

# UPDATE ON PROGRESS AND IMPACT OF COVID-19 ON PROGRAMME FOR VESSELS

## 801 & 802

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## 1 SUMMARY

This report is intended to provide an update on the progress since the original Report On Updated Cost And Programme For Vessels 801 & 802, issued to Scottish ministers on 9<sup>th</sup> December 2019, to summarise the actions taken at Ferguson Marine during the COVID-19 lockdown, and to give an assessment of the impact of the lockdown on the project to deliver the ferries.

Ferguson Marine closed for the lockdown on 24<sup>th</sup> March 2020 and remained closed until early June when, in line with Scottish Government guidelines and in close collaboration with the workforce, limited outdoor working was resumed under a pilot project to restart work at the yard. This pilot allowed around 10% of yard workers to return to work with the level gradually increased through July. At the time of writing, approximately 50% of the yard workers have returned to work, supported by a skeleton crew of supervision and technical staff.

65 Ferguson people have worked from home throughout the lockdown and, given the constraints, good progress has been made on design, planning and other areas. The Design of the vessels has reached a critical phase, requiring concentrated engineering effort to approve final designs, and, with no immediate prospect of returning the engineers to their offices this is having a direct impact on the timetable.

Overall, the COVID lockdown will have left the yard closed for 3 months and on severely restricted working for at least 3 further months.

The cost related to the COVID lockdown is expected to be **£3.3m** and this will be treated as an exceptional item and not a project cost. This cost will be directly affected by the future course of the virus.

The cost of the project to deliver the ferries is **unchanged** at **£110.3m**

The delivery of 801 is now planned for the range **April 2022 to June 2022**

The delivery of 802 is now planned for **December 2022 to February 2023**. 802 launch will occur in early May 2022.

## 2 UPDATE

The initial report highlighted the need for a period of remedial work at Ferguson Marine. This included significant rework on the vessels; re-evaluation and correction of problems with the design work carried out by FMEL; and extensive changes to business processes especially in engineering, project management and planning and controls. Good progress has been made in each of these areas and the overall project to turn Ferguson around and deliver the ferries was in line with plan when the lockdown occurred.

The care and protection routines described in the previous report have been implemented on both vessels and coating rework carried out where appropriate. A schedule of rework has

been developed and is included in the overall project plan, including the remedial drydocking for Glen Sannox which will commence on 10<sup>th</sup> August 2020.

The original report also detailed a number of specific challenges to be overcome in order to deliver the vessels and these have been progressed as follows:

### **2.1 RE-ENERGISING OF A DEMORALISED WORKFORCE AND THE IMPROVEMENT OF PRODUCTIVITY**

Good progress has been made in rebuilding morale, although there is more to be done. Wherever possible, we have attempted to build a more open culture with better communications and higher visibility of the senior team in the shipyard and out of the offices. Long-standing Trades Union concerns related to the status of temporary employees have been addressed and an effective working relationship has been established with local Union officials. Communications have been improved, including small group briefings carried out by the Turnaround Director and a weekly lockdown newsletter, but there is still work needed to bring employee communications to an appropriate level especially now that lockdown is coming towards its end.

It is also worth noting that, in June, the Ferguson Marine board was established with the appointment of a Chairman plus Non-Executive Directors and the business took another significant step towards a conventional structure. The Board is very aware of the need for good communications and will play its part by implementing policies to allow the voice of the workforce to be clearly heard at Board level.

Productivity at the yard was low before lockdown as the legacy of poor planning, rework of incorrect design and disjointed supply chains is being corrected. Planning and work sequencing has been upgraded and improvements in design control and the supply chain will allow many of the barriers to effective working to be removed. Revised working arrangements to take full advantage of these changes are under review. Physical distancing policies are having an effect on productivity, but this is expected to ease as the yard adapts to the new working practices.

### **2.2 ABILITY TO ATTRACT THE RIGHT TALENT AND RESOURCE WITH SUFFICIENTLY COMPETENT PEOPLE**

This issue included challenges in management, technical specialists and trades people.

