

CMP COURSE JUNE 2023

MANAGEMENT

PROJECT - NEW MUSEUM STORAGE FACILITY



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1. INTRODUCTION

Our company which specialises in construction project management been asked by our client to produce a logic linked program for the proposed works to the museum storage facility works. Following the sub-contractor tender reviews, we have reviewed the information that has been received indicating that there is supply chain issues with the procurement of the external cladding, this is likely to lead to an anticipated delay of 5 weeks to the contract program. This report will detail how areas of the construction program can be accelerated to complete the works on time. This will include calculated increased costs in comparison to the financial penalties incurred as a result of late hand over. The report will also assess the practical issues that could be presented when delivering an accelerated program.

1. LOGIC-LINKED CONSTRUCTION PROGRAM

See attached PDF

The proposed program is an initial construction program drafted at pre construction stage, after surveys and investigations are concluded this will allow a robust design to be produced upon which the statutory consents will be applied for. The program presumes no anomalies are found during surveys, it also presumes design has accommodated the water table issues noted on pre-construction pack provided. Total duration of the program works is 46 weeks. To mitigate potential risk a 4-week contingency has been shown at the end of the program.

2. CLADDING DELAY ACCELERATION PROPOSAL

To avoid the proposed £50,000 per week late penalties, we as the main contractor have identified two number areas in the program which should be considered for acceleration.

These are Internal Fit out as summarized under (line 50) & External Works shown in summary under (line 72). The internal fit out works cannot meaningfully start until the project is wind and watertight. Wind and watertight is shown on the program on completion of window installation & roof cladding. The external hard landscaping cannot be completed until the scaffold access required for the façade works has been removed. **See attached** second delay program reflecting this, as can be seen from the second program wall cladding was anticipated to start on the 28th of August 2023, a five week delay is now showing a new contract completion date of 25th of March 2024. This generates a critical delay of 2 weeks and 2 days.

Costs associated with being 2.2 weeks late;

	£ (p/w)	weeks	Total	Comment
Delay Damages	£ 50,000.00	2.2	£110,000.00	As per Contract
Prelim & Plant Costs	£ 86,000.00	2.2	£189,200.00	Includes staff , site accommodation, plant etc
Insurance	£ 8,000.00	2.2	£17,600.00	cost of insurance extension
Total			£ 316,800.00	

Costs associated with accelerating the programme to achieve handover;

	£ (p/w)	Number	Total	Comment
S/C weekend working & NPO	£ 22,300.00	5	£111,500.00	Includes Dry lining and follow on trades. Sat & Sun rates for 5 weekends
Overtime costs working extended hours / backshift	£ 14,000.00	5	£70,000.00	5 weeks of backshift allowance
Supervision / Weekend Management	£ 900.00	5	£4,500.00	Staff Supervision Costs for weekend working - 5 weekends
Total			£186,000.00	

When reviewing acceleration, various strategies and their practicality should be considered.

Labour Allocation – Labour resources should be increased with a particular focus on the partition works and subsequent follow-on trades such as the decorator and finishes. Coordination of management of these trades is paramount to ensuring the proposed program acceleration is successful, regular monitoring of labour resources and numbers is required to maintain required progress.

Extended working hours – The site will need to be open longer, we should engage the local authority in reference to this, the planning conditions will outline our accepted working hours. Workforce fatigue will have to be considered, adequate site supervision will also be required, should the site hours resort to double shifts we will require to supplement the project with additional management resources.

Simultaneous contractor works – All accelerated works will require to be coordinated to ensure they are working in line with the accelerated program, this will involve closely managing the synchronized installation of partitions (1st fix) with services (1st fix) or the application of tiling with the completion of joinery finishes (2nd fix).

Offsite manufacturing – The project team and supply chain should investigate the possibility of any potential off-site manufacturing such as cubicles (IPS) & joinery finishes. This could lead to betterment of the onsite program and off-set the 5 week delay in cladding procurement.

Phased Approach – With reference to the hard landscaping we should identify sections or areas that are not impacted by the scaffold and prioritize these for completion, this will leave only the area impacted by the footprint of the scaffold to be taken to a finish following the façade works completion and subsequent scaffold drop.

Temporary Access solutions –In regard to the hard landscaping works a site workshop should be undertaken with the assistance of the façade contractor and landscaper to understand if any areas can be completed with the assistance of MEWPS (Mobile Elevating Work Platform) 3A or 3B. This strategy will require coordination of these two contractors in particular, the areas in question require to be forensically looked at to understand interfaces.

Quality Control – When considering acceleration, we must ensure that quality control procedures are adhered to this includes hold points and sign off procedures. The site management team will have to conduct regular inspections and ensure the works are being carried out in line with the agreed ITP (Inspection test plan).

Health and Safety – We must consult our labour force and sub-contractors and review the impact of the accelerated program on health and safety procedures. Health and safety is the site's number one priority. Accelerating works in construction increases the likelihood of an accident, we shall ensure that any additional work hours and increased activity do not compromise safety procedures. Risk assessments and method statements should be reviewed to ensure the site is in compliance with CDM regulations and best practices. In the event site numbers are to be increased a review of the numbers on site should be carried out to ensure the welfare facilities in place are adequate.

Before considering any accelerated works a management review should be undertaken to ensure works can be carried out effectively with a key focus on the items listed above. Effective Project Management is critical to ensuring that works are completed, on program and in a safe coordinated manner.