Commissioning Plan – Part 6

CONSTRUCTION PHASE

Commissioning

Morgan Sindall business unit / region:	**Construction North West**		
Project name:	**Gorton Community Hub**		
Project no.:	**13W009**		
Customer:	**Manchester City Council**		
Location:	**Garrett Way Gorton**		
Revision no.:	**001**	**Date:**	

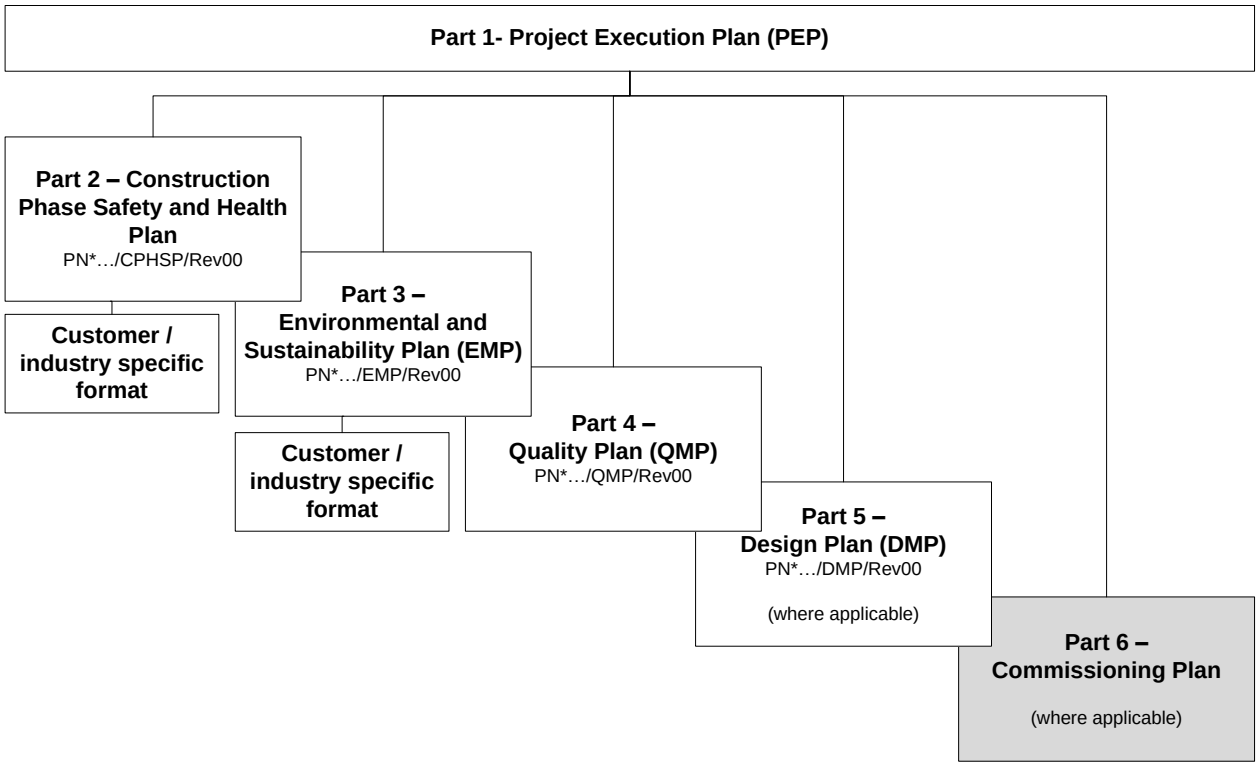
For full revision schedule see section one Project Execution Plan (PEP) (Part 1).

Commissioning Plan (CP) - Overview

This document will define how project specific commissioning will be delivered.

Each box represents the sections of the whole PEP.
Only in exceptional circumstances will a PEP consist of less than four documents.

* PN = Contract or project no.
(Update revision nos. as required)



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1. Introduction

1. Preamble – the following information is contained within PEP Part 1
   - Pre-construction information
   - Project directory
   - Contract organisation and staff responsibilities
   - Communications
   - Risk management
   - Knowledge transfer – good practice / lessons learnt.

