

**Programme:** 801 Glen Sannox  
100m LNG Dual-fuel Ro-Ro Passenger Ferry

**Review Period:** Feb 2024

<u>Name</u>	<u>Job Title</u>	
David Tydeman	CEO	
[REDACTE	Ship Delivery Director	
[REDACTED	Project Manager	



Ferguson Marine (Port Glasgow) Proprietary Information

The information contained in this document is the property of Ferguson Marine (Port Glasgow), and further dissemination is prohibited without written permission of Ferguson Marine (Port Glasgow).  
IN STRICT CONFIDENCE

# Agenda

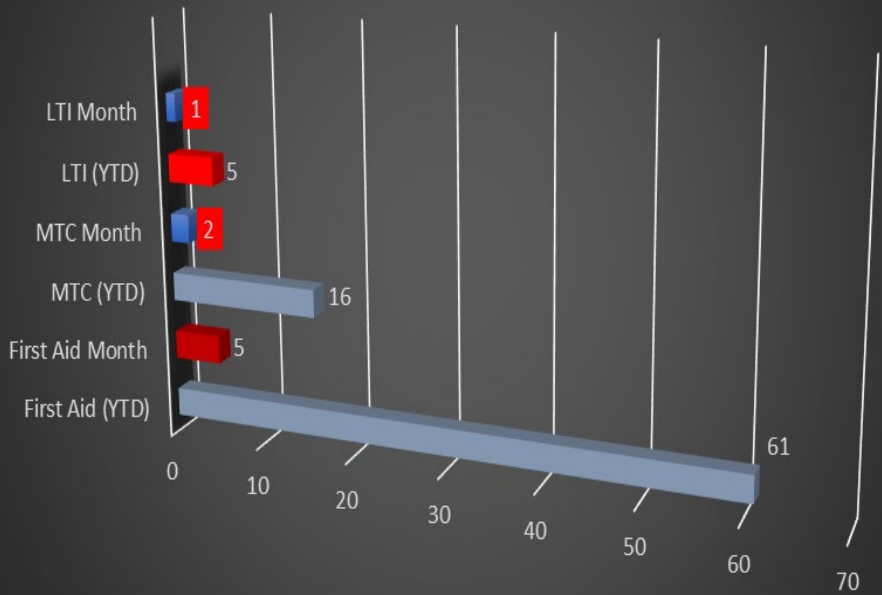
- Health & Safety
- Builders Trials
- Sea Trials/Stability
- Cost/Schedule to go Management
- 801 RAG Status
- LNG Schedule
- Engineering Status
- Risk
- OOR Progress
- AOB

# HSE Dashboard Feb 2024

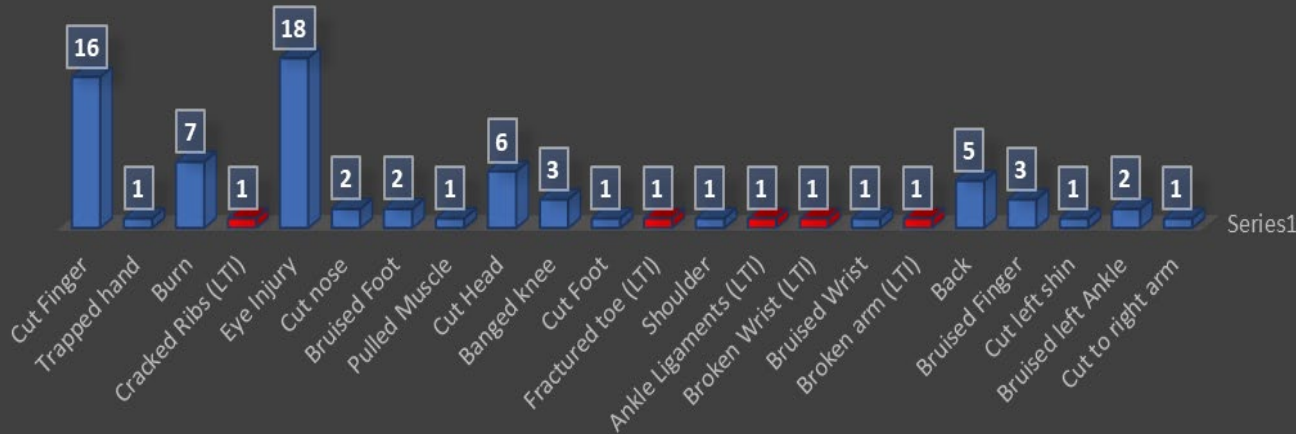
Incident Statistics	Target	Actual		Fatal	0	Fire	1	Proactive Statistics	Target		Actual	
	2024	Month	YTD						Month	2023	Month	YTD
Number of Hours Worked**		78137	468822	RIDDOR	0	Damage	0	Number of YSYD Cards	>50	>600	52	310
Number of Lost Time Incidents (> 3 Days)	< 9	1	4	LTI (> 3days )	1	Environmental	0	Toolbox Talks Issued	2	24	1	7
Lost Time Incident Freq Rate*	< 10.14	12.8	7.31	Medical Treatment (MTC)	1	Serious Near Miss	0	Housekeeping Inspections	4	48	4	24
Number of Recordable Injury Incidents	< 30	25.6	27.42	First Aid	4	YSYD	52	Emergency Drills Completed	>4	>48	1	7
Total Recordable Injury Incident Rate*	< 35.0	76.79	107.87	Total Injuries	5	TOTAL Incidents	1	Vessel Compliance Checks	30	420	30	180

