

CONSTRUCTION MANAGEMENT PLAYBOOK – SOLAR POWER PROJECT

Comprehensive Construction Management Guide for Solar Project Execution



Part 5/6 | Playbook Series for Project Nav Saksham
Developed for Torrent Power

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Abstract

This playbook is a comprehensive guide to the Construction Management of solar projects at Torrent Power. Its primary objective is to standardize, streamline, and optimize Construction activities, ensuring continued execution excellence as the organization scales up the RE portfolio.

Each chapter outlines clear process steps, process maps, RACI matrices, and KPIs to further streamline operations, ensuring consistency and efficiency across projects. By establishing standardized operating procedures (SoPs) and integrating best practices, this playbook will support Torrent Power in scaling its solar projects more effectively, while maintaining high standards of quality and performance.

Objectives

- **Establish a Standardized Approach** – Provide a unified, repeatable methodology for the Construction function, ensuring consistency across all solar projects
- **Streamline Construction Processes** – Optimize key stages through well-defined steps and roles, enabling efficient project execution
- **Support Scalable Growth** – Facilitate Torrent Power's expansion in solar energy by developing a robust Construction Management framework that adapts to increasing project complexity
- **Enhance Collaboration** – Foster seamless communication and decision-making by clearly defining processes, roles, and stakeholder expectations

Scope

This playbook outlines the structured approach to Construction Management of solar projects at Torrent Power. The scope includes:

- **Process Steps** – Detailed guidelines for each stage of the Construction process, from visual inspections to equipment testing to first-time charging and commercial operation. These steps ensure a standardized, systematic approach to Construction activities, aligning with project objectives and timelines.
- **Process Maps** – Visual representations of key Construction steps, illustrating the sequence of activities, approval stages, and decision points. These maps enhance clarity, improve cross-functional collaboration, and ensure alignment across teams.
- **KPIs** – Defined metrics to track performance throughout the Construction process, covering areas such as pre-commissioning testing, approval success and timelines, and performance testing.
- **RACI** – Clear RACI matrices that define roles and responsibilities for each step of the Construction process. This fosters accountability and transparency, ensuring each stakeholder understands their involvement at every step, from grid compliance check to commercial operation.

This playbook serves as the foundation for establishing consistent and efficient Construction Management practices, supporting the successful execution of future solar projects at Torrent Power.

Coverage

The document covers the processes that make up the Construction stage. It is structured as follows –

- **Chapter 1 – Readiness for Construction** – Covers land handover, statutory approvals, contractor compliance checks, and engineering drawing finalization to ensure project teams are fully prepared to begin execution.
- **Chapter 2 – Site Mobilization** – Describes coordination with contractor to finalize the mobilization plan, onboard manpower with required clearances, and mobilize equipment and resources to site.
- **Chapter 3 – Construction Execution** – Outlines the day-to-day planning, supervision, resource checks, issue logging, and DPR reporting necessary to track construction activities and progress.
- **Chapter 4 – Site Progress Monitoring and Reporting** – Establishes mechanisms for monitoring KPIs, conducting project reviews, and documenting lessons learned to improve future project execution.

Who is this playbook for?

- **Project Team** – Oversee the overall execution, ensures completion of construction activities in line with project timelines and technical requirements. Verifies and signs off at key construction stages.
- **Regulatory Team** – Ensure timely acquisition of statutory approvals and permits required for construction commencement. Coordinate with external agencies for clearances like connectivity, safety, and labor compliance.
- **Commercial Team** – Facilitate timely procurement and delivery of materials and services based on engineering requirements.
- **Engineering Team** – Provide approved technical drawings, layout, and design inputs for construction. Resolve design-related queries during execution and support the site team with engineering clarifications.

Chapter 1 – Readiness for Construction Execution

1.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (weeks)
S	– Project Manager (PM) takes physical control of 70% of the land parcels					-
P1	– PM requests Regulatory Approvals Head (RAH) to provide the Grant of Connectivity, Land Sale/Lease Deed Copy, Project Registration Document, Authority letter for Project Compliance, PAN and GST					-
P2	– RAH provides the Grant of Connectivity, Land Sale/Lease Deed Copy, Project Registration Document, Authority letter for Project Compliance, PAN and GST to the PM			O1	Regulatory Document Package	0.5
P3	– PM requests Procurement Lead to hire a Third-Party Engineer to conduct Geo-tech activities ¹					2
P4	– PM sends the Third-Party Engineer to the site to conduct Geo-tech activities					2
P5	– PM requests Solar Procurement Head (SPH) to share the signed PO and Scope of Work for the EPC Contractor					-
P6	– PM receives signed EPC PO and Scope of Work, and issues Notice to Proceed (NTP) to the EPC SPOC ²	I1	Signed PO and Scope of Work	O2	Notice to Proceed	-

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ If Land is procured by the EPC, they will conduct the Geo-tech activities

² Procedure remains the same for all contractors that are contracted to work at site

