

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

**Programme Director:** [redacted]

**Review Period:** August 2021

<u>Name</u>	<u>Job Title</u>	
[redacted]	Programme Director	
[redacted]	CFO	
[redacted]	Head of Planning	



## Contract Summary

<b>Customer</b>	Scottish Government	<b>Contract Start</b>	Contract Effective Date - 1st April 2020
<b>Agreed Contract value</b>	£110.3M	<b>Contract Finish</b>	801 25 July 2022 / 802 3 April 2023
<b>Project Type</b>	Design and Build	<b>Forecast Finish</b>	801 25 July 2022 / 802 3 April 2023
<b>Programme Director</b>	[redacted]	<b>Contract Type</b>	Fixed Price

<b>Project Scope</b>	Design, build and commission 2 off LNG dual fuel ferries, including training and provision of spares and handbooks. The scope of this project is to complete the design and build etc. from the date of 16 <sup>th</sup> August 2019, being the date of Administration of FMEL
<b>Significant Project Changes</b>	None (in this phase).
<b>Acceptance Criteria</b>	As per the specification.
<b>Payment Terms</b>	Monthly payment application for Actual costs incurred in the previous calendar month
<b>Warranty</b>	The warranty for both vessels is 12 months from delivery. No allowance has been made financially for either shipyard support or suppliers' warranties that have lapsed during this period.
<b>Liquidated Damages</b>	No allowance has been made for late delivery. Performance penalty for weight – the maximum allowance of £250k per vessel has been included, if the allowance is exceeded the buyer has a contractual right to terminate. Performance penalty for speed - the maximum allowance of £150k per vessel has been included, if the allowance is exceeded the buyer has a contractual right to terminate. Performance penalty for fuel consumption – no allowance has been made.
<b>Special Conditions</b>	

# Traffic Light Report

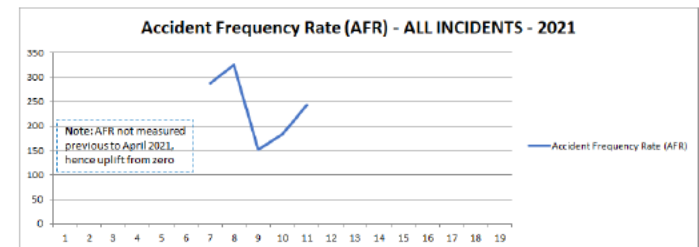
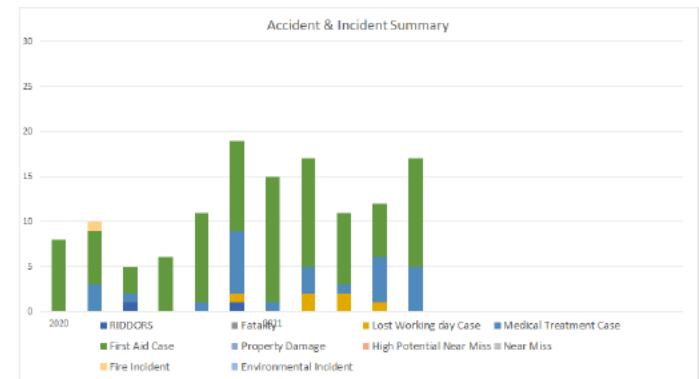
	Overall Status				Future Trend	Comments
	May 21	Jun 21	Jul 21	Aug 21		
Overall Status	G	G	A	A	↔	<ul style="list-style-type: none"> <li>Recovery plan actions identified to recover schedule, includes ship survey activity / stock count and implementation of [redacted] and material control to have robust process to issue Workpacks and materials to schedule to Operations.</li> <li>QLA will be aligned to these outputs to maximise efficient working</li> </ul>
Safety	G	G	G	G	↔	<ul style="list-style-type: none"> <li>Additional H&amp;S resources (permanent Head of HSE and 2 x H&amp;S Advisors) being recruited, with a trainee having now started. Offer accepted by 2nd (external HSE Advisor). Their role is to provide support to further improve H&amp;S on vessels under construction and across the yard. Priority H&amp;S actions continue to receive attention.</li> </ul>
Cost	G	G	G	G	↔	<ul style="list-style-type: none"> <li>Project Cost EAC remains within target at £110m. Cost forecast being reviewed in fuller detail to reflect the re-baseline exercise carried out.</li> </ul>
Schedule	G	G	A	A	↔	<ul style="list-style-type: none"> <li>Re-baseline plan now issued and in circulation.</li> <li>We have a high number of design modifications being processed due to penetrations and piping modifications, this will have an impact on programme. A recovery programme is being created.</li> </ul>
Quality	G	G	G	G	↔	<ul style="list-style-type: none"> <li>Dimensional control surveys with Specialist contractor continuing, data / knowledge migration to FMPG continues. One surveyor has left the business, but a new FMPG Surveyor now started.</li> <li>Weight control process underway. Continuous improvement developments still highlighted.</li> <li>Significant Quality improvement witnessed through recent Steelwork Surveys. (e.g Bow Section unit 48 Zero defects reported).</li> </ul>
Customer Relationship	G	A	A	A	↔	<ul style="list-style-type: none"> <li>Rules of Engagement discussions in progress and document to be finalised and agreed. OOR process defined and working. Review of the legacy OOR's in progress.</li> </ul>
Technical	A	A	A	A	↔	<ul style="list-style-type: none"> <li>LR / MCA approvals is progressing well</li> <li>Design verification completed, P&amp;IDs being updated to remove legacy issues and will be sent to CMAL for approval.</li> <li>Stability calculations have been subcontracted to [redacted] and are progressing well. Initial outputs expected in 2 weeks.</li> </ul>
Supply Chain	G	G	G	G	↔	<ul style="list-style-type: none"> <li>Pipe Installation for Zone 4 (801) and Zone 2 (802) have been awarded.</li> <li>Steelwork Services ITT has been released on PCS.</li> <li>Multiple packages of fabricated seats have been outsourced via PCS Quick Quote.</li> </ul>
Operations	A	A	A	A	↔	<ul style="list-style-type: none"> <li>52 [redacted] employees now on site with additional 30+ now being progressed - making a positive impact on progress</li> </ul>
Commissioning						<ul style="list-style-type: none"> <li>16 December 2021 is the cardinal date for start of commissioning</li> </ul>
Risk Management	R	R	R	R	↑	<ul style="list-style-type: none"> <li>The risk register and risk review process have been identified for Process Review and Improvement – in progress</li> </ul>

## Highlights

- Sourcing of a suitable permanent candidate, for the role of Head of HSE refreshed. Preferred candidate withdrew at very short notice, due to personal circumstances. New candidates identified.
- We continue to keep site COVID-19 controls under review, through our weekly Covid Control meeting
- Concern regarding number of hand injuries and foreign body eye incidents occurring in the period - we will take the opportunity to remind personnel of the importance of wearing PPE – particularly relevant now that requirement to wear face covering has been relaxed (which had a impact of compliance around safety glasses)

**Worthy of Note:** Our recent attention to improving visibility and planning of significant lifts was rewarded with the successful lift of the bow section for 802 on 1st Sept. Some minor learnings, which will be considered for other upcoming lifts.

