

**National Mission for Clean Ganga (NMCG)
Ministry of Water Resources, River
Development & Ganga Rejuvenation,
Govt. of India**

**The development of sewage treatment
plant and associated infrastructure
under Hybrid Annuity based PPP mode
at Varanasi in the State of Uttar Pradesh**

(LoA File Number: Rd-63014/1/2017/PPP/NMCG)

**Monthly Progress Report
of
Project Engineer**

June - 2018



Executing Agency

**Uttar Pradesh Jal
Nigam,
Varanasi - 221 005**



Funding Agency

**National Mission for
Clean Ganga
MoWR, River
Development & Ganga
Rejuvenation,
New Delhi - 110002**

Mahindra
Consulting Engineers

Project Engineer

**Mahindra Consulting
Engineers Limited
Mahindra Towers, No.
17/18, Pattullous Road,
Chennai - 600 002,
Tamil Nadu, India**



Concessionaire

**Varanasi STP Project
Private Limited
6th Floor, Plot No. 19,
Film City, Sector 16 A,
Gautam Buddha Nagar,
Noida,
Uttar Pradesh - 201 301**

TABLE OF CONTENTS

1.0. INTRODUCTION	4
1.1. Project components	6
1.1.1. New construction units	6
1.1.2. Rehabilitation works	7
1.2. Executing agency	7
1.3. Implementation agency	7
1.4. Consulting services.....	7
1.5. Concessionaire.....	7
2.0. STATUS OF PROJECT	7
2.1. Physical status	8
2.1.1. Pre-execution activities	8
2.1.2. Pre-execution activities - Physical progress graph	9
2.1.3. Design detailed engineering.....	11
2.1.4. Design detailed engineering - Physical progress graph.....	15
2.1.5. Equipment procurement, logistics and receipt of equipment at site	17
2.1.6. Equipment procurement, logistics and receipt of equipment at site - Physical progress graph.....	22
2.1.7. New construction units	23
2.1.8. New construction units - Physical progress graph	31
2.1.9. Associated works.....	32
2.1.10. Associated works - Physical progress graph.....	35
2.1.11. Overall progress: 12.10%	37
2.2. Financial status	37
2.3. Important issues	37
3.0. PROJECT ENGINEER ACTIVITIES.....	39
4.0. MEETINGS.....	65
5.0. STAFF DEPLOYMENT.....	65

LIST OF ANNEXES

ANNEX - 1	67
PROJECT PROGRESS (PHYSICAL).....	67
ANNEX - 2	69
FINANCIAL STATEMENTS	69
ANNEX - 3	75
QUALITY ASSURANCE / QUALITY CONTROL.....	75
ANNEX - 4	83
PHOTOGRAPHS	83
ANNEX - 5	94
OUTWARD CORRESPONDENCE LIST OF JUNE 2018	94
ANNEX - 6	98
INWARD CORRESPONDENCE LIST OF JUNE 2018	98
ANNEX - 7	101
ADDITIONAL RESOURCE REQUIRED TO THE FOLD BASED ON CURRENT DEPLOYMENT	101

MONTHLY PROGRESS REPORT

1.0. INTRODUCTION

The GoI, recognizing that long-term rejuvenation of the river Ganga will have significant social and economic benefits on the lives of the 500 million people living along its basin, has identified cleaning of the river Ganga as one of its priorities. For this purpose, in May 2015, the GoI approved the flagship Namami Gange programme for cleaning, rejuvenation, and protection of the river Ganga. In January 2016, the GoI approved a hybrid annuity model to implement STP projects under the Namami Gange programme on a PPP basis.

Subsequently, the MoWR issued the River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016 (Ganga 2016 Order) to constitute various authorities to assist the GoI in achieving its aim of effective abatement of pollution in the river Ganga. The Ganga 2016 Order applies to all states in the catchment of the river Ganga basin, including Uttar Pradesh. The Ganga 2016 Order revised the legal status of NMCG (which was initially constituted as a registered society under the Societies Registration Act, 1860) to an authority constituted under the Environment (Protection) Act, 1986 and designated NMCG as the nodal agency for the implementation of the Ganga 2016 Order.

Rapidly increasing population, rising standards of living and exponential growth of industrialisation and urbanisation have exposed water resources, in general, and rivers, in particular, to various forms of degradation. The mighty Ganga is no exception. The deterioration in the water quality impacts the people immediately. Ganga, in some stretches, particularly during lean seasons has become unfit even for bathing. The threat of global climate change, the effect of glacial melt on Ganga flow and the impacts of infrastructural projects in the upper reaches of the river, raise issues that need a comprehensive response.

In the Ganga basin approximately 12,000 million litres per day (MLD) sewage is generated, for which presently there is a treatment capacity of only around 4,000 MLD. Approximately 3000 MLD of sewage is discharged into the mainstream of the river Ganga from the Class I & II towns located along the banks, against which treatment capacity of about 1000 MLD has been created till date.

The Uttar Pradesh Jal Nigam (Jal Nigam) is a statutory body constituted under the Uttar Pradesh Water Supply and Sewerage Act, 1975, and has the power to develop, maintain and regulate water supply and sewerage works in Uttar Pradesh. With a view to implement the Namami Gange programme and the Ganga 2016 Order, the Jal Nigam, in association with the NMCG, has decided to undertake the development of an STP with a proposed capacity of 50 MLD along with other Facilities and Associated Infrastructure at Varanasi on a PPP basis, through a hybrid annuity model. While the Jal Nigam will be the principal executing agency and bidding authority for the Project, NMCG will be responsible for making payments to the Concessionaire.

The objectives that NMCG and the UP Jal Nigam wish to achieve through the Project is mentioned in **Figure 1**.

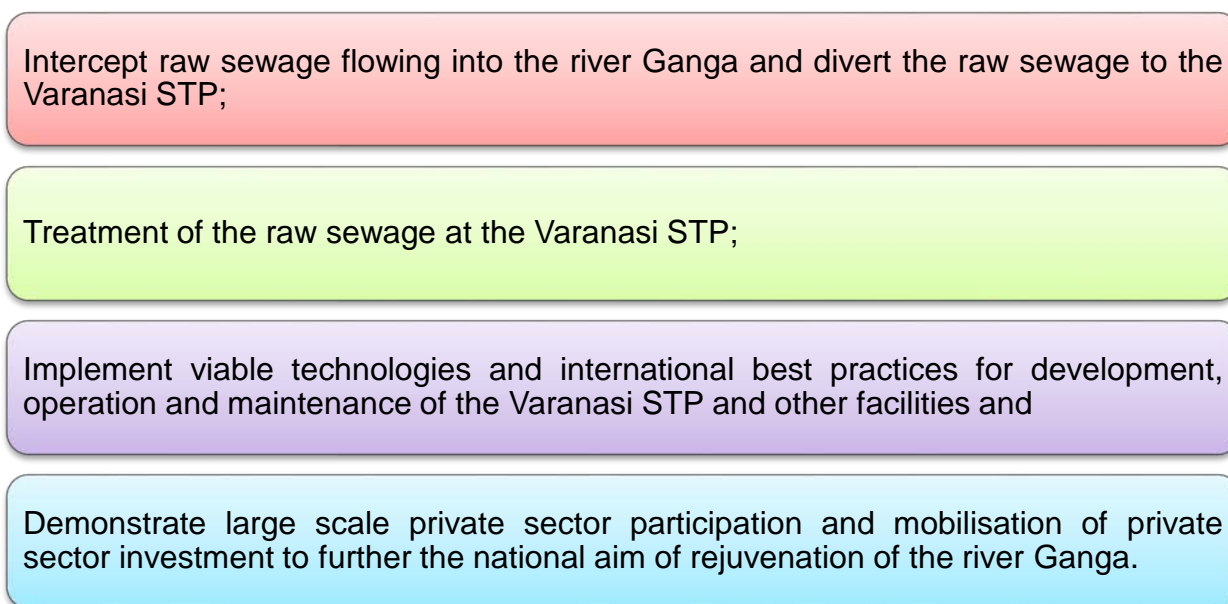


Figure 1: Objectives of NMCG and UP JAL NIGAM

Government of India, has approved the Namami Gange program as an integrated approach for effective abatement of pollution in river Ganga. As part of this and to ensure that no untreated domestic sewage flow into the river Ganga, various interventions are planned such as Interception & Diversion works and development & operation of Sewage Treatment Plants (STPs). Considering various development models in practice for the construction, operation and maintenance of Sewage Treatment Plants, Government of India has approved the Hybrid

Annuity based Public Private Partnership (PPP) mode as one of the options for the development & operation of STPs. Under this model, private investor/developer will design, build, finance, operate and transfer the asset (STP) to the Project Executing Agency/Jal Nigam/Jal Sansthan / Urban Local body at the end of the Concession Period (say 15 years). 40% of the Capital cost will be paid to the developer during construction of the STP. Balance 60% along with Operation & Maintenance (O&M) cost will be paid over the Concession Period on achievement of key performance indicators as per the contract. Entire cost of development and operation of the STPs will be 100% funded by the Government of India as central sector scheme. It is also envisaged to explore the possibility of recycle/ reuse of the treated waste water for non-potable purpose.

