

### 1.0 General

#### Executive Summary

The rate of production progress continues to be insufficient to service either vessel program. [redacted]

[redacted] What information is shared via the joint monthly progress meeting (last held on the 20th of October 2021) [redacted]

[redacted]

The deviation between planned completion and actual completion dates for critical system installation for piping, electrical cable, and area completion is now measured in units of monthly delay. The absence of a timely and credible recovery strategy in key areas underpins the contradictory statement that the forecast finish date for hull 801 is again under review despite no reportable planning issues.

For the tenth consecutive month, the yard reports the status of project risk management as needing review and improvement. [redacted] uncertainty over such a prolonged period should be seen as substantive in the need to review the proposed completion date for Glen Sannox. The September project report states that the first review of the risk register has now been undertaken and will duly be reported against in the October project report. Late recognition/mitigation of unconsidered risk should be seen as a considerable concern. In the September 30, 2021, update to the Net Zero, Energy and Transport Committee Office, significant problems are flagged regarding the lack of integration of management system between planning, procurement, warehouse inventory, and production. These ongoing concerns and risk implications are given no attention within yard reporting.

The recently completed field engineering review that is now cited as the precursor to the newly identified risk to the timely completion of 801 piping systems; this issue has been known by production since June 2021. The June 28 level one program flags the same. Zone two piping systems were scheduled to be completed on June 30 2021. The August project report flags the threat of poor application of work packs and material. No mention is made by the yard in this reporting period.

Moving forward in the project, avoidable bottlenecks in background mechanical system completion will prevent the planned commencement date of the commissioning program from starting on December 16 2021. The expectation is that the yard will have little option other than to communicate this latest delay which will likely see the works not start until the end of January 2022. It should be noted that the delays faced are not new, not driven by changes in work scope or as a result of unpredictable design change, but the development of inadequately planned timelines (real-world task data). That seriously calls into question the credibility of each schedule. No insight or consideration is given to the identification of critical path dependencies within current reporting. Late in the day, procurement definition is responsible

for many of the project's current planning delays, the impact of which is not factored into the existing planning philosophy.

Attention has been drawn to paragraphs 151 & 156 of the building specification reminding the yard that principal rotating equipment will be required to be opened for inspection after both the initial harbour and sea trial testing periods, in line with standard survey procedures.

## **Warranty Issues 801 & 802**

The Yard is requested to provide information on how this essential post-delivery benefit will be managed, as the current position held of no allowance will have significant OPEX implications.

### **801 Commissioning**

Six working weeks remain until the planned commencement of commissioning. However, little specific detail is currently provided in support of planned activities. The following queries remain to be answered by FMPG:

Yard reporting directs that the electrical shore supply will complete 15 December 2021. Switching on the electrical shore supply is only required to be carried out when the 415V Main Switchboard is ready to be powered up. When is the planned date to power up the 415V Main Switchboard from the shore supply?

Which stated pipe systems would be commissioned concerning main engines, auxiliary engines, and or harbour genset?

No reference is made to the dates commissioning will start for the fuel oil system, bunkering system, fuel oil purification system or fuel oil overflow system.

There are many unresolved issues with access and maintenance in the engine room and generator room. These issues must be prioritised and resolved to deliver a compliant vessel that satisfies Flag, Class and building specifications.

We have been informed that "882 Transformers" and "872 Main and Emergency Switchboards" will be commissioned. Which transformers/switchboards will be commissioned, and what is the extent of the proposed commissioning?

No information is yet provided in support of the Motor Control Centres and associated auxiliary system commissioning tests?

At this point in the project, we still await the release of the Yards commissioning plan for all ship's equipment and systems.

### **Basic Engineering Design Status**

Twenty-six system drawings remain to be approved by the [redacted] eleven require [redacted] approval, and [redacted] has still to be submitted for CMAL approval. As a project, it is customary to categorise Class and Flag approval deliverables as challenging to manage as the time taken to approve is not in any way driven by the yard program. This introduces the risk of further upstream production delays.

## **Resource Allocation Glen Sannox & Hull 802**

The yard last reported actual against planned manning resources in their April 2021 project report. The below tabulated weekly headcount is independently compiled against average onboard daily workers. The figures are intended to highlight trends concerning proposed planning activities. In the September project report, the yard informs that an additional 30 [redacted] will support the closeout of the remaining hot works split between both vessels. Our reported trend highlights that as of week 43 (last week in October), worker numbers had only increased by circa 15. All other worker resources remained static despite the continual slippage against task completion dates. The trend referenced above should have been sufficient to identify the risks associated with the need to recover critical schedule tasks in support of upstream activities such as testing and commissioning.

### Glen Sannox

Week	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
<b>Yard Worker/Day</b>															
Welders	5	5	5	5	6	6	5	6	6	6	5	5			
Platers/Burners	2	2	2	2	3	4	4	4	5	6	4	4			
[redacted]	16	16	14	14	42	41	30	30	33	30	39	40			
Engineers	4	4	6	6	6	6	6	4	4	6	6	6			
Yard Pipe Fitters	4	4	4	4	3	6	6	6	6	6	6	6			
Painters	10	10	10	8	6	8	8	7	7	7	8	8			
Joiner	4	4	4	6	6	8	8	5	0	4	6	6			
Shipwright	0	0	0	0	0	0	0	0	2	2	0	0			
Stagers	2	2	2	4	4	2	4	6	6	4	6	7			
Ancils	17	17	17	14	12	15	14	14	9	6	7	7			
<b>Average Total Per Day</b>	64	64	64	63	88	96	85	82	78	77	87	89			
<b>Weekly Hours 5 Day Week</b>	3200	3200	3200	3150	4400	4800	4250	4100	3900	3850	4350	4450			
<b>Week</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>
<b>Contractors</b>															
[redacted]	7	10	10	10	12	10	10	9	10	10	12	12			
	4	6	6	6	8	12	12	10	11	11	12	12			
	3	3	3	3	1	3	3	3	5	5	5	5			
	3	4	4	0	0	2	4	5	2	3	3	3			
	30	30	30	30	30	30	30	28	24	24	28	28			
	0	2	2	0	0	0	0	0	2	2	0	0			
	0	0	2	2	2	3	3	3	3	4	4	4			
	60	60	53	53	0	4	4	3	3	4	4	4			
<b>Total Per Day</b>	107	115	110	104	53	64	66	61	60	63	68	68			157 Combined Total
<b>Weekly Hours 5 Day Week</b>	5350	5750	5500	5200	2650	3200	3300	3050	3000	3150	3400	3400			7850 Combined Total