Title	This Month	Cumulative
RIDDORS	0	0
Fatality	0	0
Lost Working day Case	0	5
Medical Treatment Case	5	15
First Aid Case	12	51
Property Damage	0	0
High Potential Near Miss	0	1
Near Miss	0	0
Fire Incident	0	0
Environmental Incident	0	0
Total Number of Recordable Injuries	0	1
Total Number of Days Lost	1	48



## SOFT Report

Successes	Opportunities
<ul style="list-style-type: none"> <li>• The OOR process has been defined and is now working to review all legacy OOR's and address current OOR's.</li> <li>• Cryodiffusion - two batches of spools have arrived on site and have commenced welding. Last batch due to despatch week 39.</li> <li>• Permanent 802 Project Manager has now started (30 August).</li> <li>• 802 Bow erected with no green material included</li> <li>• Change management process agreed and rolled out</li> <li>• Permanent Mechanical Inspector to start on 27/9/21</li> </ul>	<ul style="list-style-type: none"> <li>• Build strategy review for 802 to build as blocks for wheelhouse and bow units prior to erection at ship</li> <li>• Continuous employee improvement up-skill of re-coding of several welders throughout the business.</li> <li>• Developing a new document management system – now in final stages of development – due to release in September .</li> <li>• Progress reporting from Operations improving</li> <li>• Design changes close to completion</li> <li>• Lockring demonstrated to replace axilocks in 0201 tank spaces</li> <li>• Sign off of Rules of Engagement</li> <li>• QPulse QMS to be rolled out.</li> <li>• WP / Material Factory Master implementation.</li> </ul>
Failures	Threats
<ul style="list-style-type: none"> <li>• Risk Management process needs to be re-established and brought up to date.</li> </ul>	<ul style="list-style-type: none"> <li>• COVID 19 impact to programme– remains a threat to the programme. Additional [redacted] resource being requisitioned to recover.</li> <li>• Weight report – Risk is diminishing. Due to provide updated prediction in October.</li> <li>• Stability – On track to provide initial output in September.</li> <li>• Level of change arriving as a result of field engineering review. This is impacting major pipe systems. Work is ongoing to minimise risk, first materials due week 36.</li> <li>• Systems not being used correctly for Work Packs and Materials.</li> <li>• Resolution of issues with 802 Pipe Spools for Zone 2, 3 and 4 has taken longer than originally anticipated which is impacting the start of installation.</li> <li>• 2 Lead planners leaving business in Q4</li> </ul>

# Quality

## New Processes Introduced

Pipe System Inspection (to support ITP)  
 Control of Temporary Structures  
 Change Control Process

## Dimensional Control & Survey

S3Di will continue to support on Dimensional Control activities until a replacement Lead Surveyor has been identified. To allow FMPG to be fully self-sufficient.

A second Ferguson Marine surveyor has now started. Now working closely with S3Di Surveyors.

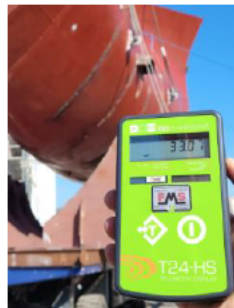
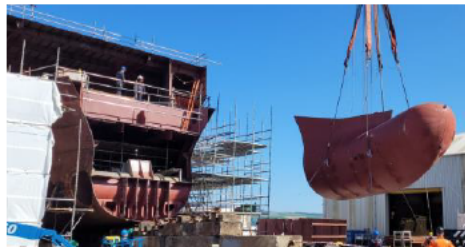
## 802 Bow section:

Bow section successfully erected with the full support of the Dimensional control teams to ensure accurate alignment and First Time fit to the vessel.

## Weight Control Process:

Cross functional team established to improve the process  
 Equipment review conducted and upgraded where required.  
 Created documentation to records the required data.

Bow Section Followed the Weight Process. Successfully.



	2020		2021																	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
ISO Audit																				
ISO Audit Schedule																				
Internal Audit																				
External Audit																				

- ISO Audit Schedule still on track to ensure audit coverage and compliance to the schedule.
- 15 audits scheduled, 13 conducted to date this year
- This will continue to be developed as a more Internal Auditor are identified and trained within the business.
- LRQA Audit due September 29th and 30th



## Training and Recruitment

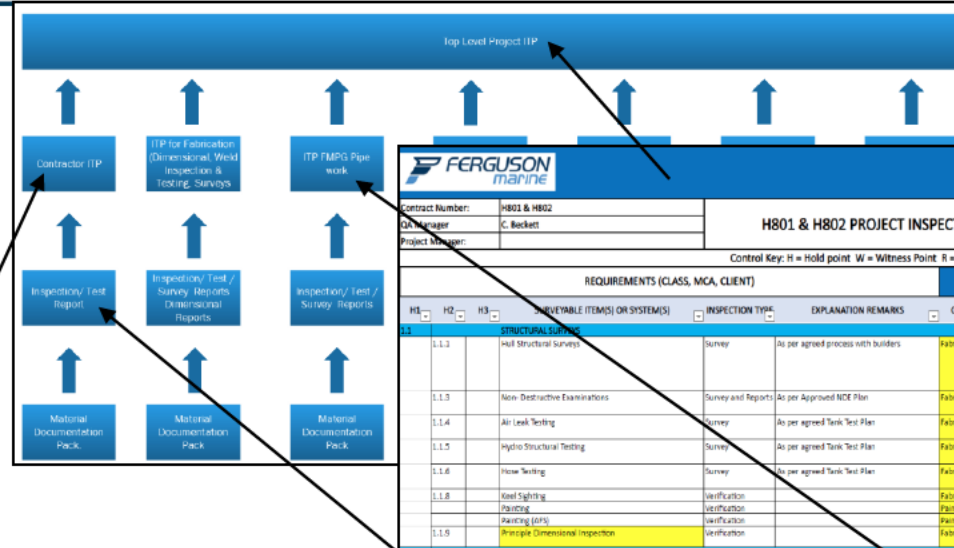
- Mechanical Inspector now recruited. Due to start on 27/9/21
- Internal Auditor Training – Candidates are identified, training company selected. Dates to be confirmed.
- Upskilling and Cross Training within the QC team to allow more coverage and flexibility.
  - Courses to be identified where necessary

**Inspection and Test Plans**

Format created for Top Level Project ITP in line with Class requirement.