Creating an effective management team is a critical task in any turnaround and recruitment is never easy. The combination of excellent skills, relevant experience and the appetite for taking on a turnaround is rare, and interim managers are often the only solution. Interims will continue to fill some roles in Ferguson, but I am pleased to report that strong permanent candidates have been appointed to several key positions. Since March, a new Chief Finance Officer, Head of Procurement, Head of Engineering and Interim Human Resources Director have joined the business and are bringing much-needed professionalism and management capacity.

Recruitment of technical specialists to re-evaluate the ferry designs and then complete the project has proved extremely difficult. Although some good appointments have been possible, the local demand for these skills on either a contract or employed basis is high and

it has not been possible to resource the project at the required level. A contingency plan was being developed when the original report was submitted and in February 2020 International Contract Engineering (ICE) was awarded a contract to provide assistance to Ferguson to complete the basic and detailed design of the ferries. ICE is an internationally recognised marine designer and the largest independent ship design consultancy in Europe. UK-owned and with an operating base in Romania, ICE employ over 300 graduate Naval Architects and Marine Engineers and have a track record of delivering complex vessel designs to shipyards across the world. Currently, ICE have over 80 specialists working on the ferry project, a level that could never have been achieved by Ferguson or its previous sub-contract design partner.

Ferguson remains responsible for technical oversight of the project and the in-house team at Port Glasgow was under-resourced even with ICE carrying out the detailed design. Recruitment to strengthen the team and to reduce its reliance on contractors was started in March but had to be placed on hold due to lockdown. The process has now been re-started, but our engineering capacity will be constrained in the short term

Trades recruitment to date has been adequate for the workload levels required for reworking the ferries and progressing the smaller vessels. However, we are unlikely to be able to directly recruit the resources required for the major work on the ferries and would always want to maintain a proportion of temporary workers or contractors to manage variations in workload. Ferguson is currently finalising framework agreements with contract labour suppliers to make sure enough qualified labour is available.

### **2.3 ABILITY TO PUT IN PLACE AND OPERATE THE NEW PROCESSES REQUIRED**

Extensive business process improvement is underway with good progress, although with 7 disparate systems required to run the business the system integration task is a major challenge. A Head of Business Improvement has been appointed to lead the implementation of the inventory control system and other key change projects. Process mapping is underway, designed to provide an effective Quality Management System with clear and understandable business processes.

A team of specialist planners from Alliance Project Controls (APC) has been contracted to upgrade Ferguson Marine's planning systems, introduce proper project planning and controls, and work as part of the Ferguson team. Significant progress has been made and we will implement the new planning regime in September 2020.

Introduction of project management systems is well underway and credible monthly reports are now being produced for review and discussion with CMAL.

### **2.4 IMPACT OF FUTURE AS YET UNIDENTIFIED REWORK TO THE PROJECT**

Major areas of rework have been identified and solutions agreed. Good relationships were established with CMAL in the first days of the project and the two teams have developed a collaborative approach which has promoted joint problem solving, limiting the impact of rework where possible. The original report predicted that further rework would arise during the final commissioning phase of the vessels and this scope remains unknown.

## **2.5 CONTROL AND MANAGEMENT OF THE DESIGN SUBCONTRACTOR**

FMEL systems did not provide suitable control of the original design contractor and their input was not effectively integrated into any of the processes at the yard. Effective design management processes have been established with ICE, incorporating their rigorous process-based approach and introducing weekly CAD model reviews which involve CMAL. Together these bring a new level of control to the project.

## **2.6 PUBLIC PROCUREMENT**

Previous procurement systems were exceptionally weak and contained inappropriate controls in several respects. Procurement law requires the implementation of Public Procurement practices for the ferry project and this was identified as a critical risk in the December report. Ferguson has been strongly supported by Scottish Procurement in implementing these changes and good progress has been made, although it should be noted that public procurement is particularly ill-suited to the needs of an industrial business.

The Tender process has been completed for pipework manufacture and scaffolding; is nearing completion for the provision of contract labour; and Invitations to Tender have been published for other areas. Public Procurement has been removed from the list of Top 10 risks.