### Hull 802

Week	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
<b>Yard Workers</b>															
Welders	6	4	6	6	6	3	0	2	3	2	2	2			
Platers/Burners	14	14	12	10	10	1	0	1	2	2	2	2			
[redacted]					4	3	14	30	30	32	36	38			
Engineers							0	0	0	0	0	0			
Yard Pipe Fitters							0	0	0	0	0	0			
Painters	2	2	2		2	2	5	4	4	6	4	4			
Joiner							0	1	0	0	0	2			
Shipwright	3		3	3	3	1	3	3	3	3	3	3			
Stagers	2	2	2	2	3	1	2	2	0	4	4	4			
Ancils	9	9		8	10	7	9	8	8	4	4	4			
<b>Total Per Day</b>	36	31	25	29	38	18	33	51	50	53	57	59			
<b>Weekly Hours 5 Day Week</b>	1800	1550	1250	1450	1900	900	1650	2550	2500	2650	2850	2950			
<b>Week</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>
<b>Contractors</b>															
[redacted]						0	0	0	0	0	0	0			
						0	0	0	0	0	0	0			
						0	0	0	0	0	0	0			
						0	0	0	0	0	0	0			
	0	2	2	0	0	0	0	0	0	2	2	2			
						0	0	0	0	0	0	0			
						0	0	0	0	0	0	0			
<b>Total Per Day</b>		2	2	0	0	0	0	0	0	2	2	2			61 Combined Total
<b>Weekly Hours 5 Day Week</b>	0	100	100	0	0	0	0	0	0	100	100	100			3050 Combined Total

### Hull 802

The below statement first made in our September report remains leading in the progress of hull 802. Yard monthly reporting completely ignores the implication of the 28<sup>th</sup> of September 2021 email.

FMPG has advised of significant changes (delay) to the baseline schedule dates issued 28th June 2021 supporting block erection and completion, ref, email dated 28th September 2021, entitled Review of the Block Erecting and Consolidation Programme. Whilst it is acknowledged rescheduling of works within the program is wholly under the responsibility of the yard and that the yard seeks to maintain overall key dates for Hull Assembly Completion (802KM002) and Superstructure Complete (802KM003), respectively 26th January 2022 and 21st July

2022. Late structure delivery invariably will impact the freedom production workers have to timely commence outfitting work in line with the current schedule, raising the question of the ongoing credibility of the current 802 schedule.

## **Yard Supervision**

The below statement first made in our September report remains leading in this discussion. The lack of onboard supervision of workers regardless of discipline remains a significant issue. Worker efficiency remains lower than would be typically expected of a shipyard <sup>[redacted]</sup>

## **2.0 Changes to Site Supervision Team**

No Changes this period

### **1.0 Design Changes Approved**

(Note of changes; changes to be authorised & recorded in Design Change Register)

### **4.0 Agreed Changes to Delivery Date**

The yard informs that the forecast finish date currently reported as 25<sup>th</sup> July 2022 for the Glen Sannox is currently under review, the findings are expected to be released mid-November 2021.

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

### **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**

A total of three low-level inspection call outs have been made during this reporting period for Glen Sannox. The call for inspection process is directly driven by the rate at which completion of work packages is achieved, which is driven by the schedule of works. With twenty-three working days to run until the planned start of commissioning works, this key indicator provides further insight into the delays currently faced to verify the vessel's build.

Callouts covering hull 802 focus entirely upon structural works. From the lessons learnt register presented during the September project review, the opportunity to present early outfitting works for inspection is not seen as a profound opportunity to capitalise upon.

## Overview of Inspection Call Outs

Vessel	Inspection Call Out Detail	Deck	Area	Week No	Status
801	Pre Insulation	6	Aft Cabins	40	Accepted
801	Deck Fairing	6	Toilet Area	40	Accepted
802	Structure		Blocks 80,81 & 93	40	Accepted
802	Hose Test	Block A5/5	Windows	40	Accepted
801	No Calls for Inspection			41	N/A
802	Structure		Block 45 & 46	41	Accepted
802	Structure Link Ups	Block 48	Blocks 41,42,43,44	41	Accepted
802	Structure	A5/6 Port		41	Accepted
802	Structure	A5/6 Stb		41	Accepted
801	No Calls for Inspection			42	N/A
802	No Calls for Inspection			42	N/A
801	Background Cleanliness	6	Cabin Deck Head	43	Accepted
802	Block 3 Unit A3/5 Welding	5	Windows	43	Accepted
802	Bilge keel Port Side	Frames 30-63	External Hull	43	Pending
802	Structure Link Ups	Block 1-2	Blister Plates	43	Accepted
802	Structural	Block 3	Unit 95	43	Accepted
802	Structural	Block 3	Unit 96	43	Accepted

### 8.0 Progress Against Programme

The below chart of work is extracted from the yard level 1 baseline plan, issued 28th June 2021. The current status report for this period is as follows:

1. A total of 11 tasks are reported as late to start measured against the baseline. The important context in this discussion is the latest start date (float) that each task can start (slippage) without delaying the project's finish.