\* Per 1,000,000 working hours  
 \*\* Estimated no. of hours worked

### Reported Incidents YTD 2023 / 2024



### INURY TYPE YTD 2023 /2024



# Builders Trials

## Set up and Demonstration of Systems.

- Main Electrical Generating Plant.
- Main Engines.
- Propulsion Plant, Gearbox & CPP.
- Bow & Stern Thrusters.
- Steering Gear.
- Stabilisers.
- Navigation Systems.
- Internal & External Communication Systems.
- Domestic Systems.
- Gally & Catering.
- HVAC.

## Trials Conducted.

- High & Low Speed Manoeuvring Trials.
- Crash Stop.
- Turning Circles.
- Steering Trials.
- Stabiliser Forced Roll.
- Acceleration Trials.
- Speed Runs.
- Astern Running.
- Docking & Departure.
- Anchor Trials.

# Stability and Sea Trials

## Stability

- We have basic Intact Stability calculations and stability cases for towing and sea trial periods. Inclining for sea trials has been successfully undertaken 04/02/24. We will conduct the final inclining experiment to finish the stability book and get approval prior to owner's trials.
- No Damage Stability book yet, [REDACTED] will prepare this following the inclining experiment.
- Lightship weight distributed and still water bending moments and shear forces calculated. The longitudinal strength calcs submitted to [REDACTED] provided limit curves on 23 Mar 2023 and related figures reflected to the longitudinal strength calcs and submitted to [REDACTED] on 5 Apr 2023. [REDACTED] comments received for the risk of buckling in the upper structure of the ship under compressive stresses on 23 May 2023. [REDACTED] finished the additional section strength calculations investigation with new load conditions as advised by [REDACTED] Approved. The results was positive and informed [REDACTED].
- The NAPA loading computer will need some further information from the final inclining experiment. (Approved intact and damage stability booklets, [REDACTED] limiting curves in numerical format, Car deck arrangements and automation system specifications).
- Damage control plan completion ongoing, we need to finish first (update [REDACTED] fire control plan, escape plan, LSA and stability booklets).

## Sea Trials

- MCA accepted all requested documentation required for sea trials and Trials began 13/02/24.
- [REDACTED] conducted initial noise and vibration analysis; experiments will be ongoing during owners trials.

# 801 Completion Plan – Level 1

801 - Scope to Go				103	03-Jan-24 A	31-May-24		181870	23556	140432
FMPG/Agency				95	15-Jan-24 A	31-May-24		93675	5757	87928
+	Hotwork			74	30-Jan-24 A	17-May-24		12240	156	11964
+	Shipwright			84	30-Jan-24 A	31-May-24		2962	126	2823
+	Piping			95	15-Jan-24 A	31-May-24		4500	368	4222
+	Mechanical Fitters			14	30-Jan-24 A	16-Feb-24		6935	462	6473
+	Painting			84	30-Jan-24 A	31-May-24		16535	689	15899
+	Joiners			9	30-Jan-24 A	09-Feb-24		5123	342	4781
+	Scaffolding			84	30-Jan-24 A	31-May-24		2700	332	2368
+	Ancillary			84	30-Jan-24 A	31-May-24		15040	881	14159
+	Quality			84	30-Jan-24 A	31-May-24		1300	77	1223
+	Design			95	15-Jan-24 A	31-May-24		6660	1494	5166
+	Commissioning			5	30-Jan-24 A	31-May-24		4320	0	4320
+	Supervision/Management/Projects			84	30-Jan-24 A	31-May-24		10180	830	9350
+	Apprentices 2nd Year			5	30-Jan-24 A	31-May-24		2580	0	2580
+	Apprentices 3rd Year			84	30-Jan-24	31-May-24		2600	0	2600
Sub-Contract				103	03-Jan-24 A	31-May-24		88195	17799	52504
+	[REDACTED]			45	03-Jan-24 A	05-Mar-24		10645	4540	6105
+				5	30-Jan-24 A	05-Feb-24		47451	0	30236
+				84	30-Jan-24	31-May-24		2860	0	2860
+				20	15-Jan-24	09-Feb-24		400	0	400
+				80	15-Jan-24 A	10-May-24		9420	1117	8220
+				5	30-Jan-24 A	05-Feb-24		16433	12142	3697
+				40	29-Jan-24	22-Mar-24		986	0	986