ITP structure created to identify and map ITP by functions.

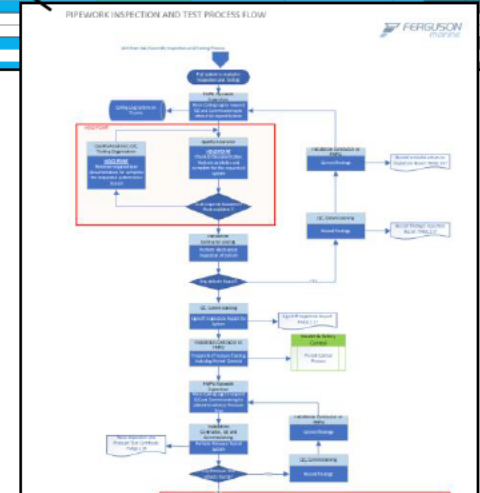
Test Process Flows with accompanying Documentation.



Contract Number: H801 & H802		H801 & H802 PROJECT INSPECTION & TEST PLAN		Document No: FMGP ITP 7277	Revision: Draft 1									
Contract Manager: C. Beckett		Project Manager:		Prepared by:	Date:									
Approved by:		Approved by:		Date:	Date:									
REQUIREMENTS (CLASS, MCA, CLIENT)				FMGP Control Plan										
H1	H2	H3	UNDEVIABLE (ITEMS) OR SYSTEM(S)	INSPECTION TYPE	EXPLANATION REMARKS	Control Document	Acceptance Criteria	Verifying Document	Sample Rat	FMGP	MCA	CMA	Lloyd	
<b>TS STRUCTURAL SURVIVAL</b>														
	I.1.1		Hull Structural Surveys	Survey	As per agreed process with builders	Fabrication ITP No. 777	Structural Drawings FMGP Swallow Standard ACS Regulation # 47	Dry Survey Reports DCC DEFRAUTMENT	100%	H	R	W	W	
	I.1.3		Non-Destructive Examinations	Survey and Reports	As per Approved NDE Plan	Fabrication ITP No. 777	Welding Test Plan BS-2-209	NDT Reports	10%	H	R	R	R	
	I.1.4		Air Leak Testing	Survey	As per agreed Tank Test Plan	Fabrication ITP No. 777	Tank Testing Plan BS-2-310	Pressure Test Reports	100%	H	R	W	W	
	I.1.5		Hydro Structural Testing	Survey	As per agreed Tank Test Plan	Fabrication ITP No. 777	Tank Testing Plan BS-2-310	Hydro Test Reports	100%	H	R	W	W	
	I.1.6		Flow Testing	Survey	As per agreed Tank Test Plan	Fabrication ITP No. 777	Tank Testing Plan BS-2-310		100%	H	R	W	W	
	I.1.8		Steel Sighting	Verification		Fabrication ITP No. 777				H	R	W	W	
			Painting	Verification		Painting ITP No. 777	Paint Specification	Paint Inspection Reports		H	R	W	W	
			Painting (SPS)	Verification		Painting ITP No. 777				H	R	W	W	
	I.1.9		Principal Dimensional Inspection	Verification		Fabrication ITP No. 777		Dimensional Control Reports		H	R	R	R	

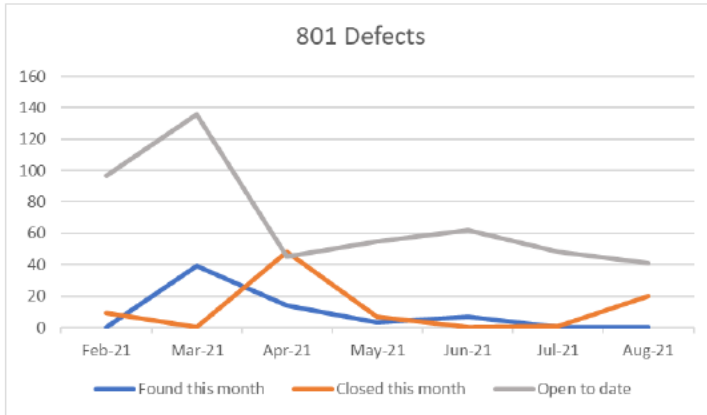
<b>GS-Hydro</b> GS-Hydro UK Ltd		GSE 02.09.02	11.04.2011	101						
Revision: 1		Created by: J. Williams	Approved by: J. Williams	11.04.2011						
Front Sheet A4/A3 Documents Only		INSPECTION TEST PLAN								
Total Number of Pages including Front Sheet: 01 of 01		Supplier Purchase Order No:								
Supplier Order Document Number: UK0401 P10 P10011		Rev No: 001	Date: 05.06.2011	Supplier Approval Name:						
Submitted for: Information Review		Project Name: Fergusons Hydraulic Pumpswork Installation for ships 801 & 802								
Accepted: [Signature]		Not Accepted: [Signature]								
Name: [Name]		Position: [Position]	Quantity: [Quantity]							
Date: 05.06.2011		Specification: [Specification]								
Package Description: Provision of Fabrication, Installation, Flushing and pressure setting of hydraulic pumpswork for ships 801 & 802		Customer Purchase Order No: 20724, 20738, 20721, 20723								
MCA Code: [Code]		MCA Code: [Code]								
MCA NoS: [List]		MCA NoS: [List]								
Client: Fergusons		Project Name: Hydraulic Pumpswork Installation for ships 801 & 802		UK-IP-ITP-001-11						
Order Number	Issue	Control Document	Technical Document	Approval Status	Program	W	R	U	U	U
1	Control Review	0208.28.04.01	PC-related Specifications	PC-related Specifications						
2	Submit Documents For Approval	0504.11.02.01	ITP	ITP						
3	Release Working Inspection Method certificate to be submitted	0508.07.08.02	Release Certificate against ITP	Release Certificate						
4	General Approval Certificate (GAC) Approval Certificate	0508.07.08.02	Delivery Note / Purchase Order	PC-related Specifications						

<b>Pressure Test Certificate</b>				
Project:				
System:				
Pipeline Number:				
Extent / Area being Tested / Inspected:				
<b>System Pressure Test</b>				
Date	System Working Pressure	System Test Pressure	Witnessed By / Sign	Representing
				FM QC
				FM Commissioning
				CMAL
				Lloyds
<b>Test equipment used</b>				
Pressure				