2. A total of 27 tasks are reported as late to finish. Again, the missing context is the latest date that a task can finish without delaying the project's finish, which is not shared by the yard. However, it is possible to conclude that the late completion of the following works is directly responsible for the delays now faced to meet the planned successor start of testing and commissioning. 801KM7602 Complete pipework installation in SZ0303, 80102PIPE001 Install Pipework in zone 2, 801Z02PIPE003 Pipework testing and the remaining cable reeving 801Z02ELEC003 in Zone 2.

The below statistic highlights that the yard has yet to meet a single planned completion date required to service the 801-master schedule.

### Glen Sannox - Late to Start Measured Against Baseline

WBS	Zone	Activity	Delay Days
801Z02ELEC003	Zone 2	Cable Reeving	60 Days
801Z05HAVC002	Zone 5	HVAC Testing	25 Days
801Z06HAVC002	Zone 6	HVAC Testing	52 Days
801Z07HVAC002	Zone 7	HVAC Testing	48 Days
801Z05PIPE001	Zone 8	Install Pipework	5 Days
801Z01PIPE001	Zone 10	Install Pipework	73 Days
801Z10HVAC001	Zone 10	HVAC Hangers	59 Days
801Z10EQUI001	Zone 10	Install Equipment	59 Days
801Z10HVAC001	Zone 10	HVAC Testing	45 Days
801Z10PIPE3	Zone 10	[redacted]	5 Days
801Z11HVAC001	Zone 11	HVAC Hangers	3 Days
801Z11PIPE001	Zone 11	Install Pipework	3 Days

### Glen Sannox - Late to Finish Measured Against Baseline

WBS	Zone	Activity	Delay Days
801KM7601	Milestone	Deck Recesses	160 Days
801KM7602	Milestone	Pipe Installation	76 Days
801FaZ010OHWO1	External	FWD Mast	95 Days
801FaZ010OHWO4	External	FWD Mast	65 Days
801Z01HVAC001	Zone 1	HVAC Hangers	20 Days
801Z02HTWK001	Zone 2	Hotwork	123 Days
801Z02PIPE001	Zone 2	Install Pipework	155 Days
801Z02EQUI001	Zone 2	Equipment Install	24 Days
801Z02HVAC001	Zone 2	HVAC Hangers	81 Days
801Z02PIPE003	Zone 2	Pipework Testing	45 Days
801Z02HVAC002	Zone 2	HVAC Testing	67 Days
801Z03PIPE001	Zone 3	Install Pipework	67 Days
801Z03HVAC001	Zone 3	HVAC Hangers	123 Days
801Z03EQUI001	Zone 3	Equipment Install	26 Days
801Z03HTWK001	Zone 3	Hotwork	76 Days
801Z03HVAC002	Zone 3	HVAC Testing	62 Days
801Z03ELEC003	Zone 3	Electrical Cable Reeving	24 Days
801Z033PIPE003	Zone 3	Pipework Testing	72 Days
801Z04HTWK001	Zone 4	Equipment Install	59 days
801Z04HTWK001	Zone 4	Hotwork	60 Days
801Z04HVAC001	Zone 4	HVAC Hangers	80 Days
801Z04HVAC001	Zone 4	Install Pipework	61 Days
801Z04ELEC003	Zone 4	Electrical Cable Reeving	59 Days
801Z04PIPE003	Zone 4	Pipe Testing	26 Days
801Z04HVAC002	Zone 4	HVAC Testing	26 Days
801Z07HTWK001	Zone 7	Install Pipework	80 Days
801Z07HVAC001	Zone 7	HVAC Testing	27 Days



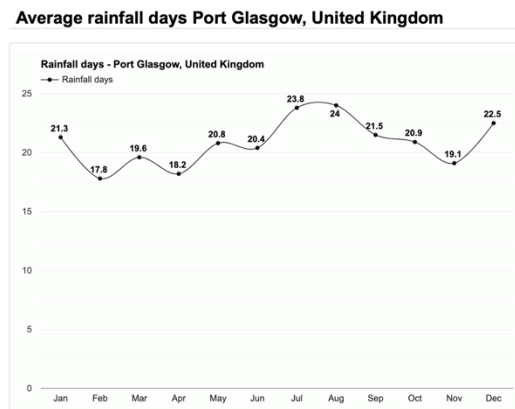
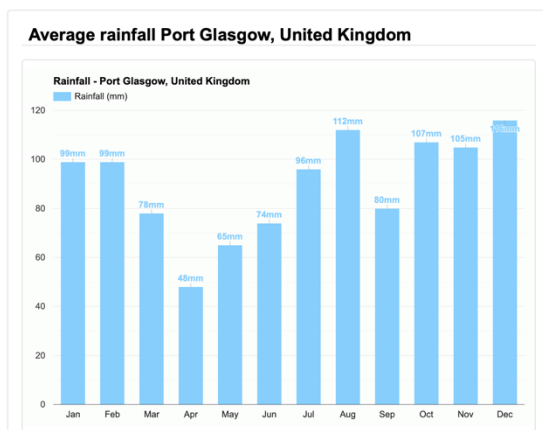
## Hull 801

### Wheelhouse Navigation, Communications and Safety Console Installation

The first incorrectly outfitted bridge consoles were lifted onboard Glen Sannox during week 42, despite the agreement made in February 2021 that all modifications to change out the now-defunct [redacted] equipment with [redacted] equipment would be carried out in a controlled environment and before installation onboard the vessel. The situation is further exasperated as the equipment is now positioned on the bridge that cannot be considered closed to the elements. Temporary window openings mean that humidity control is impossible, and aluminium dust contamination is now a major cause of concern as the bridge window openings still require to be cut. Both issues in a noncontrolled environment will likely cause current disruption in electric contacts that ultimately may influence the reliability of this principal safety equipment. Based on this strategy, the yard has been informed of our concerns regarding the overall approach to quality and highlighted that the associated equipment is deemed safety-critical.