- Full scope now mapped out including manhours to completion. This is shown by Planned, Actual & Remaining manhours
- Split between core staff (FMPG/GME/Agency) and Sub-contractors

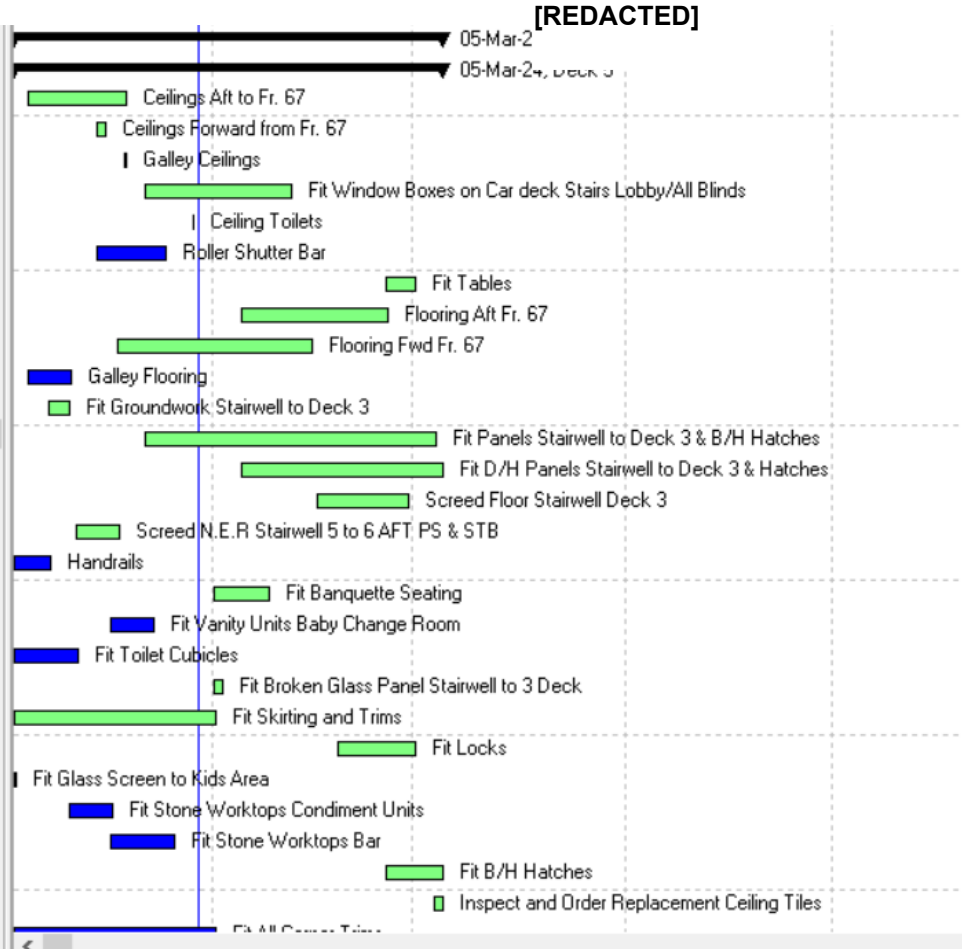
# 801 Completion Plan – Level 2 Example

Sub-Contract		103	03-Jan-24 A	31-May-24		88195	17799	52504
[REDACTED]		45	03-Jan-24 A	05-Mar-24		10645	4540	6105
+	Deck 5	45	03-Jan-24 A	05-Mar-24		4277	2223	2054
+	Deck 6	44	03-Jan-24 A	04-Mar-24		3456	1642	1814
+	Deck 7	28	24-Jan-24 A	01-Mar-24		752	395	357
+	Wheelhouse/Toilet/Archive	22	01-Feb-24 A	01-Mar-24		253	96	157
+	Patient Transfer & Toilet 3 Deck	33	15-Jan-24 A	28-Feb-24		731	185	546
+	ECR Room 2 Deck	16	15-Jan-24	05-Feb-24		1176	0	1176

- Using [REDACTED] as an example of the mid level breakdown of completion by area.
- [REDACTED] as with all contributors to 801, will issue and review their progress throughout the week
- We can see the planned, actual and remaining hours coinciding with planned dates