#	Activity	#	Inputs	#	Outputs	Timeline (weeks)
P7	– PM shares documents required for the application for Building and Other Construction Works (BOCW) license, with EPC SPOC – PM shares the communication matrix with EPC SPOC to circulate within their team and requests them to share the same			O3	BOCW Application Documents	0.5
				O4	Communication Matrix	
P8	– EPC SPOC applies for the BOCW and shares it with the PM and RAH, once received	I2	BOCW Application Documents	O5	BOCW License	2
P9	– EPC SPOC applies ¹ for the compliance documents ² outlined in the contractor mobilization checklist, including CLRA Certificate	I3	Contractor Mobilization Checklist	O6	Compliance Documents Application	2 (parallel to P10)
P10	– EPC SPOC shares the approved documents with the PM and Site QHSSE Manager	I4	Compliance Application Documents	O7	Construction Compliance Package	-
P11	– Site QHSSE Manager checks that all the documents are in order and gives the go-ahead to the PM					0.5
P12	– PM requests Solar Engineering Head (SEH) to provide the Array layout, along with the MMS installation drawings					-
P13	– SEH provides the requested drawings to the PM			O8	Array Layout	2.5
				O9	MMS Installation Drawings	
E	– PM ensures he has received connectivity approvals, EPC compliance documents and engineering drawings – PM directs the Site Admin Manager to set up the guest house, site office and mobilize site vehicles					Total – 7 – 8 weeks + time required to receive approvals

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ PM supports with documents required for the application including Form 5 for CLRA certificates

² Includes labor license, workmen compensation insurance, employee provident fund (EPF), EPC Communication Matrix

1.2 – RACI

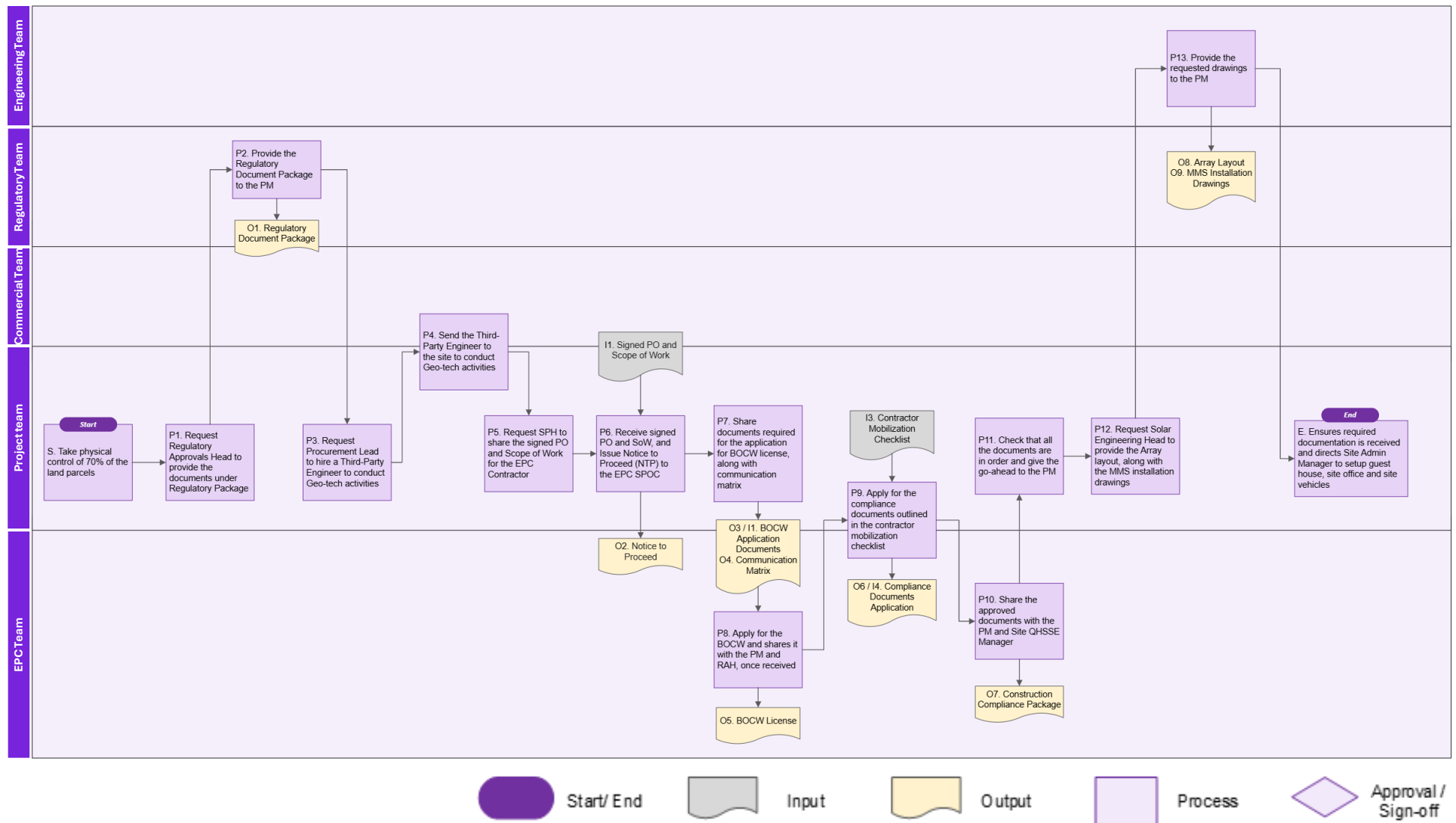
#	Key Task	Responsible	Accountable	Consulted	Informed
S	Take physical control of 70% of the land parcels	Project Manager		Land Manager	
P1	Request Regulatory Approvals Head (RAH) to provide Regulatory Document Package	Project Manager			Regulatory Approvals Head
P2	Provide the Regulatory Document Package to the PM	Regulatory Approvals Head			Project Manager
P3	Request Procurement Lead to hire a Third-Party Engineer to conduct Geo-tech activities	Project Manager			Procurement Lead
P4	Send the Third-Party Engineer to the site to conduct Geo-tech activities	Project Manager		Procurement Lead	
P5	Request SPH to share the signed PO and Scope of Work for the EPC Contractor	Project Manager			Solar Procurement Head
P6	Receive signed PO and SoW, and Issue Notice to Proceed (NTP) to the EPC SPOC	Project Manager		Solar Procurement Head	EPC SPOC
P7	Share documents required for the application for BOCW license, along with communication matrix	Project Manager			EPC SPOC