## Quality

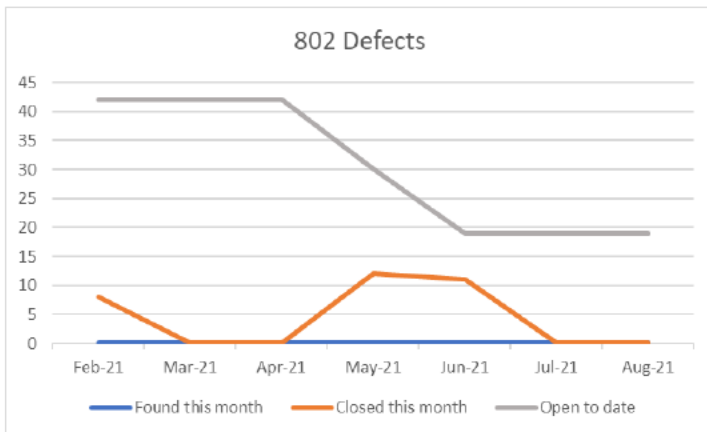
### 5. Quality 801 & 802



801 - This month's report shows no new defects open from last month on 801 several defects closed.

Weekly review of the defect list now planned for once a week to close out past defects.

Panama Eyes are now being replaced. This will close a long-standing defect



802 - There has been 0 new defects opened on 802. Defects are still continuously sent every Monday now followed by a weekly review.

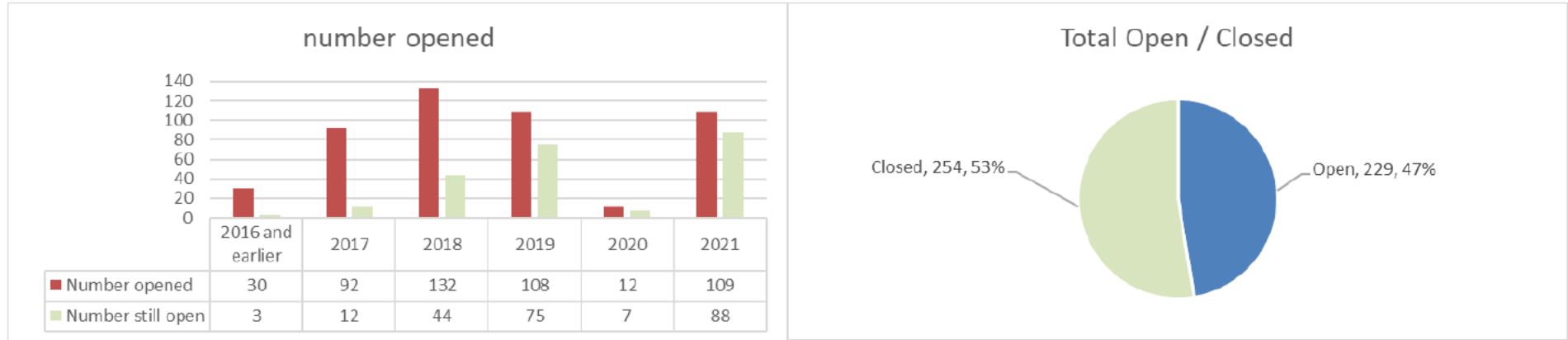
802 Link-up Survey's and Quality levels are progressing well.

Surveys carried out on Units 48, A 3/5, A 5/5, 45, 46, Ducktail and will be progressing onto 93 in the coming days. These inspections have been carried out throughout build process to ensure compliance is met and that defects are kept to a minimum..

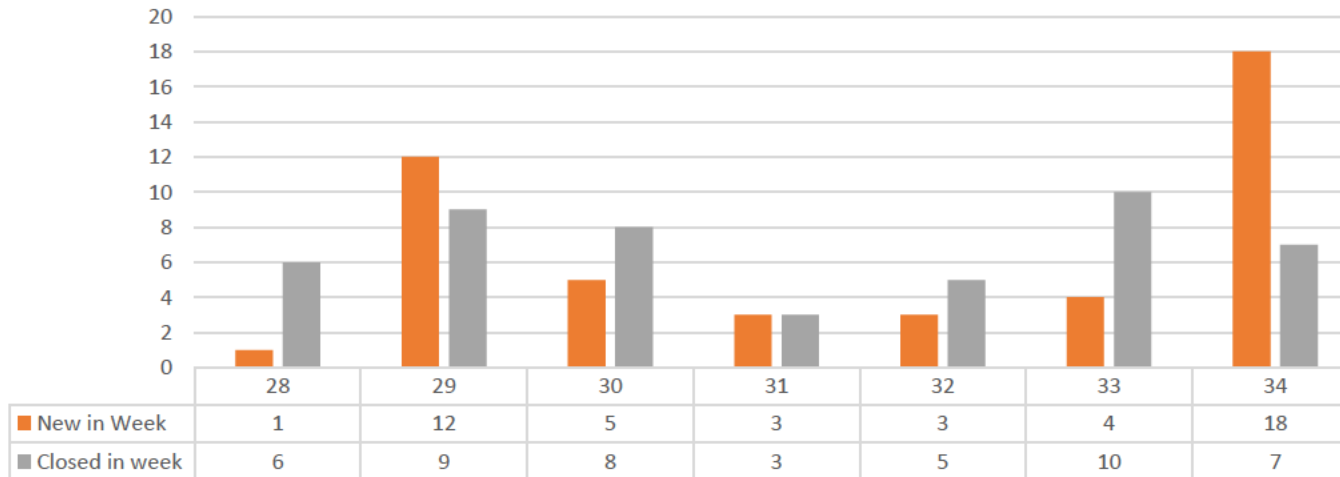
Lloyds have also witnessed over 100 frame spaces on the external hull, still ongoing