## **3 COVID-19 LOCKDOWN**

A managed closure process was implemented following the lockdown broadcasts on Monday 23rd March by the Prime Minister and the First Minister, and the Ferguson shipyard at Port Glasgow was closed for normal work the following day. Security and fire patrols continued and a rota of vessel inspections was established and the yard remained closed until the Scottish Government Routemap allowed the carefully controlled resumption of work. In the interim a restart plan was developed, in collaboration with Trades Unions, to ensure that policies were implemented to protect workers and to fully comply with the Scottish Government Manufacturing Guidance.

The yard resumed outdoor working on 8<sup>th</sup> June, using the launch of the Air Cushion Barge to pilot physical distancing controls with a team of 32 people. Work on the ferries resumed on 29<sup>th</sup> June with a similar size team, which has since been increased using staggered start times, to around 130 people, approximately 50% of the production workforce. These are supported by a skeleton crew of supervision and technical staff with other employees working from home where possible. The number of production employees in the yard is limited by physical distancing in break and changing -rooms and we are working to develop solutions to remove these constraints.

Extensive work is being done from employees' homes, notably on design where the Ferguson team is working closely with engineers from ICE on the basic and detailed design of the ferries (Hulls 801/802). Lockdown has prevented us from recruiting additional engineers and as a result this department is 25% below the required resource level. Prolonged home-working is also finally having an effect on productivity as the engineers work to review and approve

complex systems and structures without easy access to colleagues, reference materials and the vessels themselves.

Project planning and key supplier negotiation is continuing and turnaround projects, including finance systems and budgeting; materials requirements planning (MRP) system implementation; Bill of Material control and inventory management, and process mapping for the new Quality Management System (QMS) are all making good progress.

In total Ferguson has 355 employees and contractors, 65 of whom have worked from home. The remainder are in roles where this is not possible and during lockdown were paid their full basic pay whilst staying away from the yard. Both groups have continued to accrue holiday during lockdown and this will need to be used in the coming months. The Christmas/New Year shutdown has been extended to help ensure a controlled break, but holidays will create a capacity constraint across the business which has been taken into account in the plan.

The COVID lockdown has delayed the identification, specification and condition of the inventory at Westway which was identified as one of the top 5 risks in the original risk register. There was no activity at the Greenock warehouse until 28<sup>th</sup> June and since then all the stock has been transferred and the identification/inspection project has been started. Around 20% of the inventory has been checked, and so far the process has uncovered the expected range of issues, although none currently represents an additional risk to the cost or timetable. I remain concerned that we will find a major problem with a long-leadtime item, but hope that we will be able to manage problems found in the remaining inventory without further impact on the project. Even without further problems it is a major task to identify, catalogue and record this inventory in the new MRP system and we will undoubtedly face inefficiencies until this work is completed in October.

## 4 ASSUMPTIONS

The following assumptions have been made when producing the revised cost and timetable for delivery of the ferries;

### 4.1 TIMETABLE

- Lockdown continues to be eased in line with the Scottish Government Routemap and there is not a second national lockdown
- Local COVID restrictions, either in Inverclyde or in Port Glasgow, do not require significant changes to the policies in place at the yard
- No new inefficiencies are created by social distancing policies and the solutions being investigated to increase capacity in the amenities work effectively
- The inspection of Westway inventory does not create problems beyond those already envisaged

### 4.2 COST

- Full recovery of input VAT will be achieved

- The resolution of the dispute relating to provision of electrical systems and controls can be resolved as currently expected
- Productivity improvements can be achieved in line with the plan

## 5 PROGRAMME

Cardinal date timelines for both vessels are attached as an Appendix. The activities within each programme have been re-profiled to take account of the lockdown of the yard, the remedial drydocking of 801 in August 2020, and a realistic assessment of the potential recovery. Original cardinal dates are in white boxes and the reassessed dates are in yellow.