We would also highlight that CMAL agreed to a supply change on this basis to assist FMPG greatly.

### Ongoing External Structural Works



The high instance of wet weather has stopped all external deck works.

### Panama Eyes

Work started on removal back in week 33, work remains to be completed as of week 43. Scheduled completion of this work (801Z05HTWK001) was planned as 29<sup>th</sup> November 2021. Bad weather has delayed their subsequent installation onboard.

### Modified Mooring Rope Bits

Modification works to increase the height dimension is now complete, bad weather has delayed their subsequent installation onboard.

### Hull Belting

Planned completion of hot works in zones 1,2 & 3 is respectively 9 December 2021, 30 July 2021 and 16 August 2021. Arguably this work should have been a component deliverable of the 7th May 2020 milestone claim for structural completion. Work is currently abandoned because of bad weather.

### External Deck Coating Works



Uncoated structural components remain open to the elements for the second winter season, please [redacted] to gain a full understanding.

### **Forward And Aft Masts**

Remaining structural and outfitting works are on hold because on continued poor weather conditions.

### **Clam Shell Door Installation**

Work progresses to complete the mechanical installation of door hinges and locking devices. It should be noted that all components are only tack welded in position before the anticipated survey in week 44 by a representative of TTS. Zone 5 hot work is scheduled to be completed on 29th November 2021.

### **Main and Auxiliary Engine Exhaust Resilient Supports**

Works are ongoing in the uptake and funnel structure to complete the heavy sub supporting structure needed to hang the exhaust antivibration tie rods. This work is hugely time-consuming because of the lack of space available to work. It should have to the largest part been completed before lifting the funnels on board the vessel before 7th May 2021 milestone "Structural Completion". The baseline planned completion date for hot work in this area is 30th July 2021, now reported as 123 days overdue.

### **Structural Compensation of Pipe Transits**

Work is ongoing to fit compensation pieces in all affected areas. This work's out of sequence impact is hugely damaging to the progress of works set out in the master schedule. The delay impact will significantly impact the earliest date at which testing and commissioning works can start. This hold revised baseline is not factored into the current planning philosophy.

### **Structural Plenums**

Work continues in the fabrication of structural plenums. No reference is made within the level 1 baseline program as to when this work is scheduled to be completed.

### **Deadweight Issue**

Update expected week 46

### **Glen Sannox Piping**

#### **LNG**

We reported in August that constant yard responsible hold-ups had delayed LNG pipe installation. This remains the case for the whole of this reporting period. Hold-ups are currently estimated to stand at circa five to ten weeks. The situation has caused the contractor's workers to leave the site once again. They are not expected to return until week 46. No reference is made within the level 1 baseline program as to when this work is scheduled to be completed.

### **Zone 2 Machinery Space Isometric Pipe Installation**

In July 2021, CMAL noted that over a thousand pipe spools remained to be installed in Zone 2. Most being required to complete the services needed to run the main and auxiliary engines. At the time of writing work continues at a slow pace, [redacted]

Onboard observation flags the complexity of the remaining works will warrant significantly longer installation times per spool. A normal installation would typically factor between 5 and 10 hours per spool, we now typically

see this as closer to 20 hours per spool. [redacted]

The ongoing baseline program completion date overrun is currently reported as 140 calendar days in delay. Unless the Yard takes immediate action to recover this delay through acceleration measures there is little likelihood that commissioning will start in line with the master schedule on the 16th of December 2021. The level of program insight needed to accurately further comment on the impact of the above program slippage is not shared by the Yard. The Yard August progress report references the development of a suitable recovery plan, this detail is not shared.

### **Pipe System Prioritisation - Commissioning - 801**

In their September 2021 project report, the yard identifies the "volume of change from zone 2 modifications sheet now understood and materials are available, level of change has impacted major systems for the start of commissioning" Ongoing survey of the systems in question does not indicate measurable prioritisation of the works needed to complete essential systems. Late in the day, the yard's procurement of system valves and various pumps is not openly flagged as a delay issue.

### **Piping, Cable & Transformer Space - 0303**

Minimal production progress is measured over this reporting period. Installation of the central hydraulic system main pipe header transiting the area has stalled as the contractor requires yard responsible hot work to be completed. The overall level of piping completion this period; penetrations through to the P&S stabiliser spaces are now complete allowing final spool pieces to be installed for some transiting systems. Progress is assessed to remain at 75% for mechanical installation. The late procurement of glycol system valves and pipe spools, the late installation of the LNG bunkering pipe transits, and a lack of available resources to complete remain the principal issue faced by the yard. Scheduled completion of this area was planned as 16th August 2021. The current delay is 76 calendar days.

### **Forward Machinery Space (0402) – 801**

Work has stopped mainly in this area. We assume that this is driven by late procurement of key components, pipe installation was scheduled to be completed 31st August 2021, hot work was scheduled to be completed 03rd September 2021, HVAC testing is also scheduled to be completed as well of 13th August 2021.

### **Central Hydraulic System Installation - 801**

Work has started on the pipe installation, the main header is now run from the sewage treatments space (0304), through the pipe, cable and transformer space (0303), initial feedback is the installation standard is high, progress is slow as the contractor is unavoidably forced to await the shipyard driven hot works (bulkhead penetrations, support attachments to tank tops etc.) be completed. Many co-ordination issues have prevented work starting in the Zone 2 machinery spaces. This issue confirms our earlier position that the model accuracy in this area is poor.