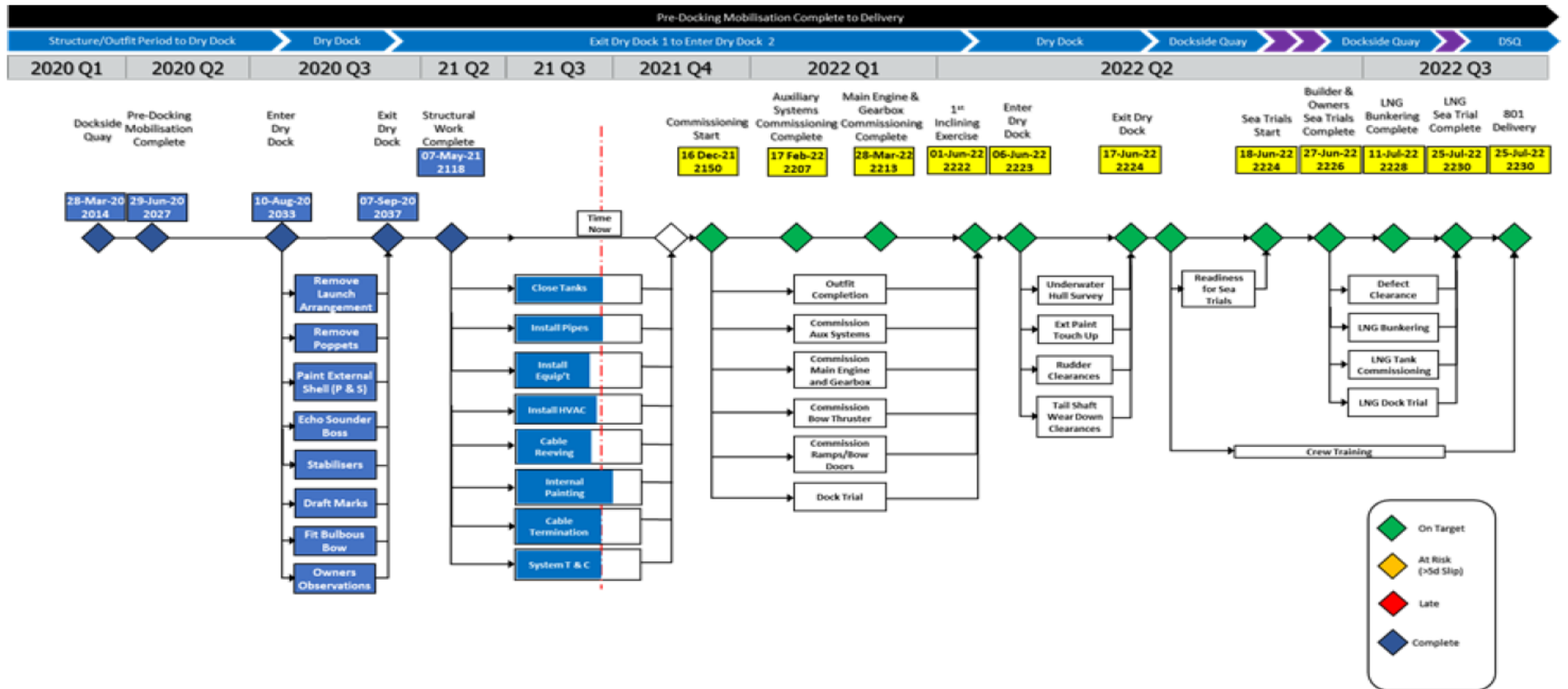
# OOB Reviews



### KPIs Opened / Closed in week



# 801 Milestones



Updated 30th Aug 2021

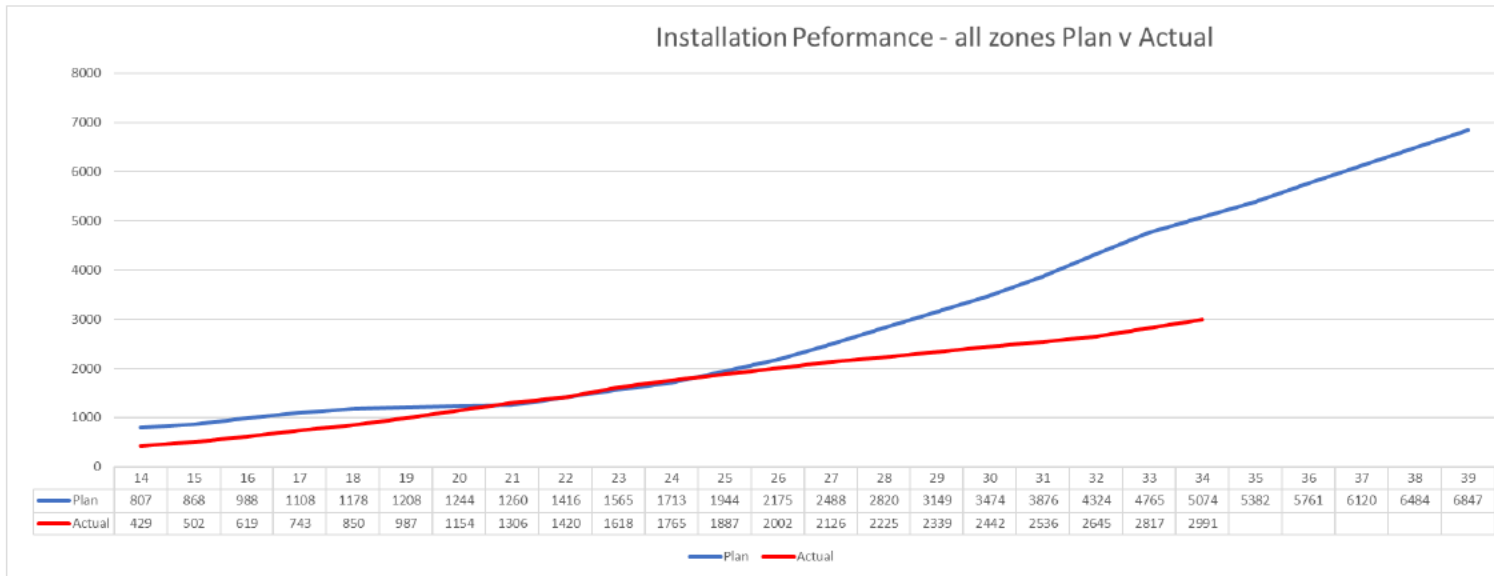
## 801 Trades

	Status		Comments
	Quality	Schedule	
Steelwork	G	A	<ul style="list-style-type: none"> <li>Forward Mast is complete and available in the yard – some additional welding to complete (penetrations / lifting lugs)</li> <li>HO steelwork &amp; Pipe spool manufacture being progressed through Manufacturing &amp; Subcontract facilities</li> </ul>
Pipe Installation	G	A	<ul style="list-style-type: none"> <li>Volume of change from Zone 2 modifications sheets understood and materials requisitioned, WP available also is impacting mid-September completion of major systems for start of commissioning</li> <li>Completion of penetration review has generated some delay</li> <li>Quality - In situ flushing proposal has been supplied for FMFG agreement and sign off</li> </ul>
Electrical Installation	G	A	<ul style="list-style-type: none"> <li>Looking to open up more workfaces – Decks 4 – 8</li> <li>Deck 5 penetrations change to be released to allow main cable runs to commence to bridge and emergency generator (due to release week 36)</li> </ul>
Upper Decks Insulation & Outfit	G	G	<ul style="list-style-type: none"> <li>[redacted] have confirmed their plan in support of the programme. Planning to incorporate minor changes and confirm.</li> <li>Some additional costs expected to complete rework activities</li> <li>Pinning of remainder of AHU underway</li> </ul>
HVAC installation	G	A	<ul style="list-style-type: none"> <li>Work has commenced week 30 on cutting penetrations</li> <li>Access to deck 5 deckhead required to ramp up installation rate</li> </ul>
Hydraulic Pipe manufacture & install	G	G	<ul style="list-style-type: none"> <li>[redacted] now on site and working with Operations on installation requirements</li> <li>Additional materials identified (different to tender documents)</li> </ul>
Structural Insulation	G	G	<ul style="list-style-type: none"> <li>[redacted] have commenced work</li> <li>Additional requisitions to raise for materials</li> </ul>
LNG Installation	G	A	<ul style="list-style-type: none"> <li>Pricing submitted is higher than anticipated due to increase in scope from original PO with FMEL</li> <li>Await 3<sup>rd</sup> batch – due week 39</li> <li>[redacted] Express Pipework team have started preparation work</li> </ul>