1.1. Purpose of the Commissioning Plan

This CP is provided to give an overall summary and outline of the proposed commissioning philosophy strategy and methodology of how the scheme will be managed to ensure project outputs are met whilst maintaining company and regulatory performance targets.

It is recommended that a commissioning team is established early in the project with the key members of the team responsible for overall commissioning of the systems and services.

This CP will record the key agreements reached by the commissioning team regarding the programme and resources required to achieve the above and key milestones related to testing, commissioning, training, production of the works Operation and Maintenance (O&M) manuals and asset data.

The CP will include:
- Roles and responsibilities of commissioning team members
- Overall programme and milestones for testing and commissioning
- Sequence of activities
- Overview of key activities and those that need detailed planning
- Any wider constraints (seasonal supply or quality issues) and interfaces with the existing site operations and other schemes.

Separate commissioning reports / files and their associated appendices will be used as a means of planning, managing and recording all inspections, testing and commissioning activities associated with the works in undertaking of the CP.

1.2. Description of the project and process

The proposed Hub consists of 2 plots which includes; one plot being transformed into a 3-storey building, and the other plot is being built as a potential location for staff car parking. Within the building their will be facilities for adult learning, health facilities and areas for Manchester Council to base their staff. The construction build up consists of Pile foundations with a concrete slab structure along the ground floor. The superstructure consists of a steel structural frame and metal deck flooring & concrete topping. External cladding will consist of a mix of masonry elements and cladding systems along with glazed windows. External hard and soft landscaping will be carried out to provide car parking and feature landscaping

1.3. Document ownership and reference documents

The production and ownership of the CP's is as per below steps:
1. The CP details the commissioning strategy and methodology developed between by the commissioning team or the commissioning manager (if appointed to the project)
2. CP's will be issued by the commissioning team or the commissioning manager (if appointed to the project).

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2. Commissioning philosophy

Commissioning is a quality assurance process demonstrating the full range of functional operation and suitable recording the performance of the equipment in the commissioning documentation. It is a systematic process beginning at the design phase of the scheme including the preparation of operational staff by ensuring, through documented verification, that all systems perform interactively, according to the documented design intent and the operational requirements of the client.

Commissioning has two main components:

- Functional
  - Systems and equipment supporting the user's functional requirements
  - Effective design
  - Safe
- Operational
  - Performance
  - Documentation
  - Training
  - O&M.

Commissioning is both a process and a phase within the overall PEP:

The commissioning process is a planned programme of quality management and information transfer activities that extends through all phases of the project's development and delivery and into the warranty period.

The commissioning phase is the transition between the implementation and operational phases (the transition between start up and full operation).

The commissioning phase (like all other phases in a scheme life) requires that all personnel involved with a project work together as a team being focused on delivering a robust, quality end product that has been demonstrated to fulfil the specification criteria.

3. Commissioning programme and resource planning

The commissioning programme is included in the main project programme, and will be maintained and updated.

Systems to be commissioned on the Gorton Community Hub Scheme are as follows:

1. AC
2. Ventilation
3. hot and cold domestic services
4. LTHW heating systems
5. BMS
6. Gas systems
7. Plant rm equipment
8. Power and lighting
9. Fire alarm
10. Intruder alarm
11. Disabled alarms/nurse call
12. CCTV
13. Door access systems
14. PV system

commissioning programme

4. Commissioning responsibilities, organogram and contacts

Morgan Sindall will establish a commissioning team for the duration of the project which will comprise key personnel provided by both Morgan Sindall together with key personnel as suggested in the structure below.

4.1. Commissioning team structure
Insert team organogram.

To be issued at a later date. Subcontract supply chain not yet appointed

Commissioning meetings will be held at regular intervals by the commissioning team. Individual subcontractors may be required to attend as necessary.