The impact of COVID on the project is as follows:

	Original Report		COVID-19 Reassessment	
	Delivery Range	Cardinal Date	Delivery Range	Cardinal Date
801	October to December 2021	11 Oct 21	April to June 2022	14 April 22
802	July to October 2022	6 July 22	December 2022 to Feb 2023	8 Dec 2022

The planning work carried out since December 2019 has added increased detail to the project, increasing the number of activities from 345 in the original plan to 2,938 in the current working version. This gives a more robust plan which reflects the actual approach to scheduling work and provides a better model for evaluating the project.

The Cardinal Date is the baseline date for the project, based on the most likely duration for each task, and the delivery range is derived from a timescale risk assessment (TRA), effectively reflecting the risk in the programme. A more detailed description of the TRA process is contained in the initial report.

## 6 COST

### 6.1 COVID-19

The lockdown for COVID-19 will cost Ferguson Marine approximately £3.3m. This is made up of £1.6m of payroll cost for direct labour which is unable to work plus £1.7m of facility cost and overhead. Payroll costs for employees and contractors who are working are not included in these figures and will be charged to the relevant projects.

This cost will be treated as an exceptional item and not a project cost.

### 6.2 801 & 802

The cost in the original report was based on a detailed assessment of the scope of work required to rework the vessels, turnaround the yard and deliver the ferries and included a range to account for the cost risk analysis. It has been regularly re-visited since the submission of the report, and inevitably there have been a number of variances identified, both favourable and unfavourable. Main variations are:

- Net increase in material cost of £2.4m. This resulted from underestimation of the costs to complete the electrical installation work which has increased by £4.5m, offset by net favourable variances in other areas
- Net £800k for the appointment of ICE as design contractor and full technical resourcing of the project

Given the range of unknowns in late 2019 a technical contingency of £8.8m was included in the cost planning. This has been reduced to £5.6m to reflect these variations.

Our assessment is that, treating the direct COVID-19 impact as exceptional, the ferries can be delivered in line with the commitment in initial report. This included the results of a cost risk analysis (CRA) and was therefore presented as a range.

**The cost range to complete the vessels is £110.3m to £114.3m**

## 7 RISKS

The following are the updated top 10 risks for the project:

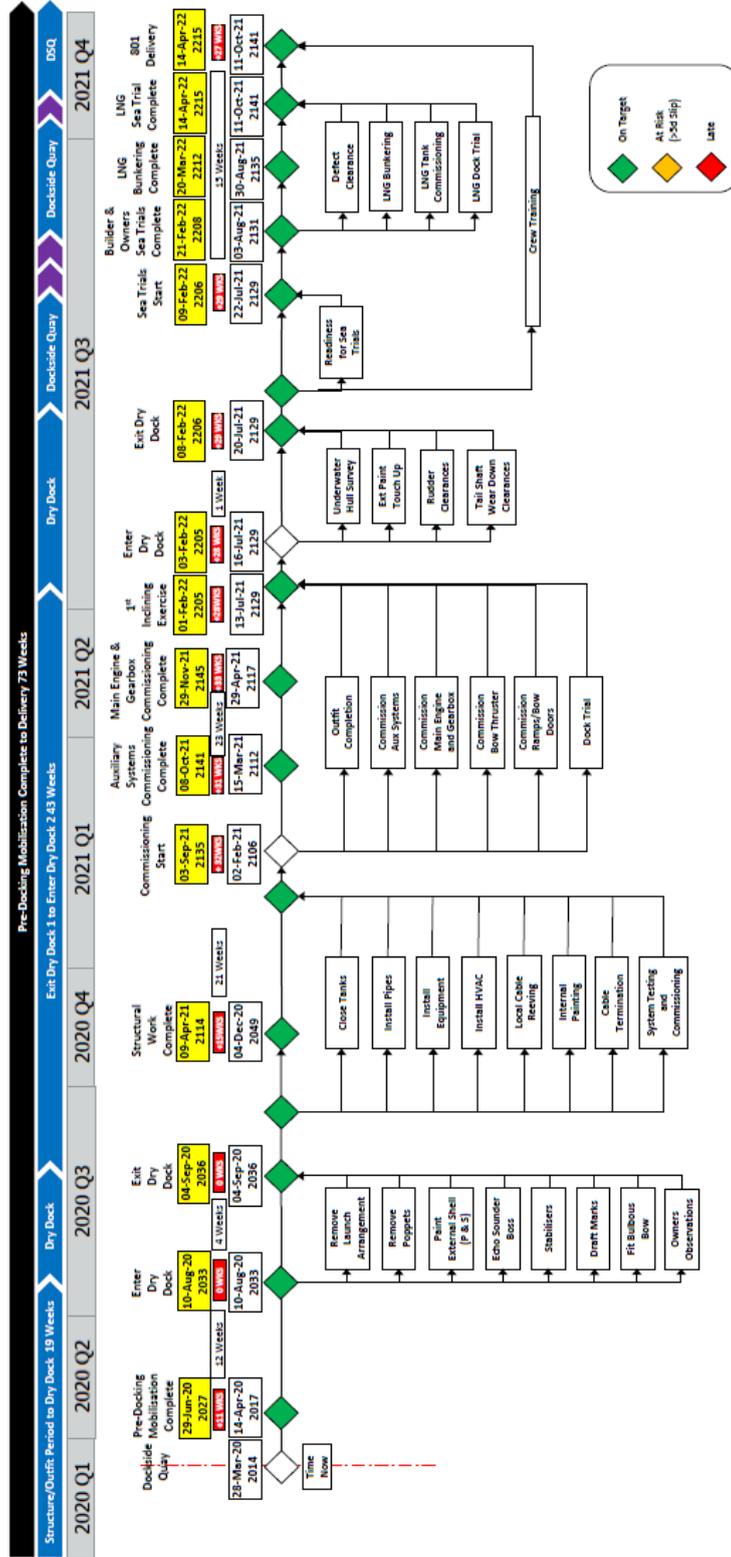
1. COVID 19 has required the shutdown of the yard and may have a significant further impact to delivery
2. COVID 19 - there is a risk that the ongoing effect may impact the yard or its suppliers
3. Materials has been stored offsite at Westway in poor conditions and unmanned. The material condition and level of stock is uncertain and may result in material stock write downs
4. Workpackaging arrangements are not robust enough to control properly the work sequence and capturing performance
5. In a competitive market for skills we may be unable to recruit or retain production staff in the required numbers, with suitable qualifications and experience
6. The level of rework is not sufficiently scoped. Known rework is not fully scoped. Unknown rework will occur particularly during the test and commissioning phase
7. A commercial decision is not reached with the original electrical contractor to allow electrical work to progress to the plan
8. Equipment may not work during the setting to work and commissioning phase as a result of being idle for a significant length of time
9. Vessel cannot meet contract deadweight
10. Hull vibration analysis indicates that there may be an inherent design problem

With the exception of the second risk, COVID 19 ongoing effect, these risks have been taken into account within the forecast programme durations and costs. The second risk is unquantifiable and has not been included.