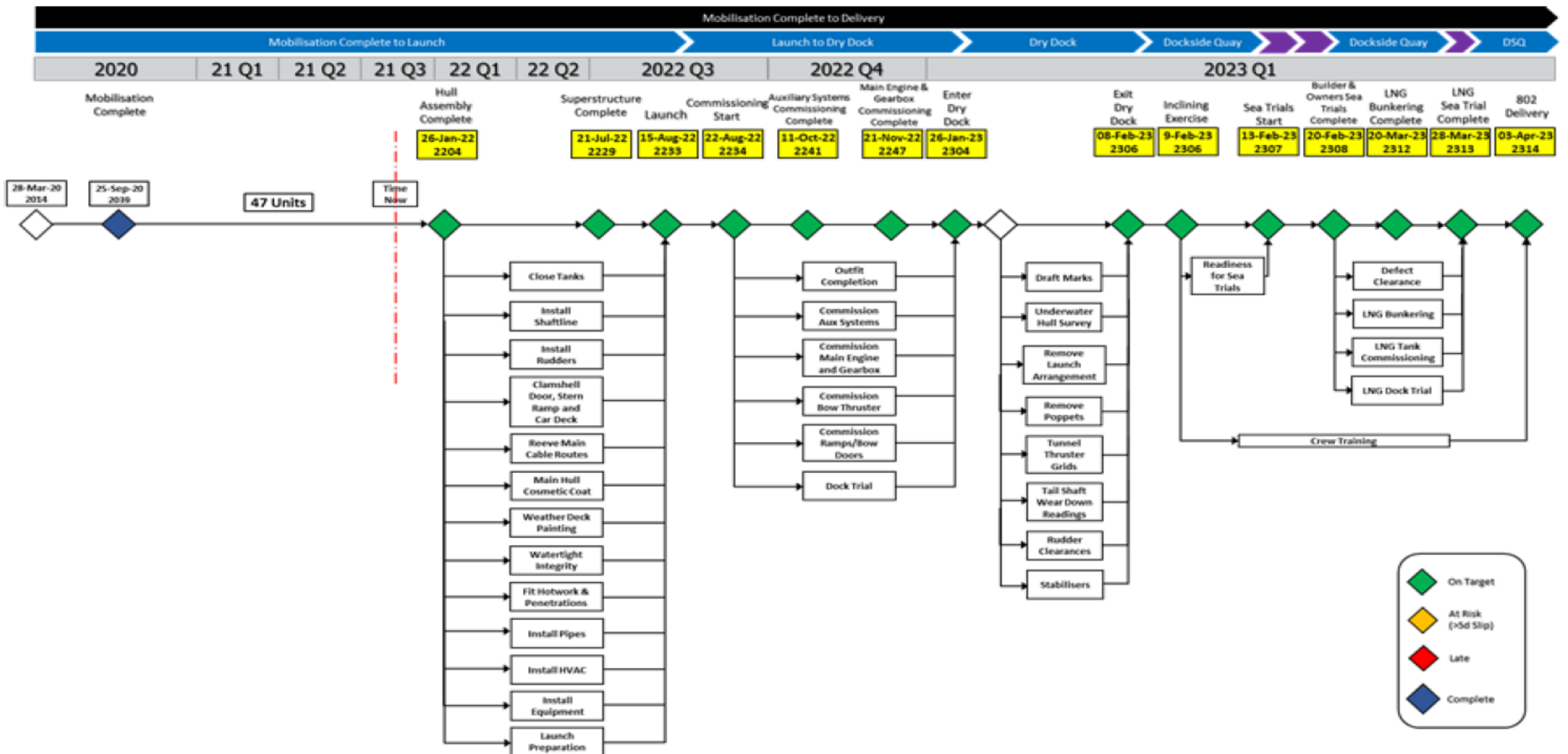
# Pipe Installation – FMPG & [redacted]

## Overall

- Pipe Installation in Zone 02, 03, 04, 05, 07 & 10 is underway using FMPG & [redacted] resource
- Overall pipe installation curve shown below (for 801 & 802), measuring plan v actual
- Issues around penetrations have hampered progress for pipe installation teams
- Impact of Modification Sheets has been sized, materials ordered for Zones 2,3 & 4
- [redacted] extended to complete Zone 2 & Zone 4 on 801, and Zone 2 on 802
- Zone 4 for 802 - contract to be let in week 37



# 802 Milestones



Updated 30th Aug 2021

## 802 Trades

	Status		Comments
	Quality	Schedule	
Steelwork	G	A	<ul style="list-style-type: none"> <li>• HO steelwork being progressed through Manufacturing &amp; Subcontract facilities</li> <li>• Bulbous bow now erected</li> <li>• Resource has been constraint, additional manpower being requisitioned</li> </ul>
Pipe Installation	G	A	<ul style="list-style-type: none"> <li>• Contract let with [redacted] for Zone 2 installation</li> <li>• Volume of change from Zones 2 Pipe Spool Modifications sheets are a risk to programme and will have a cost associated (material and labour to rework).</li> <li>• Recovery Plan for Modification Sheets in development.</li> </ul>
Electrical Installation	G	G	<ul style="list-style-type: none"> <li>• No current issues impacting cost, schedule or quality</li> </ul>
Upper Decks Insulation & Outfit	G	G	<ul style="list-style-type: none"> <li>• No current issues impacting cost, schedule or quality</li> </ul>
HVAC installation	G	G	<ul style="list-style-type: none"> <li>• No current issues impacting cost, schedule or quality</li> </ul>
Hydraulic Pipe manufacture & install	G	G	<ul style="list-style-type: none"> <li>• No current issues impacting cost, schedule or quality</li> </ul>
Structural Insulation	G	G	<ul style="list-style-type: none"> <li>• Initial pinning has commenced</li> </ul>
LNG Installation	G	G	<ul style="list-style-type: none"> <li>• Pricing submitted is higher than anticipated due to increase in scope from original PO with FMEL</li> <li>• [redacted] tracking for delivery of Spools in early October</li> </ul>