# 801 Completion Plan – Level 3 Example

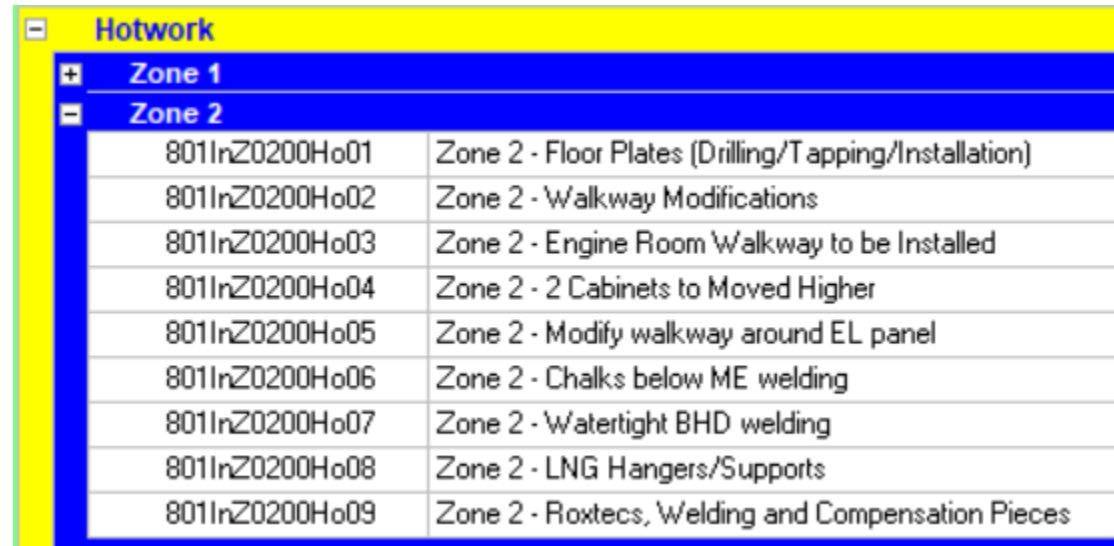
[REDACTED]		45	03-Jan-24 A	05-Mar-24		10645	4540	6105
Deck 5		45	03-Jan-24 A	05-Mar-24		4277	2223	2054
A1660	Ceilings Aft to Fr. 67	27	05-Jan-24 A	19-Jan-24	60%	279	167	112
A1670	Ceilings Forward from Fr. 67	15	15-Jan-24 A	16-Jan-24	90%	176	158	18
A1680	Galley Ceilings	9	19-Jan-24 A	19-Jan-24 A	100%	176	176	0
A1690	Fit Window Boxes on Car deck Stairs Lobby/All Blinds	20	22-Jan-24 A	12-Feb-24	20%	329	66	263
A1700	Ceiling Toilets	6	29-Jan-24 A	29-Jan-24 A	100%	54	54	0
A1710	Roller Shutter Bar	11	15-Jan-24 A	25-Jan-24 A	100%	122	122	0
A1720	Fit Tables	6	26-Feb-24 A	01-Mar-24	20%	53	11	42
A1730	Flooring Aft Fr. 67	20	05-Feb-24 A	26-Feb-24	20%	200	40	160
A1740	Flooring Fwd Fr. 67	26	18-Jan-24 A	15-Feb-24	20%	322	64	258
A1750	Galley Flooring	9	05-Jan-24 A	11-Jan-24 A	100%	63	63	0
A1760	Fit Groundwork Stairwell to Deck 3	21	08-Jan-24 A	11-Jan-24	85%	176	150	26
A1770	Fit Panels Stairwell to Deck 3 & B/H Hatches	31	22-Jan-24	04-Mar-24	0%	312	0	312
A1780	Fit D/H Panels Stairwell to Deck 3 & Hatches	22	05-Feb-24*	05-Mar-24	0%	158	0	158
A1790	Screed Floor Stairwell Deck 3	10	16-Feb-24*	29-Feb-24	0%	143	0	143
A1800	Screed N.E.R Stairwell 5 to 6 AFT PS & STB	5	12-Jan-24	18-Jan-24	0%	63	0	63
A1810	Handrails	14	03-Jan-24 A	08-Jan-24 A	100%	122	122	0
A1820	Fit Banquette Seating	21	01-Feb-24 A	09-Feb-24	70%	253	177	76
A1830	Fit Vanity Units Baby Change Room	5	17-Jan-24 A	23-Jan-24 A	100%	122	122	0
A1840	Fit Toilet Cubicles	15	03-Jan-24 A	12-Jan-24 A	100%	122	122	0
A1850	Fit Broken Glass Panel Stairwell to 3 Deck	2	01-Feb-24*	02-Feb-24	0%	54	0	54
A1860	Fit Skirting and Trims	44	03-Jan-24 A	01-Feb-24	50%	375	188	188
A1870	Fit Locks	10	19-Feb-24*	01-Mar-24	0%	96	0	96
A1880	Fit Glass Screen to Kids Area	14	03-Jan-24 A	03-Jan-24	95%	63	60	3
A1890	Fit Stone Worktops Condiment Units	5	11-Jan-24 A	17-Jan-24 A	100%	63	63	0
A1900	Fit Stone Worktops Bar	8	17-Jan-24 A	26-Jan-24 A	100%	122	122	0
A1910	Fit B/H Hatches	7	26-Feb-24*	05-Mar-24	0%	68	0	68
A1920	Inspect and Order Replacement Ceiling Tiles	2	04-Mar-24*	05-Mar-24	0%	15	0	15
A1930	Fit All Corner Trims	22	03-Jan-24 A	01-Feb-24 A	100%	176	176	0