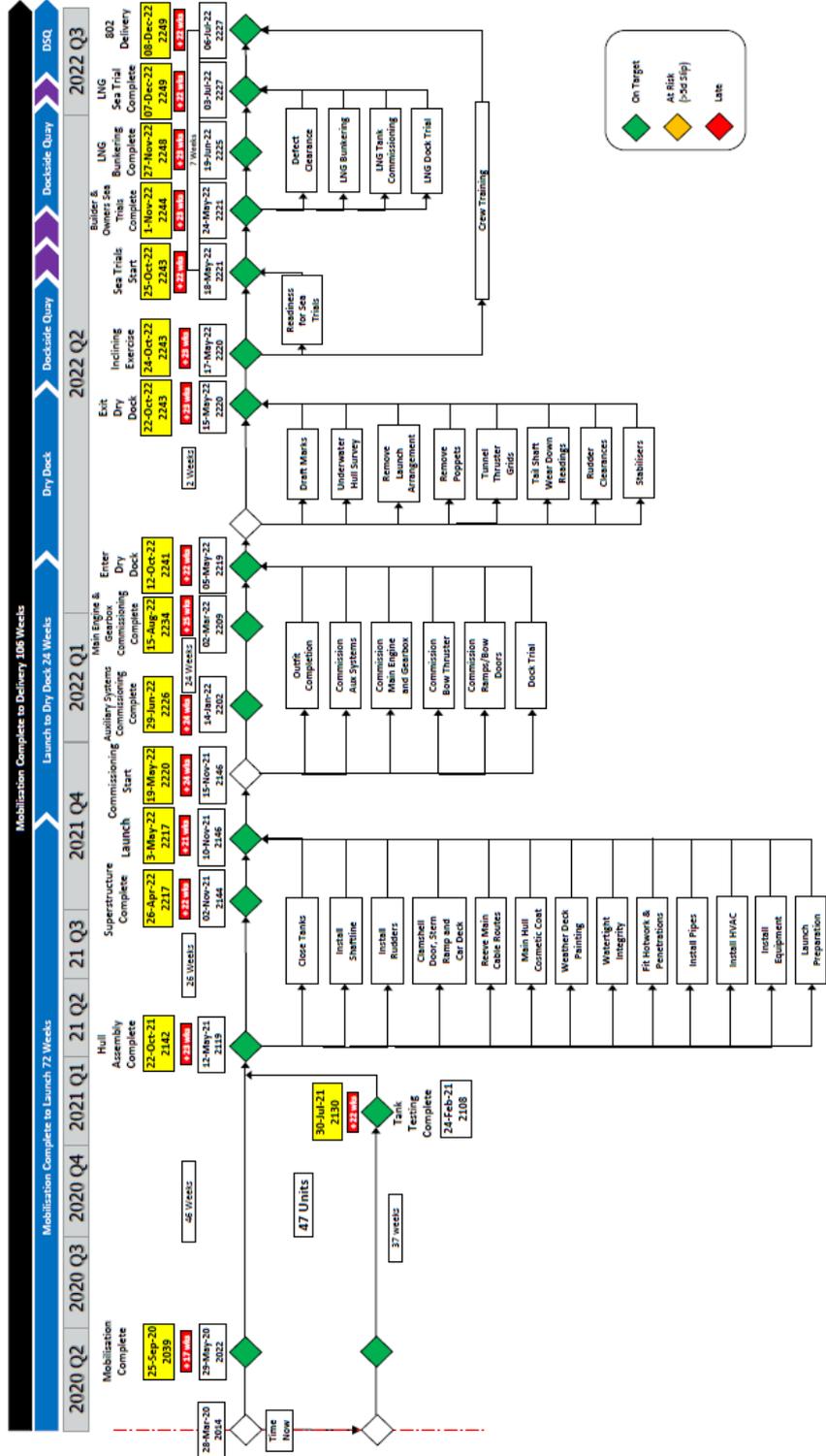
8 APPENDIX – CARDINAL DATE TIMELINES



# 801 Cardinal Date Timeline



# 802 Cardinal Date Timeline



## 9 APPENDIX – SUMMARY OF COSTS

FERGUSON MARINE (PORT GLASGOW) LIMITED					August 2020	
FUNDING REQUIREMENT	2019/20	2020/21	2021/22	2022/23	Total	
	Forecast	Forecast	Forecast	Forecast		
<b>801 Costs</b>						
Labour	0.5	4.0	6.4	1.2	12.1	
Material	0.5	7.0	8.6	6.6	22.7	
Accounts Payable		0.7			0.7	
801 - Contingency for performance penalties			0.4		0.4	
					<b>35.9</b>	
<b>802 Costs</b>						
Labour	0.3	4.6	8.8	4.1	17.8	
Material	0.0	7.0	10.3	7.5	24.8	
Accounts Payable		1.1			1.1	
802 - Contingency for performance penalties				0.4	0.4	
					<b>44.1</b>	
<b>General</b>						
Consumables	0.2	0.3	0.4	0.2	1.1	
Overheads	1.9	6.0	7.5	5.1	20.5	
SGA	0.4	2.4	2.4	1.9	7.1	
CAPEX		1.6			1.6	
<b>Total</b>	<b>3.8</b>	<b>34.7</b>	<b>44.8</b>	<b>27.0</b>	<b>110.3</b>	