NMCG & UPJN appointed M/s. Mahindra Consulting Engineers Limited, Chennai as Project Engineer for this project through tendering process. Letter of Award is issued dated 5th January 2018 and agreement signed between the parties on 16th February 2018.

1.1. Project components

1.1.1. New construction units

- Inlet structure
- Grit chambers & Parshall flume
- SBR tanks
- Chlorine contact tank
- Overhead treated water tank
- Air blower room
- Belt filter press building
- Chlorination building
- Electrical building and control room
- Admin building, laboratory room
- Transformer yard, internal roads & drainage
- Treated water pump house
- Treated effluent disposal line
- Bund wall
- Staff quarters
- Approach road

1.1.2. Rehabilitation works

- Rehabilitation of Main Pumping Station (MPS)
- Construction of Weir
- Strengthening & Pipe protection of Rising main
- Construction of Control room
- Rerouting the raising main near Samne Ghat

1.2. Executing agency

- Uttar Pradesh Jal Nigam (UPJN)

1.3. Implementation agency

- Uttar Pradesh Jal Nigam (UPJN)

1.4. Consulting services

- **Project Engineer**
 - Mahindra Consulting Engineers Ltd, Chennai

1.5. Concessionaire

- Varanasi STP Project Private Limited

2.0. STATUS OF PROJECT

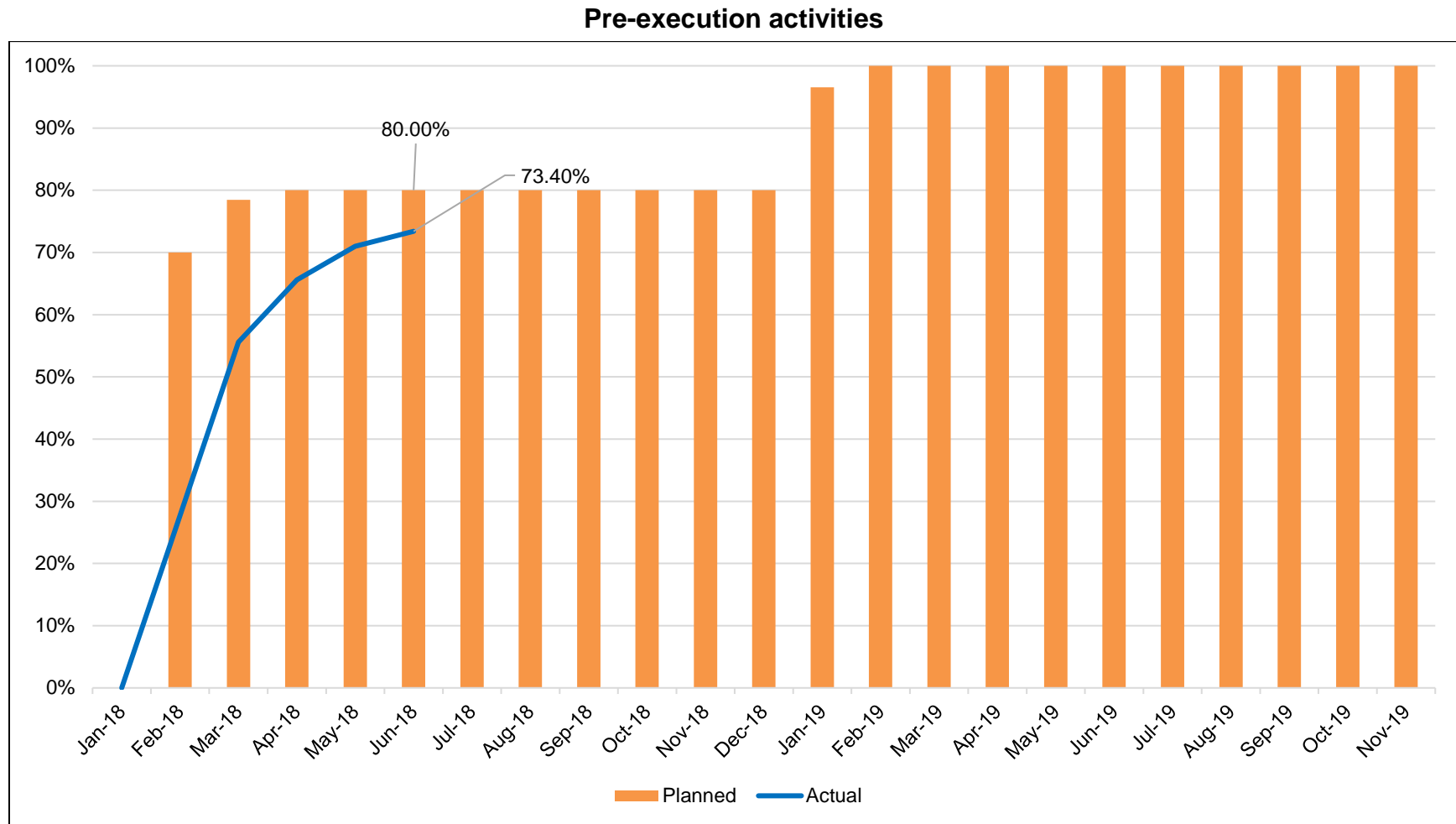
STATUS	:	CONSTRUCTION STAGE
Concessionaire Contract Agreement No.	:	SUBIN-DL DL80840374672746341531P
Name of the Concessionaire	:	Varanasi STP Project Pvt. Ltd.
Commencement date	:	19 th February 2018
Completion date (as per contract):	:	18 th November 2019