### **Zone 2 Walkways - 801**

Some intermediate level steps have been installed, no change to the installation philosophy that would improve access to equipment positioned beneath each walkway has been progressed.

## **Owner's Observation Reports (OOR)**

The Yard has made no significant improvements to the rate of closure for open issues, which remains insufficient to support the build program.

Year	2021					
Month	June	July	August	Sept	Oct	Nov
OOR's Raised	37	25	4	7	0	
OOR's Closed	0	28	33	32	12	

## Electrical

Work on the electrical installation continues at a slow pace. Cable pulling was set to start week 36. This is now reported to be delayed until week 43. No explanation of the delays faced by the yard has been shared. Measurable production achievement is confined to legacy cable routing checks. At this point in the build, based on our detailed knowledge of ship's electrical systems, we would estimate circa 150 -200km of various electrical cables remain to be installed onboard the vessel, the installation of which will likely reside on the critical path for the vessel build given the recent slippage reported by the master schedule. None of the remaining cables has been pulled this period it is unlikely this work will start until the majority of 2nd fix cable tray routing is complete. The impact upon the commissioning process will need to be carefully monitored. Our observations on board would suggest that some of the cables pulled initially by [redacted] are too short to reach the desired end-user terminations. Should this be the case, replacement cables will need to be procured, the situation will be closely monitored.

[redacted] continue the [redacted] modification of the main switchboards

## Accommodation Progress - 801

Installation of Structural fire insulation fitted to the deckhead of deck seven is complete but still requires presentation to the [redacted] for sign off. The previously insulated area of the deck eight deckhead now requires the insulation to be removed to allow incomplete fairing works to be progressed. Work to bolt down fitted bridge consoles is underway. The over-dimensioned height of the bridge watchkeeping movable chair foundation is still to be resolved. The fitting of bridge console foundations is hampered because of the incorrect deck camber applied to the deck. Bridge windows are loaded onboard before installation. Electrical ladder rack installation is being progressed on deck 6 for cabling serving the emergency generator. Construction of the deck, five aft lounge bar sub-framing, is now started.

## Coating - 801

### Bow Thruster Space – 801

Work has again stalled for the whole of this reporting period as the coating team await the hire of suitably sized air compressor equipment. Portable compressor equipment arrived on-site Thursday 30th September. However, work has yet to start as additional air pipes, and cables to connect the mobile services have not been sourced to support the plant equipment hired. Overall, the delay in beginning sweep blasting in the bow thruster space is assessed to be 52 calendar days.

### HVAC Installation - 801

The yard's lateness limits progress in all areas to complete background outfitting works. The planned installation and commissioning schedule presented in the revised baseline plan is not credible. The ventilation component of the Zone 2 installation needed to supply combustion

air to run main and auxiliary engines during initial set up and subsequent load testing will need to be prioritised.

## Vessel 802

### Block Erection Status - 802

The below chart of work is extracted from the yard level 1 baseline plan, issued 28th June 2021. The current status report for this period is as follows:

1. A total of 11 tasks are reported as late to start measured against the baseline. Work to start tank testing, cable reeving, and HVAC systems is further indication of the level of unrealistic planning detail applied to the project.
2. A total of 15 tasks are reported as late to finish. Again, the missing context is the latest date that a task can finish without delaying the finish of the project, which is not shared by the yard. Planned completion of the cryogenic pipework in Zone 2 machinery spaces is a further indication of the level of unrealistic planning detail applied to the project. The work has yet to start. No start date is provided in the Level 1 baseline.

### Late to Start Against Baseline

WBS	Zone	Activity	Delay Days
802MILECMAL2101		Tank Testing	96 days
802Z03HVAC001	Zone 3	HVAC Hangers	71 days
802Z03PIPE0012004	Zone 3	Install PipeWork	31 days
802Z03PIPE003	Zone 3	Pipe Testing	62 days
802Z03ELEC003	Zone 3	Reeve Cables	54 days
802Z04PIPE001	Zone 4	Pipe Installation	51 days
802Z06HVAC001	Zone 6	HVAC Hangers	67 days
802Z06PIPE001	Zone 6	Pipe Installation	67 days
802Z06EQU001	Zone 6	Pump Seat Installation	48 days
802Z06HVAC003	Zone 6	HVAC Testing	48 days
802Z06ELEC003	Zone 6	Reeve Cables	4 days

## Late to Finish Against Baseline

<b>WBS</b>	<b>Zone</b>	<b>Activity</b>	<b>Delay Days</b>
802MILECMAL2003	Zone 2	Complete Hot Work	40 days
802MILECMAL2004		Pipework Installation	31 days
802MILECMAL2101		Tank Testing	96 days
802MILECMAL2105		Funnel Preparation	40 days
802MILECMAL2109	Zone 2	Complete Pre Outfitting	31 days
802MILECMAL2106	Zone 2	Complete Cryogenic Pipework	31 days
802MILECMAL2108		Erect Forcastle Block U49/50/51	3 days
A1170		Unit Assembly	156 days
A1190		Unit Assembly	40 days
A1210		Unit Assembly	10 days
A1280		Unit Assembly	24 days
A1180		Unit Assembly	3 days
A1290	Block 11 Upper	Block Assembly	45 days
802Z02HTWK001	Zone 2	Hotwork	38 days
802Z02PIPE001	Zone 2	Install Pipe	23 Days