- Further detail, again using [REDACTED]
- Detailed line items by task is contained within the plan. Percentage complete and manhour content is measured against each individual job
- These plans will also be used to progress any perceived blockers



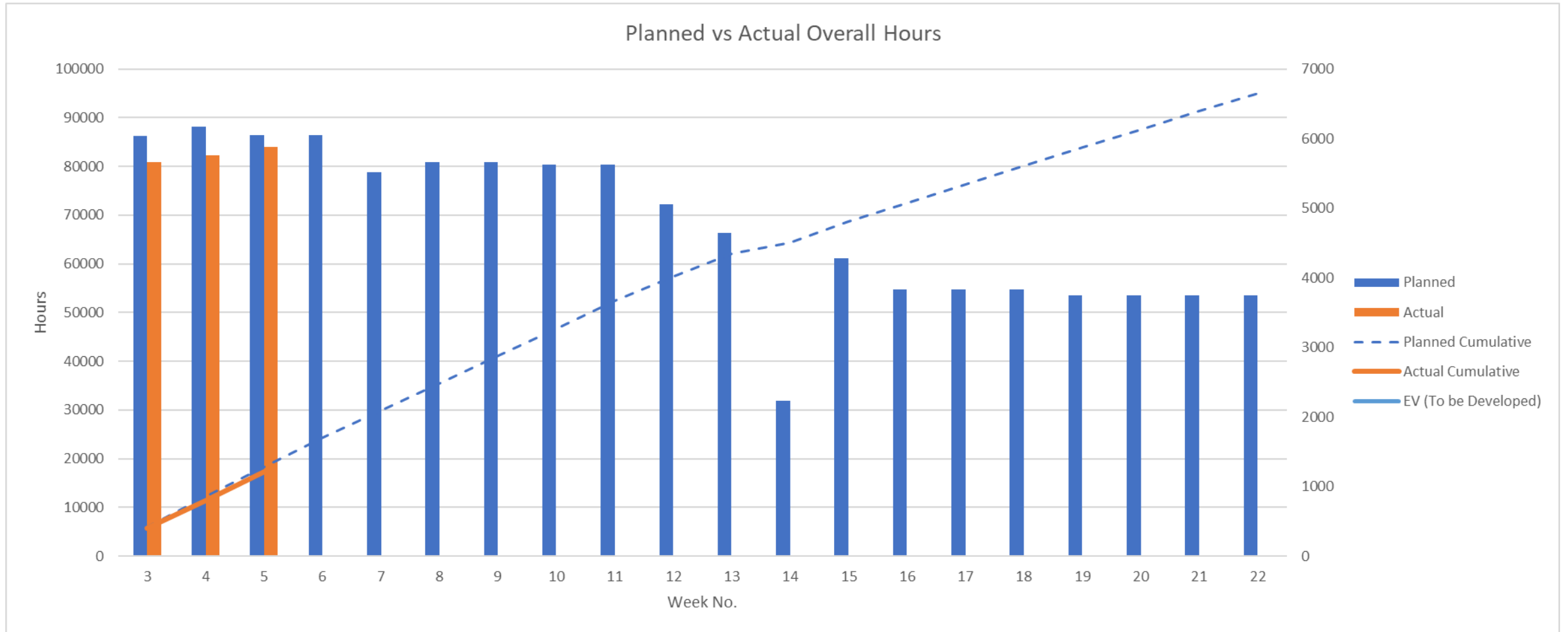
# 801 Completion Plan – Core Staff Actuals & Tracking



Hotwork	
Zone 1	
Zone 2	
801InZ0200Ho01	Zone 2 - Floor Plates (Drilling/Tapping/Installation)
801InZ0200Ho02	Zone 2 - Walkway Modifications
801InZ0200Ho03	Zone 2 - Engine Room Walkway to be Installed
801InZ0200Ho04	Zone 2 - 2 Cabinets to Moved Higher
801InZ0200Ho05	Zone 2 - Modify walkway around EL panel
801InZ0200Ho06	Zone 2 - Chalks below ME welding
801InZ0200Ho07	Zone 2 - Watertight BHD welding
801InZ0200Ho08	Zone 2 - LNG Hangers/Supports
801InZ0200Ho09	Zone 2 - Roxtecs, Welding and Compensation Pieces

- Above we have an example of the detail within the Hotwork plan
- This is scope of core staff (FMPG/GME)
- The plan has now been tied in with the timesheets and fully in use . Work is now booked against codes generated and actuals are currently being tracked successfully