2.1. Physical status

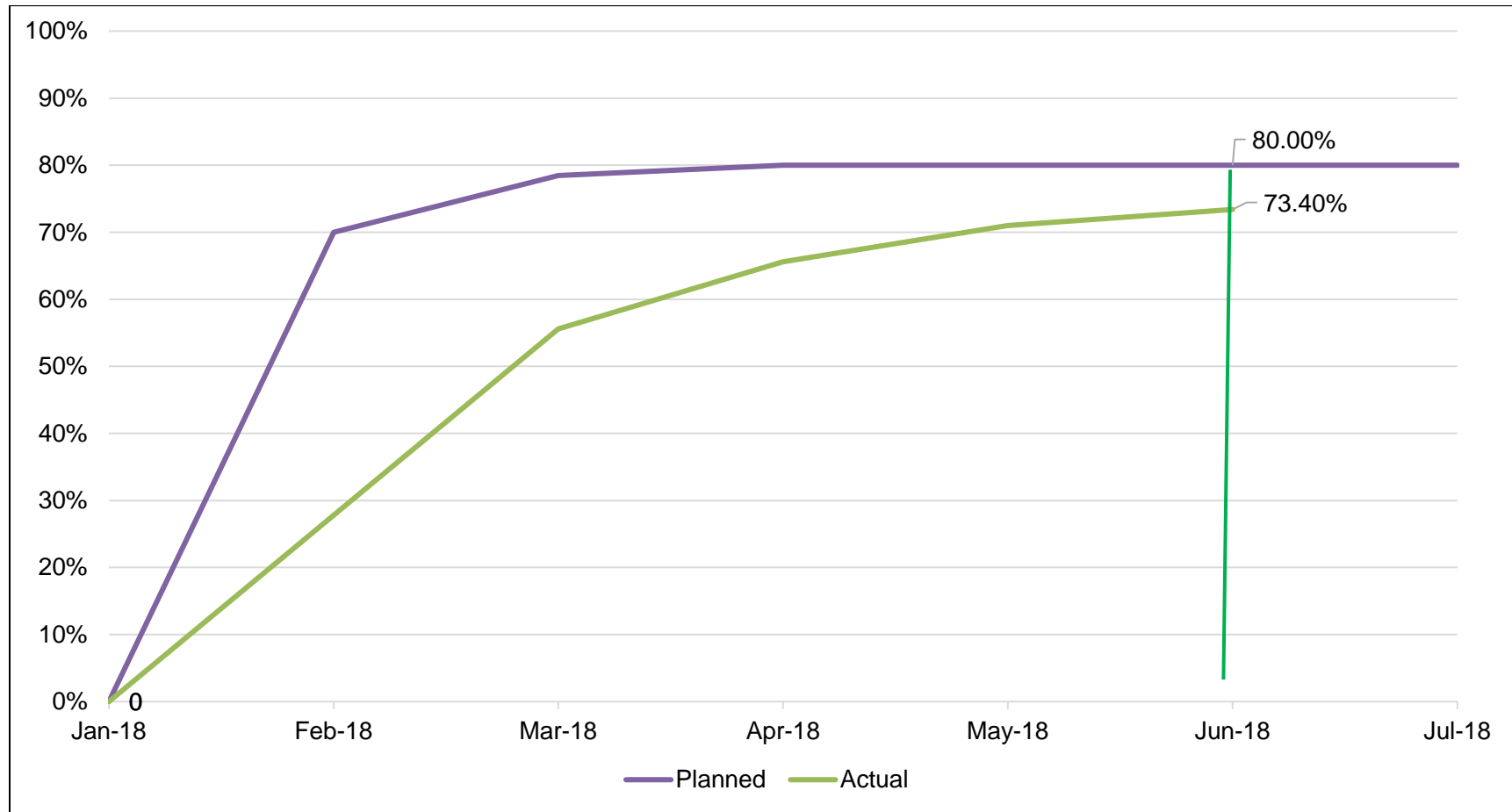
2.1.1. Pre-execution activities

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Pre-execution activities	11-Nov-17	11-Mar-18	80%	71%	2.40%	73.40%
Setting up of temporary site office	11-Nov-17	19-Feb-18	100%	75%		75%
Removal of debris & Shrubs	11-Nov-17	19-Feb-18	100%	90%	10%	100%
Borewell construction	11-Nov-17	19-Feb-18	100%	100%		100%
Other temporary execution	20-Feb-18	11-Mar-18	100%	100%		100%
Topographical / soil investigation	11-Nov-17	20-Dec-17	100%	60%	10%	70%
Condition precedent required to be satisfied by Concessionaire	12-Oct-17	19-Feb-18	100%	100%		100%
Condition precedent required to be satisfied by Jal Nigam	12-Oct-17	19-Feb-18	100%	100%		100%
Condition precedent required to be satisfied by NMCG	12-Oct-17	19-Feb-18	100%	100%		100%
Appointment of Design Consultant	12-Oct-17	9-Jan-18	100%	100%		100%
Submission & approval of Sub Contracts from UPJN	1-Feb-18	30-Jun-18	100%	70%	10%	80%

2.1.2. Pre-execution activities - Physical progress graph



Pre-execution activities upto first milestone



2.1.3. Design detailed engineering

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
PHASE-I D&E (BEP)	11-Oct-17	8-Jan-18	100%	100%		100%
Basic engineering package	11-Oct-17	8-Jan-18	100%	100%		100%
Approval (BEP)	9-Jan-18	7-Feb-18	100%	100%		100%
Phase-II D&E (Civil, Mechanical, Electrical, Inst. Drawings)	11-Nov-17	20-Dec-17	100%	60%	40%	100%
Layouts	9-Jan-18	15-May-18	100%	65.20%		65.20%
Plant layout	9-Jan-18	8-Mar-18	100%	80%		80%
Site layout	8-Mar-18	12-May-18	100%	50%		50%
Bund wall	10-Jan-18	12-Jan-18	100%	100%		100%
Inlet chamber	20-Feb-18	5-Apr-18	100%	80%		80%
Automatic / manual screens	20-Feb-18	5-Apr-18	100%	80%		80%
Grit removal chamber	20-Feb-18	5-Apr-18	100%	80%		80%
Parshall flume (I, II) and SBR distribution chamber)	20-Feb-18	5-Apr-18	100%	80%		80%
SBR basins & SBR outlet chamber	20-Feb-18	5-Apr-18	100%	100%		100%
Chlorine contact tank & treated water collection tank	20-Feb-18	5-Apr-18	100%	100%		100%
Overhead portable tank incl. tube well	20-Feb-18	15-May-18	100%			

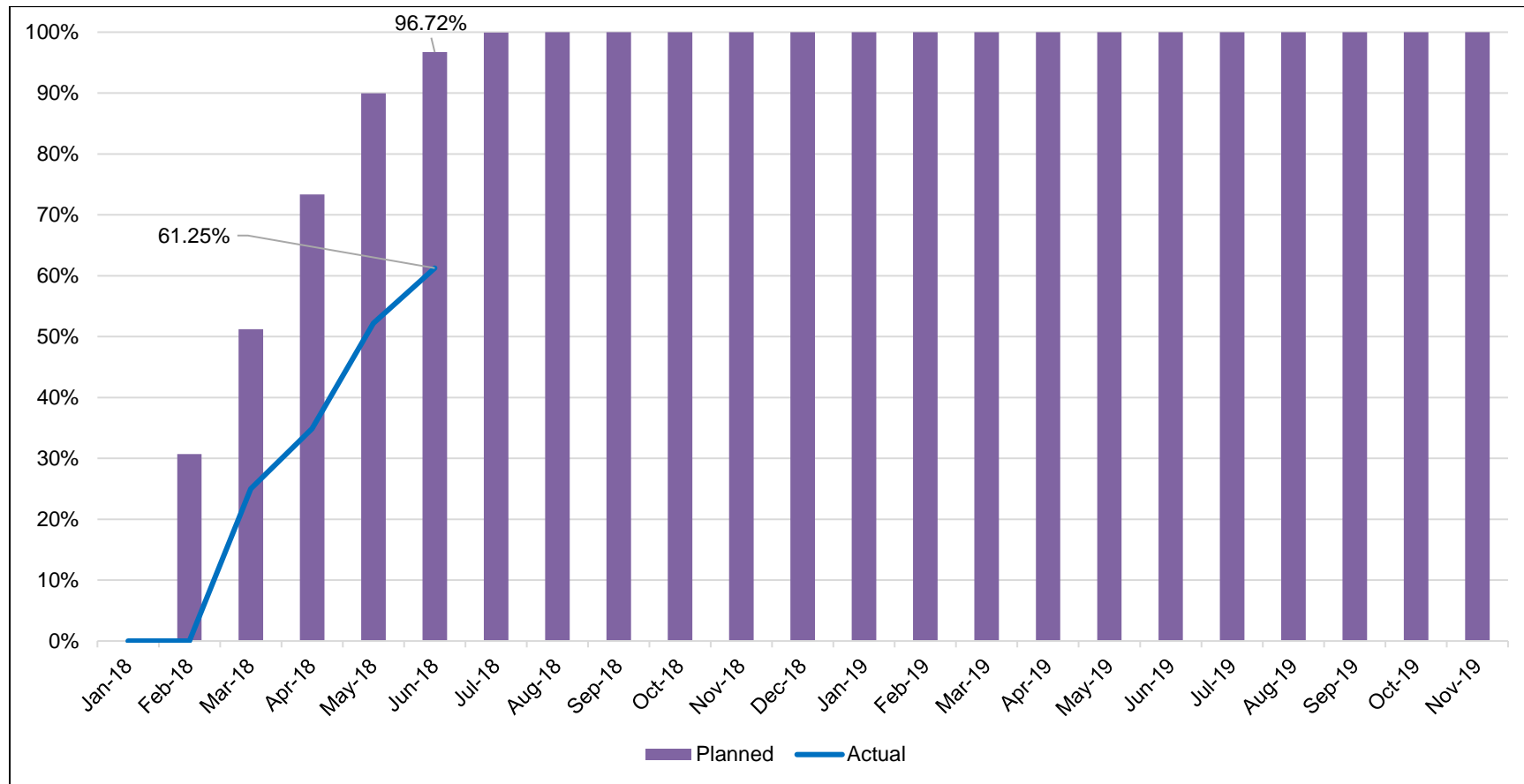
Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Foundation drawings of pumps, belt filter press & air blowers	20-Feb-18	15-May-18	100%			
Miscellaneous drawings	20-Feb-18	15-May-18	100%	10%		10%
Structural drawings submissions & approvals	20-Feb-18	15-May-18	100%	40%	10%	50%
Bund wall	20-Feb-18	5-Apr-18	100%	100%		100%
Inlet chamber	2-Mar-18	30-Apr-18	100%		75%	75%
Grit removal chamber	2-Mar-18	30-Apr-18	100%		75%	75%
Parshall flume (I, II) and SBR distribution chamber	2-Mar-18	30-Apr-18	100%		75%	75%
SBR basins & SBR outlet chamber	2-Mar-18	5-Apr-18	100%	100%		100%
Chlorine contact tank & treated water collection tank	2-Mar-18	30-Apr-18	100%	50%	25%	75%
Overhead portable tank incl. tube well	2-Mar-18	15-May-18	100%			
Foundation drawings of pumps, belt filter press & air blowers	2-Mar-18	15-May-18	100%			
Miscellaneous drawings	12-Mar-18	15-May-18	100%			
Mechanical & piping drawings submissions & approvals	11-Apr-18	25-May-18	100%	45.80%	7%	52.80%
Inlet chamber	11-Apr-18	25-May-18	100%	80%		80%
Automatic / manual screens	11-Apr-18	25-May-18	100%	80%		80%