## 802 - FMPG Baseline Planning Detail

Activity ID	Activity Name	Remaining Duration	Start	Finish	Status as of 31st October 2021
<b>802 - L1 PLAN</b>					
<b>Milestones</b>		466d	24-May-21	03-Apr-23	
802MILECMAL2102	Commence Zone 2 Pipework Manufacturing	0d	24-May-21*		
802MILECMAL2004	Complete Preparation of Unit 48	0d		25-May-21	
802MILECMAL2103	Commence Zonal Hotwork Programme - Zone 2	0d	21-Jun-21*		
802MILECMAL2104	Commence Zone 2 Pipework Installation	0d	12-Jul-21*		
802MILECMAL2101	Commence Tank Testing	0d	26-Jul-21*		Late to Start by 96 days
802MILECMAL2105	Complete Preparation of the Funnels	0d		16-Sep-21*	Late to start - late to finish 40 days
802MILECMAL2109	Complete Pre-Filling Out (PFO) - Zone 2	0d		30-Sep-21*	Late to finish by 31 days
802MILECMAL2106	Completion of Cryogenic Pipework - Zone 2	0d		28-Oct-21*	Late to finish by 31 days
802MILECMAL2108	Erect Foc'sle Block (U49/50/51) at Berth	0d	07-Dec-21*		Late to start - Late to finish by 3 days
802KM002	802 Hull Assembly Complete	0d		26-Jan-22*	
802MILECMAL2107	Shaftline - Final Line of Sight Achieved	0d		21-Feb-22*	
802KM003	802 Superstructure Complete	0d		21-Jul-22*	
802KM004	802 Launch	0d		15-Aug-22*	
802KM005	802 Commission Auxiliary Systems Complete	0d		11-Oct-22*	
802KM006	802 Main Engine and Gearbox Commissioning Complete	0d		21-Nov-22*	
802KM007	802 Zonal Outfit Complete	0d		30-Nov-22*	
802KM008	802 Enter Dry-Dock	0d	26-Jan-23*		
802KM009	802 Inclining Exercise	0d	09-Feb-23*		
802KM010	802 Builders and Owners Sea Trials Complete	0d		20-Feb-23*	
802KM011	802 LNG Bunkering Complete	0d		20-Mar-23*	
802KM012	802 LNG Sea Trial Complete	0d		28-Mar-23*	
802KM013	802 Delivery	0d		03-Apr-23*	
<b>Structure</b>		281d	25-Aug-20A	05-Jul-22	
<b>Unit Assembly</b>		262d	25-Aug-20A	08-Jun-22	
A1170	Block 1	4d	25-Aug-20A	27-May-21	Late to finish by 156 days
A1190	Block 3	86d	24-May-21*	21-Sep-21	Late to finish by 40 days
A1210	Block 5	98d	07-Jun-21*	21-Oct-21	Late to finish by 10 days
A1280	Block 12	87d	08-Jun-21*	07-Oct-21	Late to finish by 24 days
A1200	Block 4	151d	14-Jun-21*	20-Jan-22	
A1270	Block 11	103d	12-Jul-21*	02-Dec-21	
A1230	Block 7	208d	26-Jul-21*	26-May-22	
A1220	Block 6	103d	03-Aug-21*	23-Dec-21	
A1240	Block 8	208d	09-Aug-21*	08-Jun-22	
A1260	Block 10	140d	27-Sep-21*	21-Apr-22	
A1250	Block 9	154d	27-Sep-21*	12-May-22	
A1180	Block 2	19d	04-Oct-21*	28-Oct-21	Late to finish by 3 days
<b>Block Assembly</b>		171d	13-Aug-21	21-Apr-22	
A1290	Block 11 Upper	25d	13-Aug-21*	16-Sep-21	Late to finish by 45 days
A1300	Block 12 Foc'sle	46d	04-Oct-21*	06-Dec-21	
A1310	Block 10/11 Wheelhouse	85d	13-Dec-21*	21-Apr-22	
<b>Launch</b>		116d	06-Dec-21	05-Jul-22	
802A7020	Launch Arrangement	104d	06-Dec-21*	14-Jun-22	
802A7030	Launch Preparation	12d	15-Jun-22*	05-Jul-22	
<b>Outfit</b>		366d	21-Jun-21	30-Nov-22	
<b>Zone 01 Outfit</b>		142d	12-Jan-22	03-Aug-22	
802201HTWK001	Z01 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	46d	12-Jan-22*	16-Mar-22	
802201HVAC001	Z01 - Install HVAC & Hangers	26d	26-Jan-22*	02-Mar-22	
802201PIPE001	Z01 - Install Pipework	73d	26-Jan-22*	11-May-22	
802201PIPE003	Z01 - Pipework Testing	73d	23-Feb-22*	08-Jun-22	
802201HVAC002	Z01 - HVAC Testing	49d	02-Mar-22*	12-May-22	
802201EQUI001	Z01 - Install Equipment (Steel/HVAC/Elec)	73d	16-Mar-22*	29-Jun-22	
802201ELEC003	Z01 - Electrical cables - Reeve to Band Cables	79d	11-Apr-22*	03-Aug-22	
<b>Zone 02 Outfit</b>		207d	21-Jun-21	19-Apr-22	
802202HTWK001	Z02 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	68d	21-Jun-21*	23-Sep-21	Late to Finish by 38 days
802202PIPE001	Z02 - Install Pipework	63d	12-Jul-21*	07-Oct-21	Late to Finish by 24 days
802202PIPE003	Z02 - Pipework Testing	77d	29-Sep-21*	24-Jan-22	
802202EQUI001	Z02 - Install Equipment (Steel/HVAC/Elec)	85d	04-Oct-21*	08-Feb-22	
802202ELEC003	Z02 - Electrical cables - Reeve to Band Cables	131d	06-Oct-21*	19-Apr-22	
802202HVAC001	Z02 - Install HVAC & Hangers	57d	28-Oct-21*	25-Jan-22	
802202HVAC002	Z02 - HVAC Testing	35d	13-Dec-21*	08-Feb-22	
<b>Zone 03 Outfit</b>		169d	19-Jul-21	22-Mar-22	
802203HTWK001	Z03 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	108d	19-Jul-21*	16-Dec-21	
802203HVAC001	Z03 - Install HVAC & Hangers	83d	03-Aug-21*	25-Nov-21	Late to Start by 71 days
802203PIPE001	Z03 - Install Pipework	98d	03-Aug-21*	16-Dec-21	Late to Start by 71 days
802203PIPE003	Z03 - Pipework Testing	90d	30-Aug-21*	11-Jan-22	Late to start by 62 days
802203EQUI001	Z03 - Install Equipment (Steel/HVAC/Elec)	110d	06-Sep-21*	15-Feb-22	
802203ELEC003	Z03 - Electrical cables - Reeve to Band Cables	134d	07-Sep-21*	22-Mar-22	Late to start by 54 days
802203HVAC002	Z03 - HVAC Testing	27d	16-Dec-21*	01-Feb-22	
<b>Zone 04 Outfit</b>		189d	20-Sep-21	23-Jun-22	
802204PIPE001	Z04 - Install Pipework	85d	20-Sep-21*	25-Jan-22	Late to start by 51 days
802204EQUI001	Z04 - Install Equipment (Steel/HVAC/Elec)	123d	25-Oct-21*	26-Apr-22	
802204HTWK001	Z04 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	60d	01-Nov-21*	01-Feb-22	
802204ELEC003	Z04 - Electrical cables - Reeve to Band Cables	152d	10-Nov-21*	23-Jun-22	
802204PIPE003	Z04 - Pipework Testing	85d	15-Nov-21*	22-Mar-22	
802204HVAC001	Z04 - Install HVAC & Hangers	19d	22-Nov-21*	16-Dec-21	
802204HVAC002	Z04 - HVAC Testing	13d	30-Mar-22*	19-Apr-22	
<b>Zone 05 Outfit</b>		122d	29-Nov-21	31-May-22	
802205HTWK001	Z05 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	25d	29-Nov-21*	11-Jan-22	
802205HVAC001	Z05 - Install HVAC & Hangers	40d	13-Dec-21*	15-Feb-22	
802205HVAC002	Z05 - HVAC Testing	34d	05-Jan-22*	21-Feb-22	
802205PIPE001	Z05 - Install Pipework	72d	19-Jan-22*	03-May-22	
802205EQUI001	Z05 - Install Equipment (Steel/HVAC/Elec)	53d	09-Feb-22*	26-Apr-22	
802205PIPE003	Z05 - Pipework Testing	67d	09-Feb-22*	17-May-22	
802205ELEC003	Z05 - Electrical cables - Reeve to Band Cables	64d	28-Feb-22*	31-May-22	