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

#	Key Task	Responsible	Accountable	Consulted	Informed
P8	Apply for the BOCW and share it with the PM and RAH, once received	EPC SPOC			Project Manager, Regulatory Approvals Head
P9	Apply for the compliance documents outlined in the contractor mobilization checklist, including CLRA certificates	EPC SPOC		Project Manager	
P10	Share the approved documents with the PM and Site QHSSE Manager	EPC SPOC			Project Manager, Site QHSSE Manager
P11	Check that all the documents are in order and give the go-ahead to the PM	Site QHSSE Manager			Project Manager
P12	Request Solar Engineering Head (SEH) to provide the Array layout, along with the MMS installation drawings	Project Manager			Solar Engineering Head
P13	Provide the requested drawings to the PM	Solar Engineering Head			Project Manager
E	Direct Site Admin Manager to set up the guest house, site office and mobilize site vehicles	Project Manager			Site Admin Manager

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

1.3 – Process Map



¹ Map Glossary - RAH: Regulatory Approvals Head

Chapter 2 – Site Mobilization

2.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (weeks)
S	– Project Manager (PM) directs the Site Admin Manager to set up the site office, guest house and mobilize site vehicles					-
P1	– Site Admin Manager completes set-up of the site office, guest house and mobilization of site vehicles					4
P2	– PM directs Site Manager (SM) to initiate site mobilization					-
P3	– Site Manager assigns a Site Functional Head ¹ for the mobilization of given contractor <i>e.g. Site Civil Head will be assigned to a contractor performing civil jobs</i>					-
P4	– Site Functional Head requests EPC SPOC to share the site mobilization plan ² , along with manpower details ³					-
P5	– EPC SPOC prepares ⁴ and shares the site mobilization plan, and manpower details, with the Site Functional Head	I1	Construction Management Plan	O1 O2	Site Mobilization Plan Contractor Manpower Details	1

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Site Civil or Electrical Head

² Site mobilization plan includes timelines for manpower / equipment mobilization, material movement plan (up to zero point and zero point to location), Waste Management Plan, Emergency Response Plan, Incident Management Plan)

³ Includes Team Organogram, Team members name list with resume and Site Communication Matrix

⁴ The Construction Management Plan is already aligned with the contractor. This process is detailed out in the Solar Planning Playbook – Chapter 1.6.

#	Activity	#	Inputs	#	Outputs	Timeline (weeks)
P6	– Site Functional Head shares the site mobilization plan and manpower details with Site Manager for approval					-
P7	– Site Manager reviews the site mobilization plan and provides comments					1
P8	– Site Manager signs off on the plan once comments have been incorporated, and shares with PM for approval					-
P9	– PM reviews the site mobilization plan and provides comments					0.5
P10	– PM signs off on the plan once comments have been incorporated, and informs Site Manager – PM directs Site Functional Leads to coordinate further activities with respective EPC Functional Lead					-
P11	– Site QHSSE Manager requests EPC SPOC to submit the health and fitness certificates ¹ of their manpower					-
P12	– Site QHSSE Manager receives the documents from EPC SPOC and verifies them	I2	Health and Fitness Certificates			0.5
P13	– Site QHSSE Manager conducts the safety induction of all the site manpower and issues ID cards to them	I3	Manpower Induction Modules			-

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Includes Medical fitness from MBBS, Age Proof, First Aiders