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Grit removal chamber	11-Apr-18	25-May-18	100%	80%		80%
Parshall flume (I, II) and SBR distribution chamber	11-Apr-18	25-May-18	100%	80%		80%
SBR basins & SBR outlet Chamber	11-Apr-18	25-May-18	100%	80%		80%
Chlorine contact tank & treated water collection tank	11-Apr-18	25-May-18	100%	10%	70%	80%
Overhead portable tank incl. tube well	11-Apr-18	25-May-18	100%			
Foundation drawings of pumps, belt filter press& air blowers	11-Apr-18	25-May-18	100%			
Overall piping drawings	11-Apr-18	25-May-18	100%			
Electrical drawings submissions & approvals	11-Apr-18	14-Jul-18	76.1%	7.5%	3.8%	11.3%
Electrical load list	11-Apr-18	25-May-18	100%	50%	25%	75%
SLD	11-Apr-18	25-May-18	100%			
Cable layout plan	31-May-18	14-Jul-18	68%			
Cable layout drawing	31-May-18	14-Jul-18	68%			
Cable sizing calculations	31-May-18	14-Jul-18	68%			
Earthing size calculations	31-May-18	14-Jul-18	68%			
Cable schedule	31-May-18	14-Jul-18	68%			
Earthing layout	31-May-18	14-Jul-18	68%			
Plant lighting layout plan	31-May-18	14-Jul-18	68%			

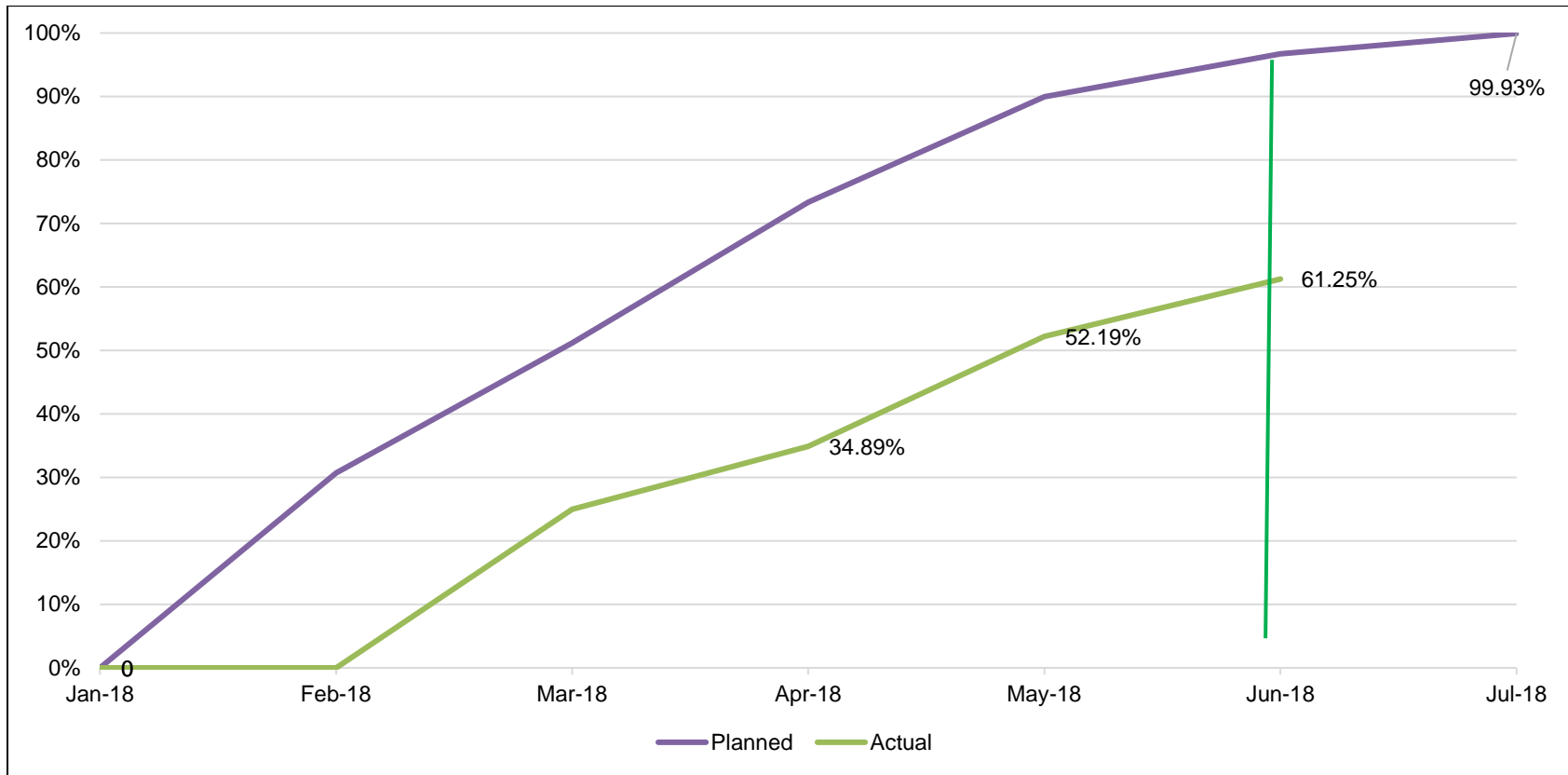
Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Miscellaneous documents & drawings	26-May-18	9-Jul-18	88.2%	3.5%	7.0%	10.5%
Design calculation - electrical components	26-May-18	4-Jul-18	90%	10%	20%	30%
Electrical control philosophy	26-May-18	4-Jul-18	90%			
Miscellaneous drawings	26-May-18	9-Jul-18	80%			
Instrumentation document submissions & approvals	1-Jun-18	20-Jul-18	65.9%			
Instrument index / alarm list	1-Jun-18	15-Jul-18	66%			
Instrument hook - up diagram	1-Jun-18	15-Jul-18	66%			
PLC - I/O list	1-Jun-18	15-Jul-18	66%			
Loop wiring diagram	1-Jun-18	15-Jul-18	66%			
Instrument cable layout plan	1-Jun-18	15-Jul-18	66%			
Instrument cable schedule/ JB wiring detail	1-Jun-18	15-Jul-18	66%			
Cause & effect diagram	1-Jun-18	15-Jul-18	66%			
Miscellaneous drawings	6-Jun-18	20-Jul-18	51.0%			
Instrumentation control & philosophy	6-Jun-18	16-Jul-18	60%			
Design SCADA	6-Jun-18	16-Jul-18	60%			
Miscellaneous drawings	10-Jul-18	20-Jul-18				