<b>Zone 06 Outfit</b>		174d	25-Aug-21	09-May-22	
801Z06HVAC001	Z06 - Install HVAC & Hangers	130d	25-Aug-21*	03-Mar-22	ate to start by 67 days
802Z06PIPE001	Z06 - Install Pipework	138d	25-Aug-21*	15-Mar-22	ate to start by 67 days
802Z06EQUI001	Z06 - Install Equipment (SteelHVAC/Elec)	130d	13-Sep-21*	22-Mar-22	ate to start by 48 days
802Z06HVAC002	Z06 - HVAC Testing	130d	13-Sep-21*	22-Mar-22	ate to start by 48 days
802Z06HTWK001	Z06 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	109d	14-Sep-21*	22-Feb-22	
802Z06ELEC003	Z06 - Electrical cables - Reeve to Band Cables	129d	27-Oct-21*	09-May-22	ate to start by 4 days
802Z06PIPE003	Z06 - Pipework Testing	83d	16-Nov-21*	21-Mar-22	
<b>Zone 07 Outfit</b>		142d	22-Nov-21	21-Jun-22	
802Z07HTWK001	Z07 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	40d	22-Nov-21*	25-Jan-22	
802Z07HVAC001	Z07 - Install HVAC & Hangers	40d	05-Jan-22*	01-Mar-22	
802Z07PIPE001	Z07 - Install Pipework	40d	05-Jan-22*	01-Mar-22	
802Z07HVAC002	Z07 - HVAC Testing	40d	19-Jan-22*	15-Mar-22	
802Z07PIPE003	Z07 - Pipework Testing	25d	23-Feb-22*	29-Mar-22	
802Z07EQUI001	Z07 - Install Equipment (SteelHVAC/Elec)	27d	23-Mar-22*	03-May-22	
802Z07ELEC003	Z07 - Electrical cables - Reeve to Band Cables	15d	01-Jun-22*	21-Jun-22	
<b>Zone 08 Outfit</b>		199d	07-Mar-22	30-Nov-22	
802Z08HTWK001	Z08 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	96d	07-Mar-22*	21-Jul-22	
802Z08PIPE001	Z08 - Install Pipework	17d	28-Mar-22*	21-Apr-22	
802Z08HVAC001	Z08 - Install HVAC & Hangers	90d	28-Mar-22*	04-Aug-22	
802Z08HVAC002	Z08 - HVAC Testing	85d	11-Apr-22*	11-Aug-22	
802Z08PIPE003	Z08 - Pipework Testing	82d	25-Apr-22*	18-Aug-22	
802Z08EQUI001	Z08 - Install Equipment (SteelHVAC/Elec)	88d	13-Jun-22*	13-Oct-22	
802Z08PIPE3	Z08 - [redacted]ing Out	122d	13-Jun-22*	30-Nov-22	
802Z08ELEC003	Z08 - Electrical cables - Reeve to Band cables	93d	11-Jul-22*	17-Nov-22	
<b>Zone 09 Outfit</b>		182d	07-Mar-22	21-Nov-22	
802Z09HTWK001	Z09 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	76d	07-Mar-22*	23-Jun-22	
802Z09HVAC001	Z09 - Install HVAC & Hangers	114d	16-Mar-22*	26-Aug-22	
802Z09PIPE001	Z09 - Install Pipework	127d	16-Mar-22*	14-Sep-22	
802Z09HVAC002	Z09 - HVAC Testing	108d	28-Mar-22*	30-Aug-22	
802Z09PIPE003	Z09 - Pipework Testing	113d	13-Apr-22*	22-Sep-22	
802Z09EQUI001	Z09 - Install Equipment (SteelHVAC/Elec)	124d	14-Apr-22*	10-Oct-22	
802Z09PIPE3	Z09 - [redacted]ing Out	146d	14-Apr-22*	09-Nov-22	
802Z09ELEC003	Z09 - Electrical cables - Reeve to Band Cables	142d	05-May-22*	21-Nov-22	
<b>Zone 10 Outfit</b>		222d	08-Nov-21	28-Sep-22	
802Z10HTWK001	Z10 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	159d	08-Nov-21*	30-Jun-22	
802Z10PIPE001	Z10 - Install Pipework	146d	21-Dec-21*	26-Jul-22	
802Z10HVAC001	Z10 - Install HVAC & Hangers	116d	27-Jan-22*	12-Jul-22	
802Z10PIPE003	Z10 - Pipework Testing	127d	02-Feb-22*	03-Aug-22	
802Z10EQUI001	Z10 - Install Equipment (SteelHVAC/Elec)	149d	03-Feb-22*	05-Sep-22	
802Z10HVAC002	Z10 - HVAC Testing	108d	10-Feb-22*	14-Jul-22	
802Z10PIPE3	Z10 - [redacted]ing Out	141d	10-Feb-22*	31-Aug-22	
802Z10ELEC003	Z10 - Electrical cables - Reeve to Band cables	148d	01-Mar-22*	28-Sep-22	
<b>Zone 11 Outfit</b>		195d	24-Jan-22	27-Oct-22	
802Z11HTWK001	Z11 - Install all Compartment Hotwork incl. hull outfit/walkways/elec seats	19d	24-Jan-22*	17-Feb-22	
802Z11HVAC001	Z11 - Install HVAC & Hangers	29d	21-Feb-22*	31-Mar-22	
802Z11PIPE001	Z11 - Install Pipework	31d	23-Feb-22*	06-Apr-22	
802Z11HVAC002	Z11 - HVAC Testing	9d	04-Apr-22*	14-Apr-22	
802Z11PIPE003	Z11 - Pipework Testing	11d	04-May-22*	18-May-22	
802Z11EQUI001	Z11 - Install Equipment (SteelHVAC/Elec)	26d	27-Jun-22*	04-Aug-22	
802Z11PIPE3	Z11 - [redacted]ing Out	52d	27-Jun-22*	07-Sep-22	
802Z11ELEC003	Z11 - Electrical cables - Reeve to Checkwire	59d	08-Aug-22*	27-Oct-22	
<b>Commissioning</b>		154d	22-Aug-22	03-Apr-23	
A1110	Commission Auxiliary Systems	37d	22-Aug-22*	11-Oct-22	
A1150	Main Engine & Gearbox Commissioning	15d	31-Oct-22*	18-Nov-22	
A1160	STW Propulsion controls/Bow Thruster/Inflating	68d	21-Nov-22*	17-Feb-23	
A1120	Dry Dock	11d	25-Jan-23*	08-Feb-23	
A1130	Trials	32d	13-Feb-23*	28-Mar-23	
A1140	802-Delivery	0d		03-Apr-23	