4.2. Site commissioning team organogram
Insert team organogram.

To be issued at a later date. Subcontract supply chain not yet appointed.
Process to be managed Elec Ian Jones Mech Jamie Cockin

4.3. Name and contact details (specific to each project)

Name	Position	Contact number	Email
Paul Waite	Clients Project Manager		
	NEC PM		
	Client's Designer		
	Clients Engineer		
Manchester City Council	Clients Operator / End User		
	Project Manager		
	Commissioning Manager		
	Designer		
	Engineer		
	Commissioning Engineer / Technician		
Ian Jones Jamie Cockin	Subcontractors Representative		Ian.jones @quartzelec.com jamie.cockin @quartzelec.com

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5. Commissioning strategy

The commissioning strategy is to plan and manage the commissioning activities in a rigorous and pro-active manner to achieve a “right first time” solution. Further to this, the commissioning strategy describes the way in which the work is to be commissioned.

5.1. Acceptance criteria and drivers
The table below sets out the current consents and conditions for commissioning standards are:

- *(insert as applicable)*

5.2. Sampling and testing strategy
A detailed sampling and testing strategy will be developed by the commissioning team or commissioning manager to demonstrate the requirements and performance as specified in the acceptance criteria. This will be a separate document and will detail the “who”, “where” and “how” of the sampling strategy. This will also identify what equipment will be used.

Or insert the respective sections from the specification.
TBC once orders placed with the supply chain

5.3. Commissioning constraints
The following constraints for maintenance of compliance of the works have been considered in the development of our CP:
1.
2.
3.

6. Stages of commissioning

Each stage on the flow chart below forms an element of the commissioning strategy and will form part of the commissioning programme, with links to its associated interfaces, outages and temporary works. These stages will be developed during the delivery phase for agreement with the commissioning team prior to the undertaking of a Hazard Communication (HAZCOM) and production of Risk Assessment / Method Statement (RAMS).
To move from the testing stage to the commissioning stage, a permission to bring on line certificate will be issued for approval of the customer’s operations manager.

Flowchart of commissioning stages
TBC once orders placed with the supply chain

7. Health and safety

7.1. Overview
This section of the commissioning plan describes the approach to health and safety during the commissioning phase and identifies all interfaces, mitigations and residual risks. Reference will be made to use the best practice where possible.

7.2. Site specific hazards
refer to other PEP – (Part 2).

7.3. Hazards in Commissioning (HAZCOM)
A HAZCOM meeting shall be held between Morgan Sindall, client representatives and other stakeholders prior to the commencement of any commissioning activities. All commissioning activities shall be risk assed on an on-going basis and the client will be kept informed of the risks throughout. The HAZCOM tabulates the commissioning activities and the risk control measures, which reflects the approach followed in the commissioning plan and commissioning method statements.

The HAZCOM meeting will further identify possible residual risks. All risks will be assessed and incorporated into the commissioning method statements for the various activities. The HAZCOM list will form part of the commissioning manual.

7.4. Risk Assessment / Method Statement (RAMS)
No commissioning activity will be permitted without an approved RAMS.

8. Commissioning records

The following manuals will be created and maintained as contemporary records of the commissioning process and as-built installation.

- Commissioning and testing manual
- Training manual
- O&M manual.

The contents of the commissioning and testing manual shall be agreed with the client to meet the requirements of the form of contract and works information contained therein, and should contain the following as a minimum:

1. Commissioning planning
   - Commissioning plan
   - Commissioning team / commissioning minutes of meetings
   - HAZCOM report
   - Commissioning risk assessments
   - Commissioning method statements
   - Commissioning procedures
   - Sanction to test / permission to turn flow certificates.

2. Construction completion report
   - Civil's structure testing records
   - Mechanical equipment testing records
   - Electrical equipment testing records
   - Instrumentation equipment testing records
   - Manufacturers testing records
   - Lifting equipment testing records
   - Pressurised systems and equipment testing records
   - Factory acceptance testing records
   - Performance testing records
   - Site acceptance testing records
   - Clients witness testing records
   - Outstanding works schedule
   - 'Red penned' as-tested drawings / schedules.

3. Completion report
   - Sampling and test results
   - Performance test results
   - Maintenance schedules / reports
   - Asset data files
   - As-commissioned drawings / schedules
   - Take-over certificates
   - Sectional completion certificates
   - Completion certificates
   - Outstanding works schedule.