2.1.4. Design detailed engineering - Physical progress graph

Design detailed engineering - Physical progress



Design detailed engineering for first milestone



2.1.5. Equipment procurement, logistics and receipt of equipment at site

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Equipment procurement, logistics and receipt of equipment at site			6.5%	0.2%	11.8%	11.9%
Fine screen / coarse screen / belt conveyors	6-Apr-18	6-Dec-18	21.4%			
Procurement (including submission & approval of drgs / documents)	6-Apr-18	22-Oct-18	43%			
Inspection / logistics	23-Oct-18	21-Nov-18				
Receipt of equipment at site	22-Nov-18	6-Dec-18				
Grit removal mechanism	26-May-18	25-Jan-19	8.8%		5.0%	5.0%
Procurement (including submission & approval of drgs / documents)	26-May-18	11-Dec-18	18%		10%	10%
Inspection / logistics	12-Dec-18	10-Jan-19				
Receipt of equipment at site	11-Jan-19	25-Jan-19				
SBR system	26-May-18	25-Jan-19	8.8%		25.0%	25.0%
Procurement (including submission & approval of drgs / documents)	26-May-18	11-Dec-18	18%		50%	50%
Inspection / logistics	12-Dec-18	10-Jan-19				
Receipt of equipment at site	11-Jan-19	25-Jan-19				

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
SAS / RAS pumps / booster pumps / treated water pumps/ drain pumps	26-May-18	25-Jan-19	8.8%			
Procurement (including submission & approval of drgs / documents)	26-May-18	11-Dec-18	18%			
Inspection / logistics	12-Dec-18	10-Jan-19				
Receipt of equipment at site	11-Jan-19	25-Jan-19				
Air Blowers	16-May-18	15-Jan-19	11.3%	2.5%	22.5%	25.0%
Procurement (including submission & approval of drgs / documents)	16-May-18	1-Dec-18	23%	5%	45%	50%
Inspection / logistics	2-Dec-18	31-Dec-18				
Receipt of equipment at site	1-Jan-19	15-Jan-19				
Chlorination System	6-Apr-18	6-Dec-18			25.0%	25.0%
Procurement (including submission & approval of drgs / documents)	6-Apr-18	22-Oct-18			50%	50%
Inspection / logistics	23-Oct-18	21-Nov-18				
Receipt of equipment at site	22-Nov-18	6-Dec-18				
Tube well	16-May-18	15-Jan-19	11.3%			
Procurement (including submission & approval of drgs / documents)	16-May-18	1-Dec-18	23%			
Inspection / logistics	2-Dec-18	31-Dec-18				
Receipt of equipment at site	1-Jan-19	15-Jan-19				

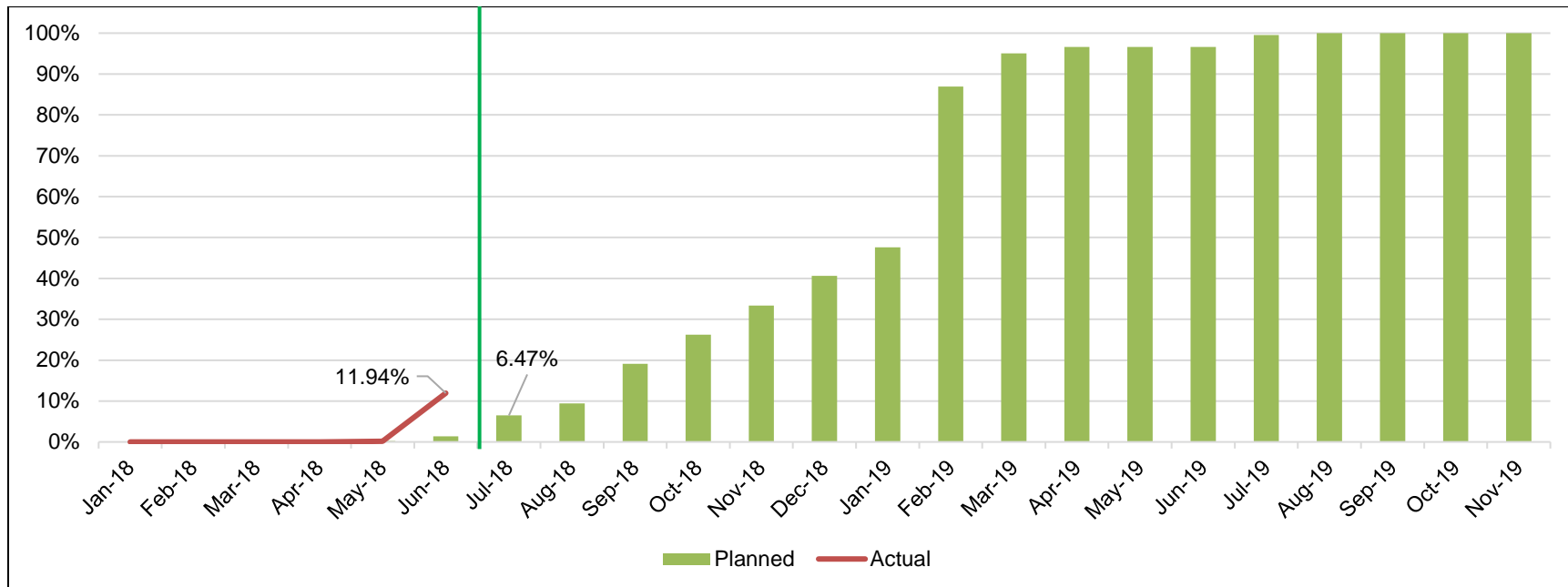
Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Piping & fittings, valves, flanges, other associated connections	26-May-18	10-Jan-19	9.5%			
Procurement (including submission & approval of drgs / documents)	26-May-18	26-Nov-18	19%			
Inspection / logistics	27-Nov-18	26-Dec-18				
Receipt of equipment at site	27-Dec-18	10-Jan-19				
Miscellaneous	11-Jan-19	24-Feb-19				
Procurement (including submission & approval of drgs / documents)	11-Jan-19	9-Feb-19				
Inspection / logistics	10-Feb-19	19-Feb-19				
Receipt of equipment at site	20-Feb-19	24-Feb-19				
VCB panel / APFC panel / transformer / DG set / PMCC / synchronizing panel	21-Jul-18	7-Mar-19			5.0%	5.0%
Procurement (including submission & approval of drgs / documents)	22-Jan-19	21-Jan-19			10%	10%
Inspection / logistics	21-Feb-19	20-Feb-19				
Receipt of equipment at site	21-Jul-18	7-Mar-19				
Power, control, lighting cables / plant lighting / cable trays / other electrical accessories	21-Jul-18	7-Mar-19				

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19				
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Analysers – TDS / Total Nitrogen / TSS / COD-BOD / pH / Total phosphorus	21-Jul-19	7-Mar-19				
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19				
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Flow meters - Magnetic flow meters / differential LT / weir type flowmeter	21-Jul-18	7-Mar-19				
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Feb-19				
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Motorized - Gate valves & butterfly valves & pressure release valves	21-Jul-18	7-Mar-19				
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19				