## Cardinal Date Status

Milestone 'Completion of Car Deck Recesses' originally due 9 April 2021 and is now claimed as complete 7 May 2021, is now scheduled to be complete 24 May 2021 under the guidance set out in the re-baselined programme. The balance of work needed to complete the remaining 17 structural recesses remains to be started. The programme slippage currently stands at 128 calendar days. [redacted]

Work to complete the claimed milestone of structural completion claimed 7 May 2021 remains ongoing. Many other areas need to be worked and completed to achieve 'full' Steel/Aluminium Structural Completeness. Examples are, installation of all remaining internal bulkheads, aluminium bulkheads within the accommodation areas, installation of all stairwells, completion of welding of all Panama fairleads, completion of lift shafts, installation of all windows, installation of Forward Mast and the cutting / opening of bow doors and associated major structural works.

Aft Mast: As of week 21, 2021, milestone completion claimed 7 May 2012. However, final acceptance by CMAL inspection was not possible as the build quality of vent pipe supports, and poor standard of internal structure coating was insufficient to satisfy normal industry build standards or the requirements set out in the contractual specification.

Belting: Milestone completion claimed 7 May 2021; As of week 30, 2021, work remains incomplete on the starboard side of the vessel, work has been progressed this period to complete the port aft belting, this is not expected to complete until week 34, 2021. Programme slippage currently stands at 115 calendar days

## **9.0 Next Stage Payment Due**

n/a

## **10.0 Forthcoming Period Events**

(Note of events, visits, holidays or other yard commitments)

## **11.0 Tests & Trials Due**

Updated statistics not provided by FMPG for this reporting period.

## **12.0 Risk Register Update**

Updated statistics not provided by FMPG for this reporting period.

## **13.0 Safety & Environmental**

Updated statistics not provided by FMPG for this reporting period

Print Name: [Jim Anderson]

Signature:

Date: 16 November 2021]



[redacted]