# FMPG Resource Profiles (Planned v Actual/Earned)



# 801 RAG Status

			SLT / NEX - Weekly Report			
			WEEK 6			
Activity	Key Contractor	w/c 5th Feb	Comments	Risk (RAG) Status	Risk (RAG) Status Mitigation	
		target				
1	LNG pipework	[REDACTE]	<p>Awaiting updated programme from [REDA] [RE] are progressing on site, however no programme available to monitor progress. [RE] here on site addressing commissioning issues. Programme of activities to be made available this week, currently being developed.</p>	8 week programme from 8th Jan currently proposed to complete pipework.	Programme considered on critical path and will be monitored closely.	Contract for installation has now been moved from [RE] company (Glasgow) to move forward and establish closer links. LNG schedule review 20/2. Pipeshop management issue now resolved
2	LNG commissioning	[RED]	<p>FMPG will work closely with [RED] to source replacement parts and re-install. Note some parts may be long lead time.</p>	10 week programme from 8th Feb - target to reduce. Activity can only start once LNG Pipework has been completed. Programme Target potential RISK as a result of [RED] activities.	Programme considered on critical path and will be monitored closely.	Engineering now dealing directly with [RED] on commissioning phase, with [REDACT] leading on bunkering activities. Status moved to RED as items should have been closed out prior to return of [RED] remain open. [REDACT] will now oversee the interface between Engineering, Commissioning and Production from 19/2.
3	Fire detection	[R]	No Activity.	5 week programme from 8th Jan	Engineering / Commissioning services secured.	System tested and operational prior to sea trial, although permanent fixing of detectors still to be completed aligned to ceiling/ling works
4	Fire suppression	[R]	Equipment delivery slippage from mid- Feb, now scheduled for delivery 1st March. Status, no change.	Target to complete by end Feb '24. Target completion now realigned to delivery of equipment Mid-March.	Programme considered on critical path until all equipment received and commissioning support secured..	Equipment currently being expedited and discussions regarding commissioning support ongoing. [RE] fit

# 801 RAG Status cont.

5	Doors evacuation routes	FMPG	Minor adjustments to closing mechanisms required.	Target to complete by end March '24	Programme and sequence for installation now being developed.	Complete
6	Escape trunks	FMPG / [REDACTED]	Continue with modification works.	Target to complete by end March '24	Escape Trunk modifications now defined by Engineering.	Works complete, to be officially presented
7	Clam Shell Doors, Ramps, Mezz Decks	[REDACTED]	Installation of inner door watertight seal. Structural clash between ramp and clam shell doors, solution proposed will be worked following sea trials.	Target to complete Pre-Sea Trials, second week in February	Clash between inner ramp and clam shell doors identified. This prevents the doors closing with the inner locking arrangement installed.	4wks to rework Bow door clash, complete Bow door and frame arrangement, and commissioning
8	Passenger Lifts	[REDACTED]	Head of Supply Chain now chasing vendor for confirmation of date for site return. This will now probably need to move to after sea trials. Programme can accommodate this.	Target to complete by mid March '24	Passenger Lift Contractor is based in Poland and has proven difficult to engage with.	Discussions are ongoing with contractor to secure a commitment to return to site and complete remaining 30% installation and testing phase.
9	Outfitting	[REDACTED]	Progress outfit of 5 Deck, Galley & Forward Lounge.	target to complete by end March '24	Outfitting work will be ongoing through the final stages of delivery of the ship.	Complete
10	Complete ship commissioning	[REDACTED] / FMPG/MCA	Address minor defects on FW System. Continue to bring the vessel to life in preparation for sea trials.	target MGO by end March '24, LNG subsequent	Commissioning of systems will be dependant from support from specialist contractors and will be driven by outcome of Builders Sea Trials.	All efforts continue to be made to secure specialist contractors with preliminary dates now established.