#	Activity	#	Inputs	#	Outputs	Timeline (weeks)
P14	– Site QHSSE requests EPC SPOC to submit the certificates of machinery ¹					-
P15	– Site QHSSE Manager verifies the machinery documents and conducts the safety induction of machinery	14	Certificates of Machinery			0.5
P16	– Site QHSSE Manager requests EPC SPOC to share the EHS documents ²					-
P17	– Site QHSSE Manager verifies the EHS documents received from EPC SPOC	15	EHS Documents			0.5
P18	– Site Manager ensures completion of the remaining sections ³ of the contractor mobilization checklist					0.5
P19	– Site Manager signs off on it and shares it with the Project Manager for approval					-
P20	– PM seeks clarifications and recommends changes, if any					0.5
E	– PM signs off on the mobilization checklist and directs Site Manager to begin construction activities, as per the plan					Total – 7 – 8 weeks

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Includes RC book copy, Insurance copy, Operator / Driver license copy, Third-Party Fitness Certificate

² Includes Company Introduction, Job Safety Assessment (JSA), Hazard Identification and Risk assessment (HIRA), Waste Disposal Plan, Number of Signboards, PPEs with certificates, First Aid Kits, Fire Extinguishers, and dust bins

³ Includes Office and Support related documents

2.2 – RACI

#	Key Task	Responsible	Accountable	Consulted	Informed
S	Direct the Site Admin Manager to set up the site office, guest house and mobilize site vehicles	Project Manager			Site Admin Manager
P1	Complete set-up of the guest house and mobilization of site vehicles	Site Admin Manager			Project Manager
P2	Direct Site Manager to initiate site mobilization	Project Manager			Site Manager
P3	Assign a Site Functional Head ¹ for the mobilization of given contractor	Site Manager			Site Functional Head
P4	Request EPC SPOC to share the site mobilization plan, along with manpower details	Site Functional Head			EPC SPOC
P5	Prepare and share the site mobilization plan, and manpower details, with the Site Functional Head	EPC SPOC			Site Functional Head
P6	Share the plan and manpower details with Site Manager for approval	Site Functional Head		Site Manager	
P7	Review the site mobilization plan and provide comments	Site Manager		Site Functional Head, EPC SPOC	

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Site Civil or Electrical Head

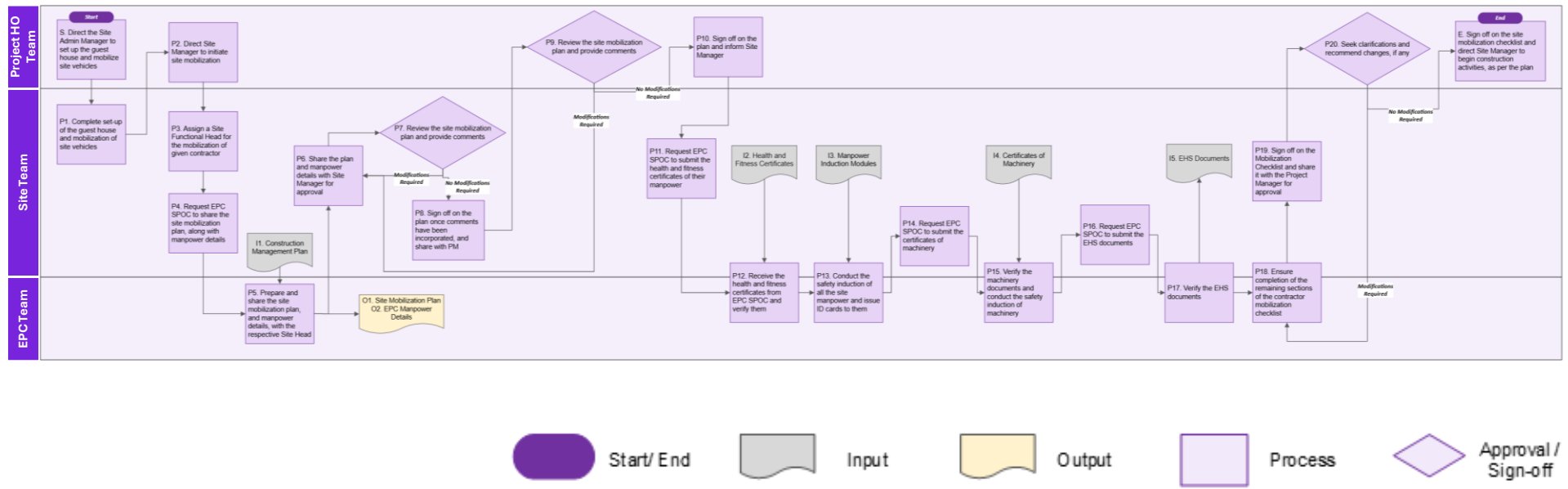
#	Key Task	Responsible	Accountable	Consulted	Informed
P8	Sign off on the plan once comments have been incorporated	Site Manager			Project Manager
P9	Review the site mobilization plan and provide comments	Project Manager		Site Manager	
P10	Sign off on the plan once comments have been incorporated	Project Manager			
P11	Request EPC SPOC to submit the health and fitness certificates of their manpower	Site QHSSE Manager			EPC SPOC
P12	Receive the health and fitness certificates from EPC SPOC and verify them	Site QHSSE Manager		EPC SPOC	
P13	Conduct the safety induction of all the site manpower and issue ID cards to them	Site QHSSE Manager		EPC SPOC	
P14	Request EPC SPOC to submit the certificates of machinery	Site QHSSE Manager			EPC SPOC
P15	Verify the machinery documents and conduct the safety induction of machinery	Site QHSSE Manager		EPC SPOC	
P16	Request EPC SPOC to share the EHS documents	Site QHSSE Manager			EPC SPOC