## Weight

	July (REV27)	Sept (RE V28)	Difference	Comments/Highlights
Group 1-1 Hull Steel	1537.38	1537.38	0.00	
Group 1-2 Misc. Steel	135.61	124.7	-10.9	Fender update and margin reduction. 25t of foundations still to be validated
<b>Total Steel</b>	<b>1672.99</b>	<b>1662.09</b>	<b>-10.9</b>	25t of smaller foundations still to be validated
Group 2 S/S Aluminium	158.81	158.81	0.00	
<b>Total S/S Aluminium</b>	<b>158.81</b>	<b>158.81</b>	<b>0.00</b>	
2-4 Paint	37.27	35.34	-1.93	Recalculated in greater detail. Will be monitored through QC records. Further adjustments are possible
Group 3 Cargo Equipment	202.40	201.46	-0.94	OEM information implemented. 4t of small items to be validated
Group 4 Ship Equipment	188.28	188.54	0.27	Foundation updated for aft moorings. 40t of small items to be validated
Group 5 Accom. Outfit	587.22	580.90	-6.31	Updates based on 3D model of piping systems, Pax, LNG, bunker door weight updates and a 13tonne reduction in the margin for validated areas. 94t of small items to be validated (mostly passenger outfit)
<b>Total Outfit</b>	<b>977.89</b>	<b>970.91</b>	<b>-6.99</b>	
Group 6 Main Machinery	295.34	295.34	0.00	Less than 25t of small items still to be validated
Group 7 Machinery Systems	200.27	210.08	9.82	Piping systems validated. 36t to validate (alarms, consoles ...)
Group 8 Ships Common Systems	255.07	263.6	8.53	Piping systems validated. 108t to validate - fire fighting (32t) and electrical cables and components (76t)
<b>Total Machinery &amp; Electrical</b>	<b>750.68</b>	<b>760.3</b>	<b>18.34</b>	
<b>Actual Weight of the Lightship</b>	<b>3597.64</b>	<b>3596.17</b>	<b>-1.47</b>	
Excess weight (negative values)	-44.29	-42.82		
<b>Target Weight of the Lightship</b>	<b>3553.35</b>	<b>3553.35</b>		

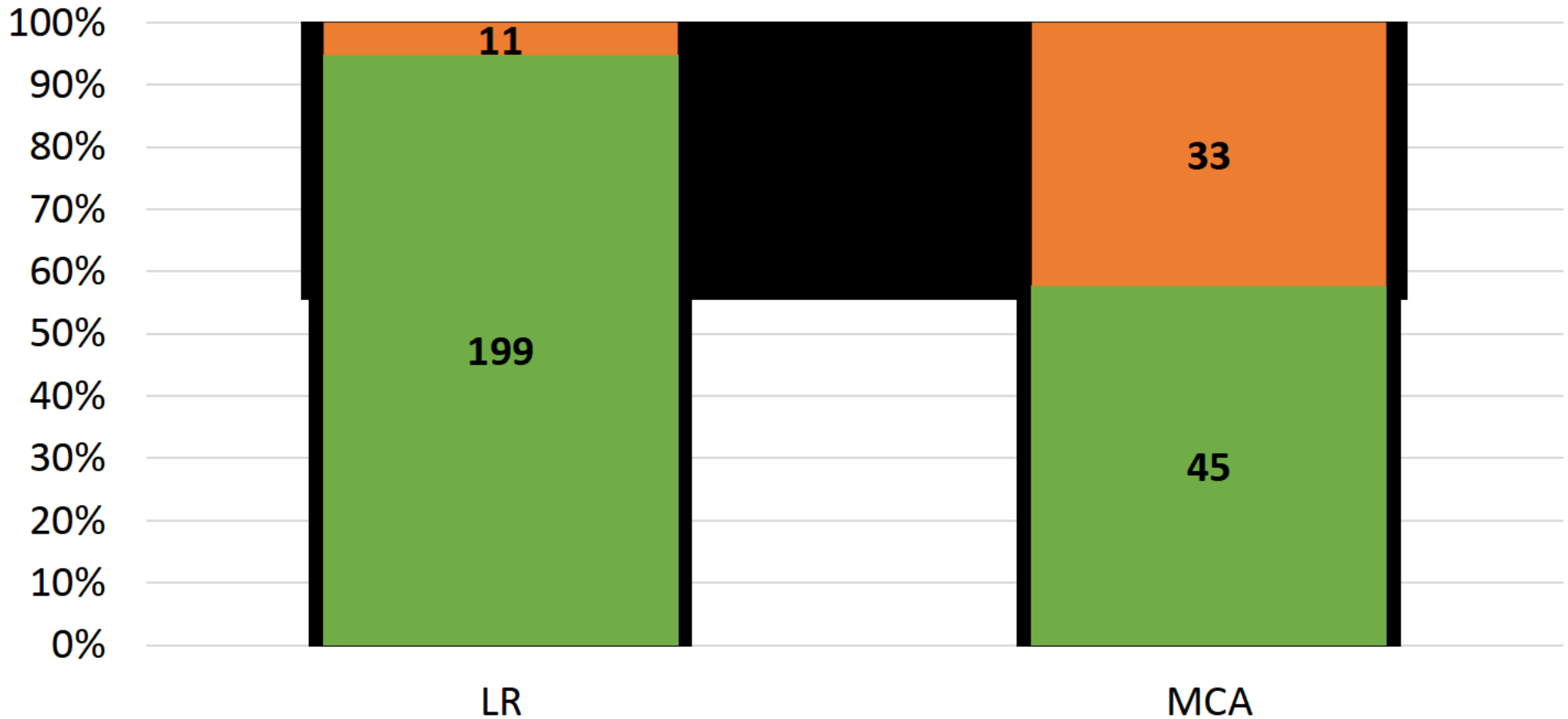
- Piping system validation now complete
- Uncertainty 'margin' values are being reduced as validation completes
- Total retained margin included still exceeds excess weight.
- About 332tonnes still to validate, generally smaller items weighing less than 1t each
- Expect to complete all validations in October

Green is at least 90% validated  
 Yellow is at least 80% validated  
 Orange is at least 60% validated

## Engineering – Basic Design Status

Green are approved.