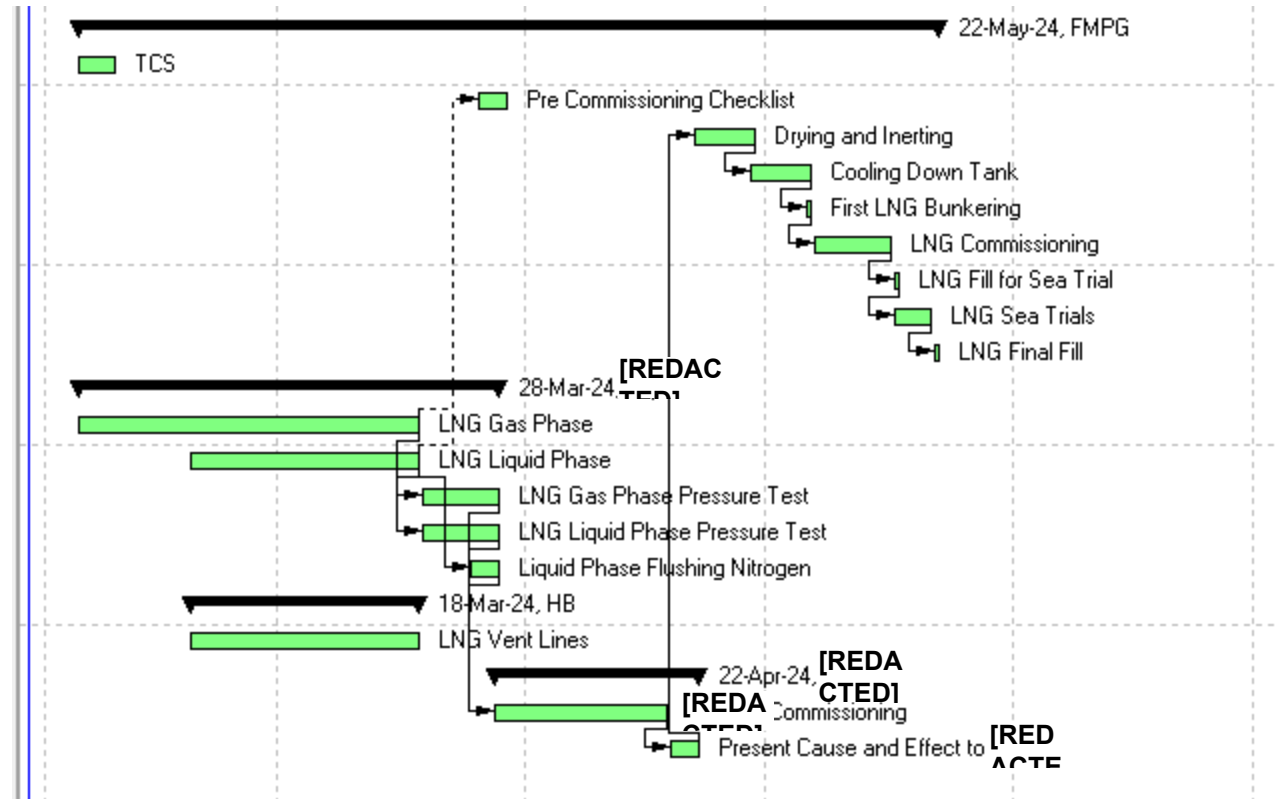
# 801 RAG Status cont.

11	Electrical Installation	FMPG / [RE	Progress legacy works remaining from [RE contract. Prep for sea trials.	Close out of Electrical Installation will align with delivery programme of vessels through sea trials phase.	With [RE] contract now terminated, FMPG have control over direction, schedule and resource.	January progress shows less than 200 cables outstanding from total of 800 in November. February progress to be updated Thursday 22/2
12	Sea trials (MGO)	FMPG, CMAL, MCA, [	<b>MCA visit to vessel 8th &amp; 9th February to review vessel condition and issue sea trials exception certificate. MCA are proving difficult to read regards requirements as they remain subjective. Biggest concern will be their approach to structural fire protection and the extent needed to complete for trials.</b>	Target MGO complete by end Feb '24, LNG.	Preparations underway, OEM's secured. Trials dependant on MCA Exemption Certificate.	Complete
13	Relocate Vessel to [REDA Berth	FMPG / [RE DA	Continue dialog with [RE ED	Scheduled move by Wk. commencing 19th Feb '24	Contract in place with [RE] for relocation of [RE].	Now remaining within Ferguson Marine until Dry Dock in April
14	Dry Docking	[RE	No planned activity.	Drydock now booked, 2nd -7th April	Discussions have been ongoing, Dry dock to confirm that they comply with HSE requirements. If not we may need to realign LNG Commissioning Schedule which could impact on projected delivery date of vessel.	Dry dock booked and discussions ongoing .
15	Sea trials (LNG)	FMPG, CMAL, MCA, [	Will be progressed following (MGO) Sea Trials.	Target LNG Mid-May '24, subsequent	<b>Dependency remains LNG Commissioning Phase.</b>	Engineering in discussions with [RE] (OEM)

# LNG Level 1 schedule

LNG		05-Feb-24	22-May-24
[-] FMPG		05-Feb-24	22-May-24
A3900	TCS	05-Feb-24*	09-Feb-24
A3910	Pre Commissioning Checklist	26-Mar-24*	29-Mar-24
A4000	Drying and Inerting	22-Apr-24*	29-Apr-24
A4010	Cooling Down Tank	29-Apr-24*	06-May-24
A4020	First LNG Bunkering	06-May-24*	06-May-24
A4030	LNG Commissioning	07-May-24*	16-May-24
A4040	LNG Fill for Sea Trial	17-May-24*	17-May-24
A4050	LNG Sea Trials	17-May-24*	21-May-24
A4060	LNG Final Fill	22-May-24*	22-May-24
[-] [REDACTED]		05-Feb-24	28-Mar-24
A3320	LNG Gas Phase	05-Feb-24*	18-Mar-24
A3930	LNG Liquid Phase	19-Feb-24*	18-Mar-24
A3950	LNG Gas Phase Pressure Test	19-Mar-24*	28-Mar-24
A3960	LNG Liquid Phase Pressure Test	19-Mar-24*	28-Mar-24
A3970	Liquid Phase Flushing Nitrogen	25-Mar-24*	28-Mar-24
[-] [REDACTED]		19-Feb-24	18-Mar-24
A3940	LNG Vent Lines	19-Feb-24*	18-Mar-24
[-] [REDACTED]		28-Mar-24	22-Apr-24
A3980	[REDACTED] Commissioning	28-Mar-24*	18-Apr-24
A3990	Present Cause and Effect to [REDACTED]	19-Apr-24*	22-Apr-24