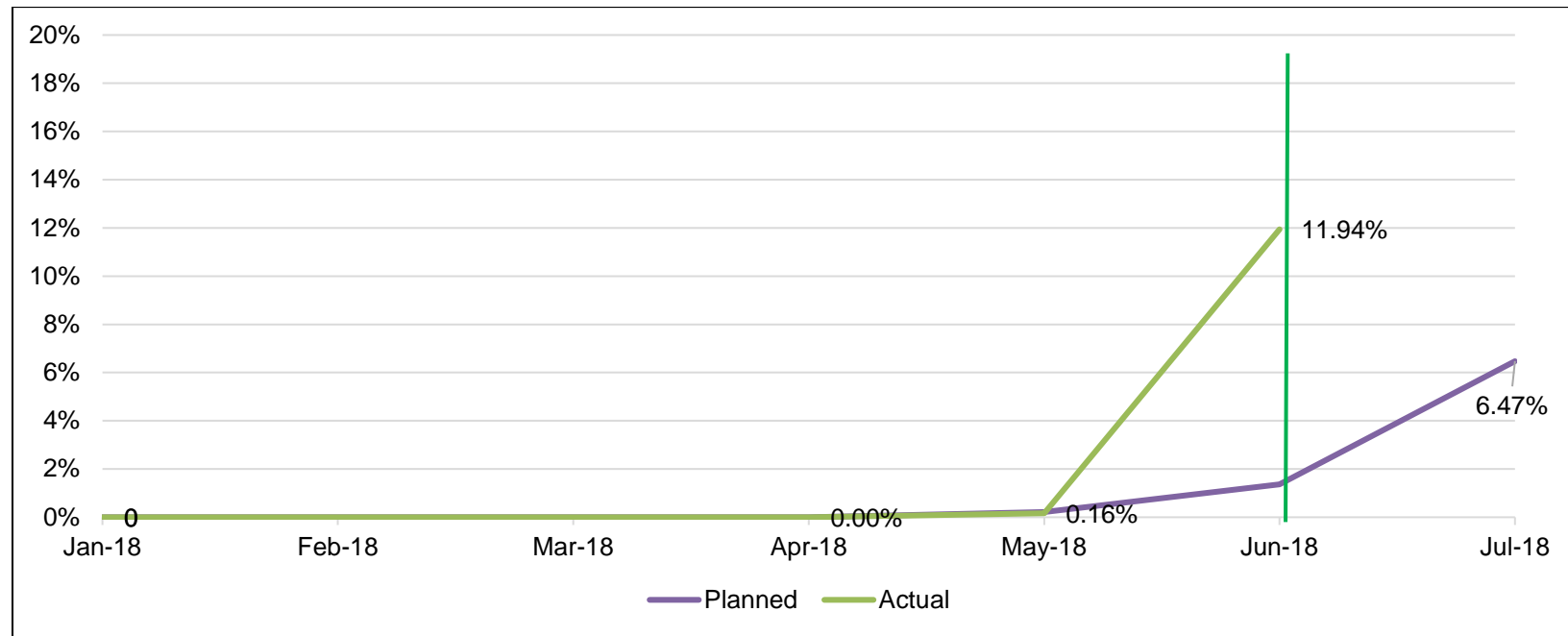
Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Transmitter-Temp./Level/ Temperature	21-Jul-18	7-Mar-19				
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19				
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Level switches	21-Jul-18	7-Mar-19				
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19				
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Pressure & Temperature Gauges	21-Jul-18	7-Mar-19				
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19				
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Other accessories - cables, cable trays, SCADA, PLC system/GPRS system	21-Jul-18	10-Jan-19				

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Procurement (including submission & approval of drgs / documents)	21-Jul-18	27-Dec-18				
Inspection / logistics	28-Dec-18	6-Jan-19				
Receipt of equipment at site	7-Jan-19	10-Jan-19				

2.1.6. Equipment procurement, logistics and receipt of equipment at site - Physical progress graph



Procurement for first milestone



2.1.7. New construction units

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Civil executions			26.5%	5.8%	4.9%	10.7%
Band wall / earthen embankment	6-Apr-18	10-Oct-18	47.4%	16.0%	6.5%	22.5%
Excavation filling & compaction	6-Apr-18	11-Jul-18	89%	32%	13%	45%

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Stone pitching	11-Jun-18	10-Sep-18	21%			
Side drain works	12-Aug-18	10-Oct-18				
Fencing works	12-Aug-18	10-Oct-18				
Inlet chamber manual & mechanical screen chamber	16-Apr-18	26-Jul-18	62.6%			
Excavation, dressing, filling G & PCC	16-Apr-18	25-Apr-18	100%			
Foundation and raft	26-Apr-18	5-May-18	100%			
Wall & super structure	6-May-18	4-Jul-18	93%			
Hydrotesting	5-Jul-18	11-Jul-18				
Misc. works	12-Jul-18	21-Jul-18				
Finishing & landscaping	22-Jul-18	26-Jul-18				
Grit chamber & outlet channel of grit chamber	21-Apr-18	8-Aug-18	59.7%			
Excavation, dressing, filling G & PCC	21-Apr-18	30-Apr-18	100%			
Foundation and raft	1-May-18	10-May-18	100%			
Wall & super structure	11-May-18	9-Jul-18	85%			
Hydrotesting	10-Jul-18	14-Jul-18				
Misc. works	15-Jul-18	24-Jul-18				
Finishing & landscaping	25-Jul-18	8-Aug-18				

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Parshall flume (I) & distribution chamber of SBR basin	21-Apr-18	16-Jul-18	88.9%			
Excavation, dressing, filling G & PCC	21-Apr-18	30-Apr-18	100%			
Foundation and raft	1-May-18	15-May-18	100%			
Wall & super structure	16-May-18	14-Jun-18	100%			
Hydrotesting	15-Jun-18	21-Jun-18	100%			
Misc. works	22-Jun-18	1-Jul-18	89%			
Finishing & landscaping	2-Jul-18	16-Jul-18				
SBR Basins & SBR outlet chamber	6-Apr-18	10-Jan-18	15.0%	5.4%	6.9%	12.3%
Excavation, dressing, filling & PCC	6-Apr-18	24-Jun-18	100%	34%	40%	74%
Foundation and raft	15-Jul-18	28-Aug-18		2%	1%	3%
Wall & super structure	29-Aug-18	16-Nov-18			2%	2%
Hydrotesting	17-Nov-18	1-Dec-18				
Misc. works	2-Dec-18	11-Dec-18				
Finishing & landscaping	12-Dec-18	10-Jan-19				
Chlorination building	1-May-18	3-Aug-18	73.3%			
Excavation, dressing, filling & PCC	1-May-18	15-May-18	100%			
Foundation and raft	16-May-18	9-Jun-18	100%			
Wall & super structure	26-May-18	24-Jun-18	100%			
Misc. works	25-Jun-18	4-Jul-18	56%			

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Finishing & landscaping	5-Jul-18	3-Aug-18				
Chlorine contact tank & treated water collection tank, treated water pumps	1-May-18	28-Aug-18	54.1%	0.5%	3.8%	4.2%
Excavation, dressing, filling & PCC	1-May-18	15-May-18	100%	3%	25%	28%
Foundation and raft	16-May-18	9-Jun-18	100%			
Wall & super structure	10-Jun-18	9-Jul-18	69%			
Hydrotesting	10-Jul-18	19-Jul-18				
Misc. works	20-Jul-18	29-Jul-18				
Finishing & landscaping	30-Jul-18	28-Aug-18				
SBR air blower room	5-Jun-18	22-Sep-18	43.7%		0.2%	0.2%
Excavation, dressing, filling G & PCC	5-Jun-18	14-Jun-18	100%		1%	1%
Foundation and raft	10-Jun-18	19-Jun-18	100%			
Wall & super structure	15-Jun-18	23-Aug-18	22%			
Misc. works	24-Aug-18	12-Sep-18				
Finishing	13-Sep-18	22-Sep-18				
HT room	5-Jun-18	8-Aug-18	62.6%		0.2%	0.2%
Excavation, dressing, filling G & PCC	5-Jun-18	6-Jun-18	100%		1%	1%
Foundation and raft	7-Jun-18	11-Jun-18	100%			