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

#	Key Task	Responsible	Accountable	Consulted	Informed
P17	Verify the EHS documents	Site QHSSE Manager		EPC SPOC	Site Functional Head
P18	Ensure completion of the remaining sections of the contractor mobilization checklist	Site Functional Head		EPC SPOC	
P19	Sign off on the Mobilization Checklist and share it with the Project Manager for approval	Site Manager			Project Manager
P20	Seek clarifications and recommend changes, if any	Project Manager		Site Functional Head	
E	Sign off on the site mobilization checklist and direct Site Manager to begin construction activities, as per the plan	Project Manager			Site Manager

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

2.3 – Process Map



¹ Map Glossary - EHS: Environment Health Safety

Chapter 3 – Construction Execution

3.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (weeks)
S	– Project Manager (PM) directs Site Manager (SM) to begin construction activities, as per the plan					-
P1	– SM directs Site Functional Heads ¹ to distribute jobs within their package to their Site Engineers <i>e.g. Site Civil Head assigns a given job to a Site Civil Engineer</i>					-
P2	– Site Functional Heads distribute the jobs within their packages to the Site Engineers and shares the Construction Management Plan (CMP) with them			O1	Construction Management Plan	-
P3	– Site Planner creates the work completion ² plan, for a given job, and shares it with the EPC SPOC, Site Store Manager and Site Functional Head	I1	Construction Management Plan	O2	Work Completion Plan	0.5
P4	– EPC SPOC creates the manpower availability schedule, as per the work completion plan, and shares it with Site Engineer and Site Planner	I2	Work Completion Plan	O3	Manpower Availability Schedule	0.5
P5	– Site Store Manager prepares the material (or, component) availability schedule, as per the work completion plan, and shares it with the Site Engineer and Site Planner – Site Procurement Manager provides inputs for the same	I2	Work Completion Plan	O4	Material Availability Schedule	0.5 (parallel to P4)

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Site Head refer to Site Electrical and Civil Leads

² Work completion plan is a daily work completion plan, such that work is evenly distributed till the job deadline

#	Activity	#	Inputs	#	Outputs	Timeline (weeks)
P6	<ul style="list-style-type: none"> Site Planner reviews the manpower and material availability schedule to ensure there is alignment between the plans, and gives go-ahead to the Site Engineer <i>Construction/ Installation work is now ready to begin for the given job</i>	I3 I4	Manpower Availability Schedule Material Availability Schedule			0.5
P7	<ul style="list-style-type: none"> In the daily site review, Site Planner shares the work update from the previous day Site Planner then shares the planned work for the given day, and raises any concerns¹ that may impact the completion deadline² 	I5	Daily Progress Report			-
P8	<ul style="list-style-type: none"> Site Engineer supervises the construction activities, for his job, for the day 					-
P9	<ul style="list-style-type: none"> At the end of the day, Site Engineer records and shares the progress update with the respective Site Functional Head, along with any unresolved issues 					-
P10	<ul style="list-style-type: none"> Site Functional Heads collate work progress data from all the engineers and update the Daily Progress Report (DPR) and shares with Site Planner and Site Manager Site Functional Heads update the issues recorded in the Issue Log 			O5 O6	Daily Progress Report Issue Log	-
P11	<ul style="list-style-type: none"> Site Manager reviews the DPR and provides sign-off, and shares it with PM 					-
P12	<ul style="list-style-type: none"> Project Manager reviews the DPR and provides sign-off 					-

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Land or ROW related issues are to be resolved by the Site Land Coordinator

² Plan Update will be made by the Site Planner as per the process detailed in the Solar Planning Playbook – Chapter 1.9