# LNG Level 1 schedule



# Engineering Status

- [REDACTED] Submissions – Updates to [REDACTED] approved drawings associated with Escape stairwells is complete. Discussions ongoing with [REDACTED] regarding latest longitudinal weight distribution and impact on agreed longitudinal strength analysis. Strength Analysis complete 06/01/24 to be submitted to [REDACTED] 08/01/24. Engineering will deal with [REDACTED] on board system survey remarks as received.
- MCA Submissions – Engineering continue to work with the MCA to close out all remaining documentation and will respond to MCA survey comments from onboard inspections as they are submitted. All Sea Trials objectives were addressed prior to sea trials getting underway. Sea Trials exemption form was received 13/02/24.
- Owners Observations – A reset of all outstanding owners observations was undertaken at the start of Feb. Engineering have 73 Cat 1, 10 Cat 2, 4 Cat 3 and 24 closed actions out of a total of 262 current OORs. The remainder are production and commissioning issues to be addressed directly at ship. no outstanding OORs or TQs but continue to support production with patrol remarks and closing out historical issues.
  - Cat 1 – Necessary before Handover
  - Cat 2 – Warranty Drydock after 1 year
  - Cat 3 – No Action Calmac to determine cost impact
  - Cat 4 - Closed
- Spares – A list of all required spares for 801 and spares transferred to CalMac has been completed. All unaccounted for spares have been passed to procurement to proceed and order.
- As Built Drawings - Production of final As Built Drawings is ongoing and will continue until handover.
- Manuals - Production of the Operations Manual is complete.
- Certification – Certificates have been located and are in hand, were required these have been passed to [REDACTED]
- Sea Trials – MCA prerequisites for sea trials have all been achieved.
- LNG Installation – Engineering continue to support with the management of subcontractors for the installation of the LNG Liquid, Gas and Vent Lines. A programme of work has been created. Restricted access due to Sea Trials has been recorded.



# Risk

Current top 5 risks on risk register:

Risk No	Risk Category	Risk Name	Risk identified by:	Risk Owner	Risk Description	Mit./Action Planned	Post-Mit. Impact	Post-Mit. Likelihood	Post-Mit. Risk Score	Movement in the month
	Contract Queries	Contract Queries		[REDACTED]	Legacy subcontractor costs continue to surface ie HB circa 2900 man hours owed for previous works. [REDACTED] cable for 802 used on 801.	1. New process implemented for capturing costs. 2. Sit down with Subcontractors to establish/ confirm previous costs.	[ ]		[ ]	Reduced Risk. Time spent with each subcontractor have indicated legacy costs would be at a minimum if any moving forward.
P10-801	Production	Cost of Delay	[REDACTED]	[REDACTED]	Additional Overhead and SG&A, due to risks materialising and causing delay. 0-3 months for 801. Quayside rental [REDACTED] delay period at £10k per week.	Project management and continued focus to minimise risk.	[ ]		[ ]	Reduced Risk. Initial potential risk projection was 0-6 months delay. New projection is 0-3 months due to work scopes now completion and reduction in overall risk.
P2-801	Production	Sub-Contractor	[REDACTED]	[REDACTED]	Sub- Contractor under performing [REDACTED] target completion is 14th November, risk of this slipping into december.	[REDACTED] are being closely monitored with no additional work being passed to them relating to Evacuation Route Modifications. This work will be allocated to alternative electrical contractor [REDACTED] Based on [REDACTED] current completion target for all installation work 14th November, this looks likely to slip into December.	[ ]		[ ]	
C2-801	Compliance	Project		[REDACTED]	There is a risk of delay (cost and schedule) due to OOR rectification, CMAL, class or statutory findings as the build program matures. Residual risk from OORs relates now to impact on through life maintenance and its tolerability to CMLA/Calmac. Until this exercise is concluded by CMAL the Risk premium remains at this time	1. All remaining Open CAT 1 and OORs discussed and actioned at weekly meeting with CMAL All WIP OORs to be managed through project/planning as WIP 2. Regular engagement with CMAL/LR/MCA to derisk and identify potential issues. 3. OORs now in production and being progressed	[ ]		[ ]	
C7-801	Compliance	Design Consolidation	[REDACTED]	[REDACTED]	Machinery escape non compliance	1. LR Escape Analysis conducted confirming AS built arrangement escape meets the statutory escape times. 2. Robust design justification paper submitted 3. Site survey by MCA completed 4 New solution currently being worked up by Engineering for submission to MCA.	[ ]		[ ]	Reduced on basis solution now in place and work has commenced onboard ship.

# OOR Progress (Production)

- All OORs, TQs & Patrol Remarks on one sheet (262 Total)
- 74 now closed since amalgamation
- Actions assigned to action owners by name and department