The total required has increased slightly since last month as we are reviewing the approvals requirements with LR and the MCA to ensure nothing is missed.





[redacted]

[redacted]

[redacted]

Successes	Opportunities
<p><b>801:</b></p> <ul style="list-style-type: none"> <li>Aft Ramp installation progressing well.</li> <li>HVAC aluminium penetrations now being installed.</li> </ul> <p><b>802</b></p> <ul style="list-style-type: none"> <li>Unit 48 (bulbous Bow) Fitted and fairing up started</li> <li>Zone 2 penetrations started to mark and cut out</li> <li>Block 5/6 shell sign off (welding)</li> <li>Unit 93 blasted and ready to implement change</li> <li>Tank team started to identify missing items to close tanks</li> <li>Switch board room tamper heating complete, and signed off.</li> </ul> <p><b>Manufacturing:</b></p> <ul style="list-style-type: none"> <li>Unit 45 and 46 shell fitting</li> <li>Anchor recess work started (stainless Welding)</li> <li>Windows fitted Unit 5/5 &amp; Unit 4/6 - both units ready for transport to ship</li> <li>801 seat manufacturing area identified and working well</li> <li>Full integration of night shift working</li> </ul> <p><b>Facilities &amp; Warehouse</b></p> <ul style="list-style-type: none"> <li>Greenock Warehouse electrical reconciliation completed</li> </ul>	<p><b>801:</b></p> <ul style="list-style-type: none"> <li>To progress areas aligned with plan., 7 deck &amp; wheelhouse</li> <li>To reduce weight by fitting less hilti than designed on installation drawing</li> </ul> <p><b>802</b></p> <ul style="list-style-type: none"> <li>Penetrations ship wide. Sign off pending</li> <li>Pipe instal zone 2 and 3</li> <li>Zone 1 foundation install</li> <li>Zone 3 penetrations to complete</li> <li>Tamper heating squad to hit Hull.</li> </ul> <p><b>Manufacturing:</b></p> <ul style="list-style-type: none"> <li>Dedicated steel outfit shop in Port Glasgow store to get operational</li> <li>New tooling identified to increase productivity</li> <li>Seat review for weight issues (802)</li> </ul> <p><b>Facilities &amp; Warehouse</b></p> <ul style="list-style-type: none"> <li>Full cycle count and stock take underway</li> </ul> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>Engaging with resource provider to provide longer team resourcing solution</li> <li>Developing shift pattern proposal to allow for more effective working patterns</li> </ul>
Failures	Threats
<p><b>801:</b></p> <ul style="list-style-type: none"> <li>Currently failing to resource to the plan causing delays to complete work packs. Mitigation: plan in place to smooth out activities.</li> </ul> <p><b>802</b></p> <ul style="list-style-type: none"> <li>Resource – insufficient actual v planned resource throughout trades</li> <li>Unit 83/84 internal link up issues.</li> </ul> <p><b>Manufacturing:</b></p> <ul style="list-style-type: none"> <li>Unit build slow progress due to resource</li> <li>New tooling required / order to place</li> <li>TQ process causing issues for seating plan – process to roll out</li> </ul> <p><b>Facilities &amp; Warehouse</b></p> <ul style="list-style-type: none"> <li>Allocation of materials in FM to work packs i.e., material availability</li> <li>Material schedules / work packs - Process review to address this concern</li> <li>Lack of QC / Drawing Support for Quarantine area – Working with QC to address a way forward</li> <li>Internal NCRs are increasing daily</li> </ul>	<p><b>801:</b></p> <ul style="list-style-type: none"> <li>Completion of pipe systems by required date due to material shortages including valves.</li> </ul> <p><b>802</b></p> <ul style="list-style-type: none"> <li>Zone 2 and 3 penetration delivery/ slow pipe install from sub contractor</li> <li>Resource transfer to support 801 – slow 802 link up and unit build</li> <li>Change from 801 not being released for 802</li> </ul> <p><b>Manufacturing:</b></p> <ul style="list-style-type: none"> <li>Resource</li> <li>TQ process/change coming from 801 surveys. adding to seat scope</li> </ul> <p><b>Facilities &amp; Warehouse</b></p> <ul style="list-style-type: none"> <li>Min/max PG stores ongoing</li> <li>Process definition: Working with Planning to tailor process and address process gaps</li> </ul>

## Commissioning

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- Test Packs are being created and sent to CMAL when they are ready for review.
- The commissioning plans are being integrated into the main production plan
- The system completions essential to achieve first run of the engines have been identified and progress on these activities is being tracked at a detail level on a weekly basis.
- Initial systems to be commissioned:
  - Fuel Oil & Fuel oil bunkering
  - Quick closing valves (as required for bunkering)
  - Lubricating oil
  - Sea Water
  - HT / LT cooling
  - Compressed air
  - Exhaust & crankcase breather
  - Vents and soundings (All FO tanks, HT/LT expansion, Water & sludge M.E Room & A.E room, cooling water drain tank)

## Variations to Contract

We would like to have the process for approving Variations agreed with the Buyer's Representative to close pending VTCs

Description	Additional Cost 801	Additional Cost 802	Programme Allowance 801	Programme Allowance 802	Weight Allowance 801	Weight Allowance 802	Status	VTC Forecast Date
Removal of Oily Water Separator	-	-	-	-	-1.88 T	-1.88 T	Closed	
Removal of 1 air compressor, 1 air receiver, and 1 air dryer	-	-	-	-	-1.1 T	-1.1 T	Closed	
Removal of 2 LO purifiers for Diesel Gen	-	-	-	-	-1 T	-1 T	Closed	
Removal of Vapour Return Line	-	-	-	-	-	-	Closed	
Supply of Window Washing Equipment	[redacted]	[redacted]	-	-	-	-	Closed	
Removal of Condition Monitoring System	-	-	-	-	-	-	Closed	
[redacted]	-	-	-	-	-	-	Closed	
Removal of 24V AC system	-	-	-	-	-	-	Closed	
Raindrop Ventilation Change	-	-	-	-	-	-	Closed	
Panama Eye Removal	-	-	-	-	-	-	Closed	
802 Thermostatic Valves	-	[redacted]	-	-	-	-	CMAL to respond	26/05/2021
Provision of Workshop Tools	[redacted]	[redacted]	-	-	-	-	FM to send VTC	01/06/2021
Accommodation Fresh Water Fire Main							Open	24/06/2021
Sliding Weathertight Doors Deck 7							Open	24/06/2021
Additional Shore Supply Connection 802							Open	24/06/2021
Sanitary System Discharge							Open	CMAL to confirm

## CMAL Comments to the Monthly Report

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### CMAL Comments:

- **Drawing approval process to be agreed and documented**