#	Activity	#	Inputs	#	Outputs	Timeline (weeks)
P13	– Site QHSSE Lead, with team members, supervises adherence to safety procedures, records observations, and escalates violations, in the Site HSE Tracker ¹			O7	Site HSE Tracker	-
P14	<ul style="list-style-type: none"> – Site Store Manager updates the Store Register based on inward and outward material for that day – Site Store Manager updates the Issue Log for any delays in delivery that may impact work completion deadlines <i>The steps P7 to P12 will repeat daily till job completion</i>			O8 O6	Store Register Issue Log	-
P15	– Once the job is completed, Site Functional Head raises the Quality Inspection Notice to the Site Quality Head			O9	Quality Inspection Notice	-
P16	<ul style="list-style-type: none"> – Site QHSSE Lead conducts an inspection of the completed work – Site QHSSE Lead records the list of deviations and shares it with the EPC SPOC and Site Functional Head 			O10	Quality Deviation List	0.5
P17	– Site Functional Head ensures EPC SPOC fixes the deviations					2
P18	– Site QHSSE Head issues a Job Completion Certificate, on successful inspection, to the EPC SPOC			O11	Job Completion Certificate	-
E	<ul style="list-style-type: none"> – Site Manager informs the Project Manager that the given job has been completed – Site Manager informs the Site Procurement Manager of the same for milestone-related payments 					Total – 3 – 4 weeks + time to complete the job

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Site QHSSE Lead collates these observations in the Weekly HSE Report, on a weekly basis.

3.2 – RACI

#	Key Task	Responsible	Accountable	Consulted	Informed
S	Direct Site Manager (SM) to begin construction activities	Project Manager			Site Manager
P1	Direct Site Functional Heads to distribute jobs within their package to their engineers	Site Manager			Site Functional Head
P2	Distribute the jobs within their packages to the Site Engineers	Site Functional Head			Site Engineer
P3	Create and share the work completion plan, for the given job	Site Planner		Site Functional Head	
P4	Create the manpower availability schedule, as per the work completion plan, and share it with Site Engineer and Site Planner	EPC SPOC			Site Engineer, Site Planner
P5	Create the material availability schedule, as per the work completion plan, and share it with Site Engineer and Site Planner	Site Store Manager		Site Procurement Manager	Site Engineer, Site Planner
P6	Review the manpower and material availability schedule to ensure there is alignment between the plans, and gives go-ahead to the Site Engineer	Site Planner		EPC SPOC, Site Store Manager	Site Engineer
P7	Share the previous day work update and current day work plan	Site Planner		Site Functional Head	Site Manager, Project Manager

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

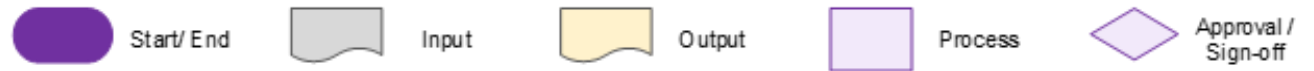
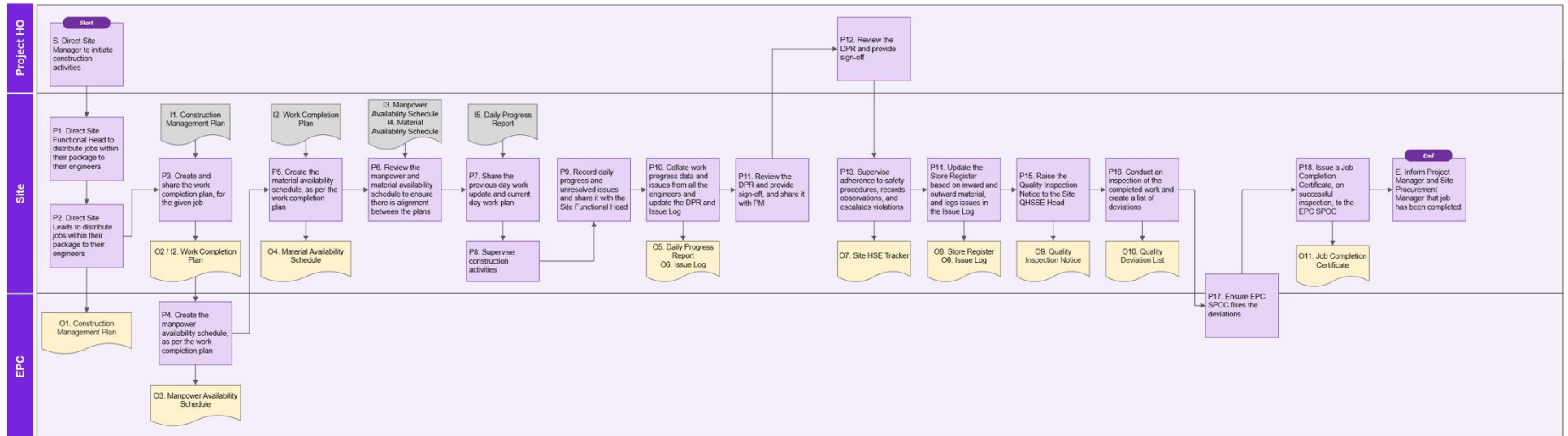
#	Key Task	Responsible	Accountable	Consulted	Informed
P8	Supervise construction activities	Site Engineer		EPC SPOC	
P9	Record daily progress and unresolved issues and share it with the Site Functional Head	Site Engineer			Site Functional Head
P10	Collate work progress data and issues from all the engineers and update the DPR and Issue Log	Site Functional Head		Site Engineer	Site Manager, Site Planner
P11	Review the DPR and provide sign-off, and share it with PM	Site Manager			Project Manager
P12	Review the DPR and provide sign-off	Project Manager			Site Manager
P13	Supervise adherence to safety procedures, records observations, and escalates violations	Site QHSSE Lead		Site Engineer	Site Manager
P14	Updates the Store Register based on inward and outward material for that day, and logs issues in the Issue Log	Site Store Manager		Site Procurement Manager	Site Manager
P15	Raise the Quality Inspection Notice to the Site QHSSE Lead	Site Functional Head			Site QHSSE Lead
P16	Conduct an inspection of the completed work and create a list of deviations	Site QHSSE Lead		Site Functional Head	EPC SPOC