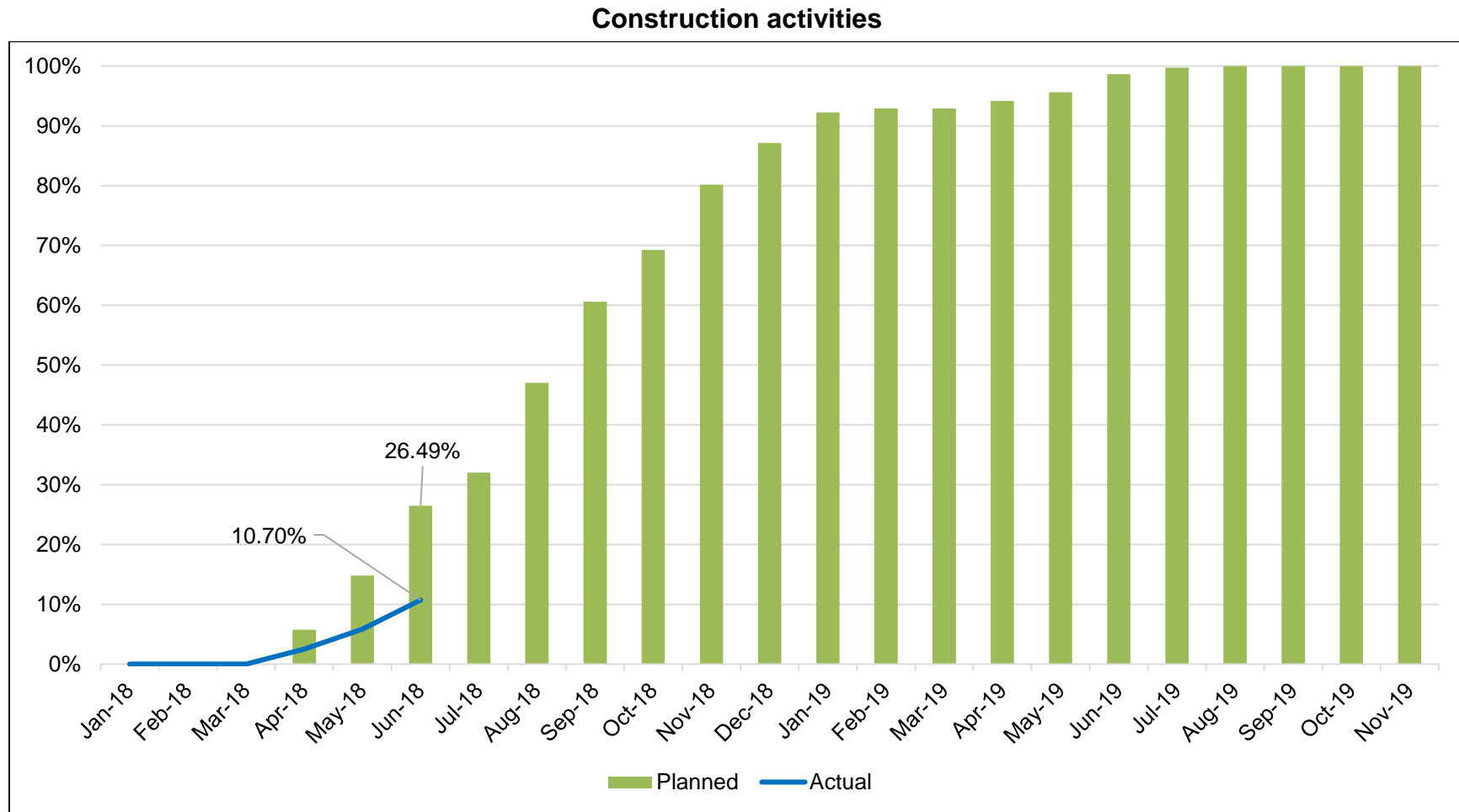
Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Wall & super structure	10-Jun-18	9-Jul-18	69%			
Misc. works	10-Jul-18	19-Jul-18				
Finishing	20-Jul-18	8-Aug-18				
MCC room	5-Jun-18	2-Oct-18	23.3%		0.15%	0.2%
Excavation, dressing, filling G & PCC	5-Jun-18	14-Jun-18	100%		1%	1%
Foundation and raft	20-Jun-18	14-Jul-18	42%			
Wall & super structure	30-Jun-18	28-Aug-18				
Misc. works	29-Aug-18	17-Sep-18				
Finishing	18-Sep-18	2-Oct-18				
Transformer yard	5-Jun-18	13-Jul-18	78.8%		0.2%	0.2%
Excavation, dressing, filling G & PCC	5-Jun-18	8-Jun-18	100%		1%	1%
Foundation and raft	9-Jun-18	18-Jun-18	100%			
Wall & super structure	14-Jun-18	28-Jun-18	100%			
Misc. works	29-Jun-18	3-Jul-18	25%			
Finishing	4-Jul-18	13-Jul-18				
DG set area	5-Jun-18	29-Jun-18	100.0%		0.0015	0.2%
Excavation, dressing, filling G & PCC	5-Jun-18	9-Jun-18	100%		1%	1%
Foundation and raft	10-Jun-18	19-Jun-18	100%			

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Misc. works	20-Jun-18	24-Jun-18	100%			
Finishing	25-Jun-18	29-Jun-18	100%			
Security room	5-Jan-19	15-Feb-19				
Excavation, dressing, filling G & PCC	5-Jan-19	6-Jan-19				
Foundation and raft	7-Jan-19	16-Jan-19				
Wall & super structure	7-Jan-19	5-Feb-19				
Misc. works	6-Feb-19	10-Feb-19				
Finishing & landscaping	11-Feb-19	15-Feb-19				
DP structure	5-Jan-19	15-Feb-19				
Excavation, dressing, filling G & PCC	5-Jan-19	11-Jan-19				
Foundation and raft	12-Jan-19	26-Jan-19				
Wall & super structure	27-Jan-19	5-Feb-19				
Misc. works	6-Feb-19	10-Feb-19				
Finishing	11-Feb-19	15-Feb-19				
Mechanical installation	7-Jun-18	9-Feb-19	4.9%			
RAS/SAS pumps for STP	26-Jan-19	9-Feb-19				
Booster pumps for STP	11-Jan-19	20-Jan-19				
BFB feed PUMP for STP	11-Jan-19	22-Jan-19				
Belt wash pumps for STP	11-Jan-19	16-Jan-19				