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

#	Key Task	Responsible	Accountable	Consulted	Informed
P17	Ensure EPC SPOC fixes the deviations	Site Functional Head		EPC SPOC	Site QHSSE Lead
P18	Issue a Job Completion Certificate, on successful inspection, to the EPC SPOC	Site QHSSE Lead			EPC SPOC, Site Manager, Site Functional Head
E	Inform PM and Site Procurement Manager that job has been completed	Site Manager			Project Manager, Site Procurement Manager

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

3.3 – Process Map



¹ Map Glossary - DPR: Daily Progress Report

Chapter 4 – Site Progress Monitoring and Reporting

4.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline
S	– Project Manager requests Site Manager to prepare for daily site review ¹					-
P1	– Site Manager reviews the status of action items from last review's MoM and collects updates from respective Site Functional Head	I1	Previous day's MoM			-
P2	– Site Manager reviews the Daily Progress Report (DPR), Store Register and Site HSE Tracker, from the previous day	I2 I3 I4	DPR Store Register Site HSE Tracker			-
P3	– Site Manager reviews the Issue Log and discusses issues with the engineer that lodged it	I5	Issue Log			-
P4	– Site Manager prepares the agenda for the daily site review and shares it with the Project Manager ahead of the meeting			O1	Meeting Agenda	-
P5	– Daily Site Review is anchored by Site Manager, and chaired by Project Manager: – MoM action items are discussed – Daily Progress is reviewed, along with the daily work plan ² – Issues are reviewed ³ – Site HSE tracker is reviewed ⁴					-

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Controls Playbook Deck outlines the entire governance and review mechanism for project monitoring.

² Delays greater than 2 weeks are escalated to Chief Solar

³ Resolution attempt is made, and next steps are aligned with respective stakeholder, primarily service contractors and vendors. Issues are escalated to Chief Solar if attempt is unsuccessful.

⁴ Corrective and preventive actions for safety violations are finalized, along with associated penalties.

#	Activity	#	Inputs	#	Outputs	Timeline
P6	– Site Planner records the MoM and shares it with all the attendees post-meeting <i>Steps S to P6 repeat daily</i>			O2	Today's MoM	-
P7	– Project Manager informs the Site Procurement Manager when work milestone, outlined in Contractor contract, is reached					-
P8	– Site Procurement Manager fills the Contractor Scorecard ¹ basis inputs from the Site Manager and respective Site Functional Head			O3	Contractor Scorecard	1
P9	– Site Procurement Manager shares the Contractor Scorecard with the Order Manager					
P10	– Order Manager deducts any applicable penalties from the contract milestone amount and shares it with the Finance Team <i>Steps P7 to P10 repeat for every contract milestone</i>					
P11	– On project completion, Project Manager prepares a Lessons Learnt document			O4	Lessons Learnt Document	2
E	– PM shares the lessons learnt document with Chief Solar and the functional heads ²					-

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Payments are made to the contractor basis milestones. Penalties may be deducted basis performance tracked by KPIs agreed upon during contract signing.

² Functional Heads include Procurement, Engineering, Quality, HSE and other Solar PMs

4.2 – RACI

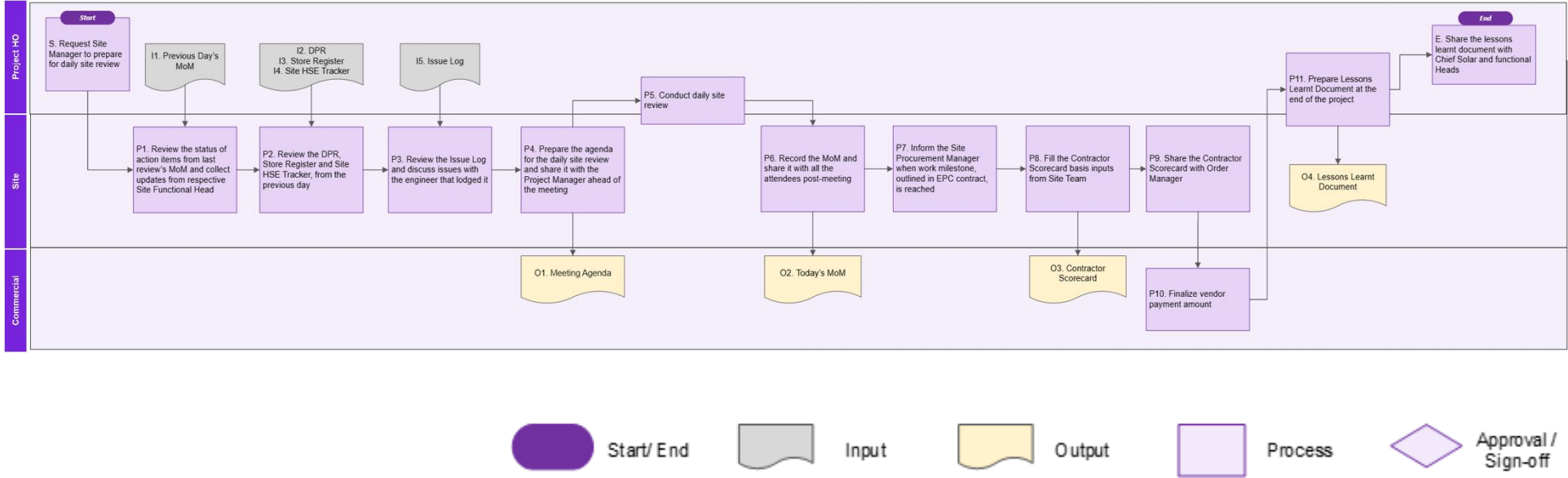
#	Key Task	Responsible	Accountable	Consulted	Informed
S	Request Site Manager to prepare for daily site review	Project Manager			Site Manager
P1	Review the status of action items from previous MoM and collect updates from Site Functional Heads	Site Manager		Site Functional Head	
P2	Review the DPR, Store Register and Site HSE Tracker, from the previous day	Site Manager		Site Functional Head, Site Store Manager, Site QHSSE Lead	
P3	Review the Issue Log and discuss issues with the engineer	Site Manager		Site Engineer	
P4	Prepare the agenda for the daily site review and share it with the Project Manager ahead of the meeting	Site Manager		Site Planner	Project Manager
P5	Conduct daily site review	Site Manager		Project Manager, Site Planner	
P6	Record the MoM	Site Planner			
P7	Inform Site Procurement Manager that work milestone in Contractor contract is reached	Project Manager			Site Procurement Manager

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

#	Key Task	Responsible	Accountable	Consulted	Informed
P8	Fill the Contractor Scorecard	Site Procurement Manager		Site Manager, Site Functional Head	
P9	Share the Contractor Scorecard with Order Manager	Site Procurement Manager			Order Manager
P10	Finalize vendor payment amount	Order Manager			Finance Team
P11	Prepare Lessons Learnt Document at the end of the project	Project Manager		Site Manager	
E	Share the lessons learnt document with Chief Solar and functional Heads	Project Manager			Chief Solar, Functional Heads

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

4.3 – Process Map



¹ Map Glossary - KPI: Key Performance Indicator

Key Performance Indicators

Metric	Definition	How to Calculate
Construction Schedule Variance <i>(calculated as a %)</i>	Variance in the actual construction schedule, with respect to the planned construction schedule.	Calculated as the difference in the actual number of days and the planned number of days for construction, divided by the number of planned days and taken as a percentage.
Manpower Availability Ratio <i>(calculated as a %)</i>	Actual manpower on site, with respect to the planned manpower.	Calculated as the actual manpower present on site divided by the planned manpower, taken as a percentage.
Construction NCR Rate <i>(calculated as a %)</i>	Number of NCRs (Non-Conformance Reports) issued per Quality Inspection.	Calculated as the number of NCRs issued divided by the number of quality inspections conducted, taken as a percentage.
Document Compliance Ratio <i>(calculated as a %)</i>	Number of valid documents submitted, with respect to the total required submissions.	Calculated as the number of valid documents submitted divided by the number of required submissions, taken as a percentage.
Material Loss Rate <i>(calculated as a %)</i>	Value of unaccountable material, with respect to the total material value handled.	Calculated as the value of material unaccounted for, divided by the total material value handled, taken as a percentage.
Near Miss Reporting Rate <i>(calculated as a number)</i>	Number of near misses reported, per worker, per month.	Calculated as the number of near misses reported in a month divided by the total workforce.

Glossary

Abbreviation	Expanded
BOCW	Building and Other Construction Works
CMP	Construction Management Plan
DPR	Daily Progress Report
EHS	Environment, Health, Safety
KPI	Key Performance Indicator
MMS	Module Mounting Structure
MOM	Minutes of Meeting
NCR	Non-Conformance Report
NTP	Notice to Proceed
PM	Project Manager
QHSSE	Quality, Health, Safety, Security, Environment
RAH	Regulatory Approvals Head
SEH	Solar Engineering Head
SM	Site Manager