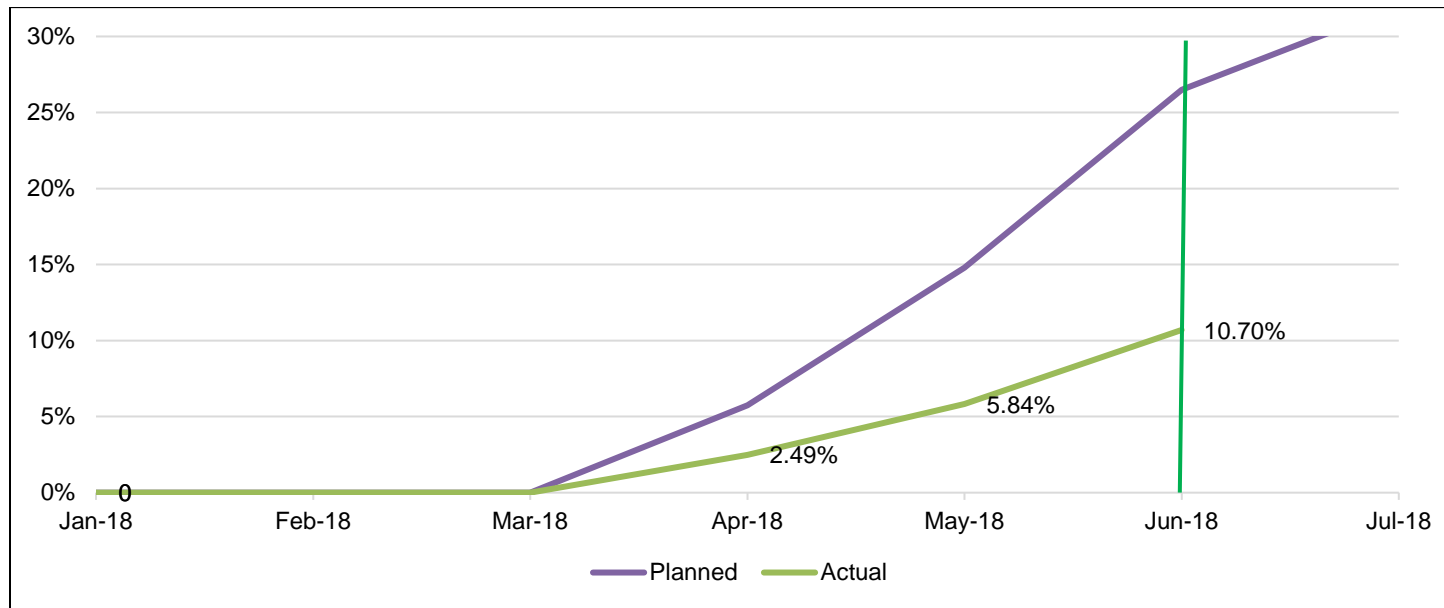
Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Filtrate pump for STP	11-Jan-19	16-Jan-19				
Treated water pump for STP	11-Jan-19	16-Jan-19				
Drained pump for STP	11-Jan-19	14-Jan-19				
PE dosing pump for STP	11-Jan-19	16-Jan-18				
Agitator for PE dosing tank	11-Jan-19	18-Jan-18				
Piping & valve for rising main 5.5 km to discharge the effluent	7-Jun-18	2-Aug-18	41%			
Other mechanical installation	23-Oct-18	9-Feb-19				
Portable water tube well	11-Jan-19	20-Jan-19				
Gates (Inlet / outlet & grit chamber) manual	12-Dec-18	4-Jan-19				
Gates inlet (motorized at inlet of each SBR unit)	12-Dec-18	23-Dec-18				
Fine screen mechanical	11-Jan-19	26-Jan-19				
Fine screen manual	17-Nov-18	27-Dec-18				
Grit removal mechanism (rake arm classified & organic pump)	25-Dec-18	8-Jan-19				
Conveyor belt for fine screen	27-Jan-19	29-Jan-19				
Whell barrow	31-Jan-19	3-Feb-19				
SBR decanter	17-Nov-18	16-Dec-18				
Fine diffusor for SBR	17-Dec-18	9-Feb-19				

Item of work	As per schedule		Physical status			
	Proposed date	Completed date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Turbo blower for SBR	30-Dec-18	1-Feb-19				
Vacuum chlorinator	27-Dec-18	10-Jan-19				
Chlorine tonner	11-Jan-19	18-Jan-19				
Belt fitter press	4-Jan-19	13-Jan-19				
Air compressor	11-Jan-19	14-Jan-19				
Air scorur blower	11-Jan-19	14-Jan-19				
Perforated pipe grid	23-Oct-18	21-Nov-18				
Electrical & instrumentation installation	11-Jan-19	31-Mar-19				
Pre-commissioning	1-Apr-19	30-Apr-19				
Trail run - COD	1-May-19	31-Jul-19				
Commissioning	1-Aug-19	18-Nov-19				

2.1.8. New construction units - Physical progress graph



Construction activities - first milestone



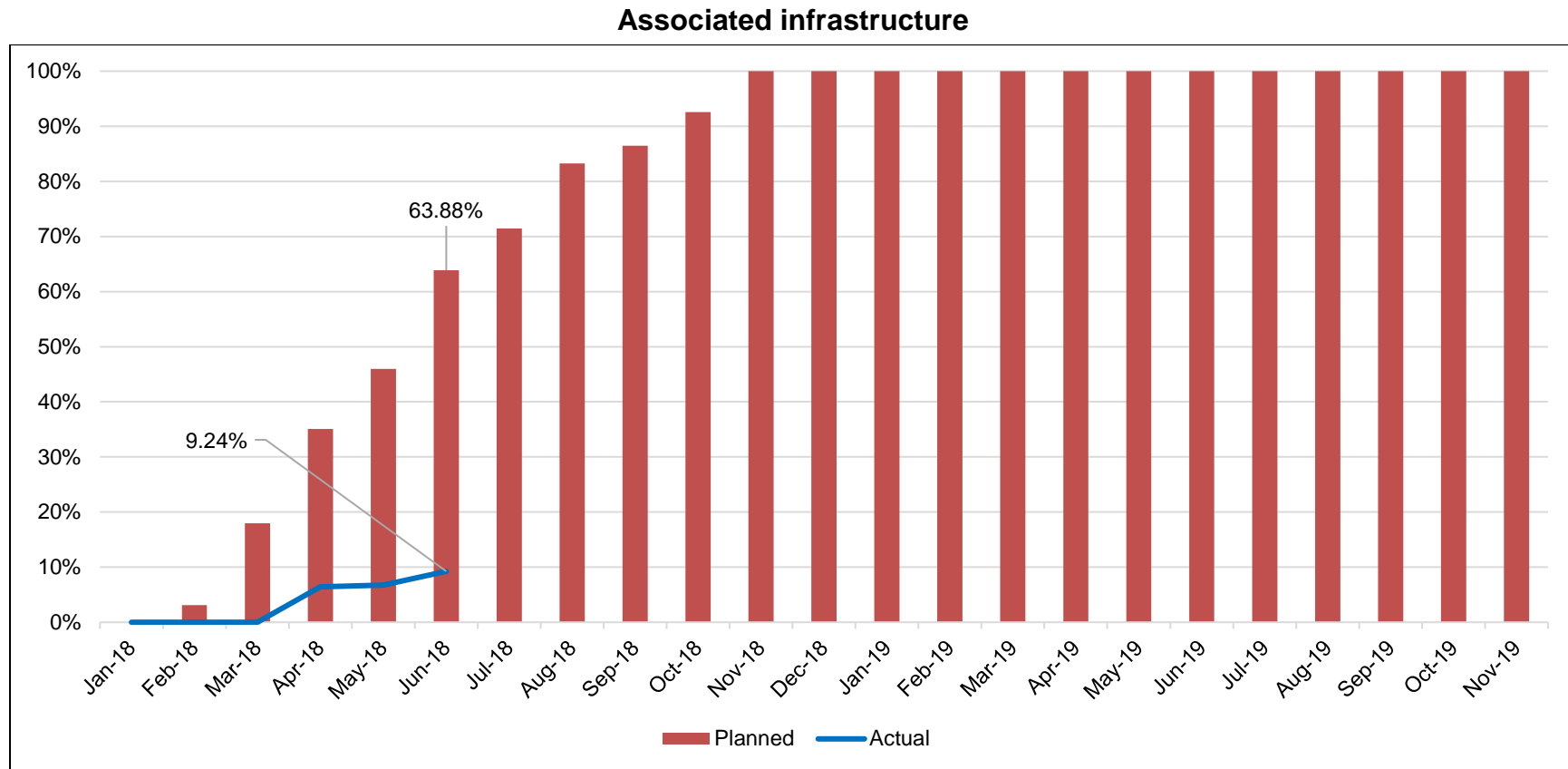
2.1.9. Associated works

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Associated works			63.88%	6.72%	2.52%	9.24%
MPS pumping station	10-Apr-18	23-Aug-18	61.41%	0.56%	7.07%	7.63%
Submission & approval of drawings / documents	10-Apr-18	15-May-18	100%		25%	25%

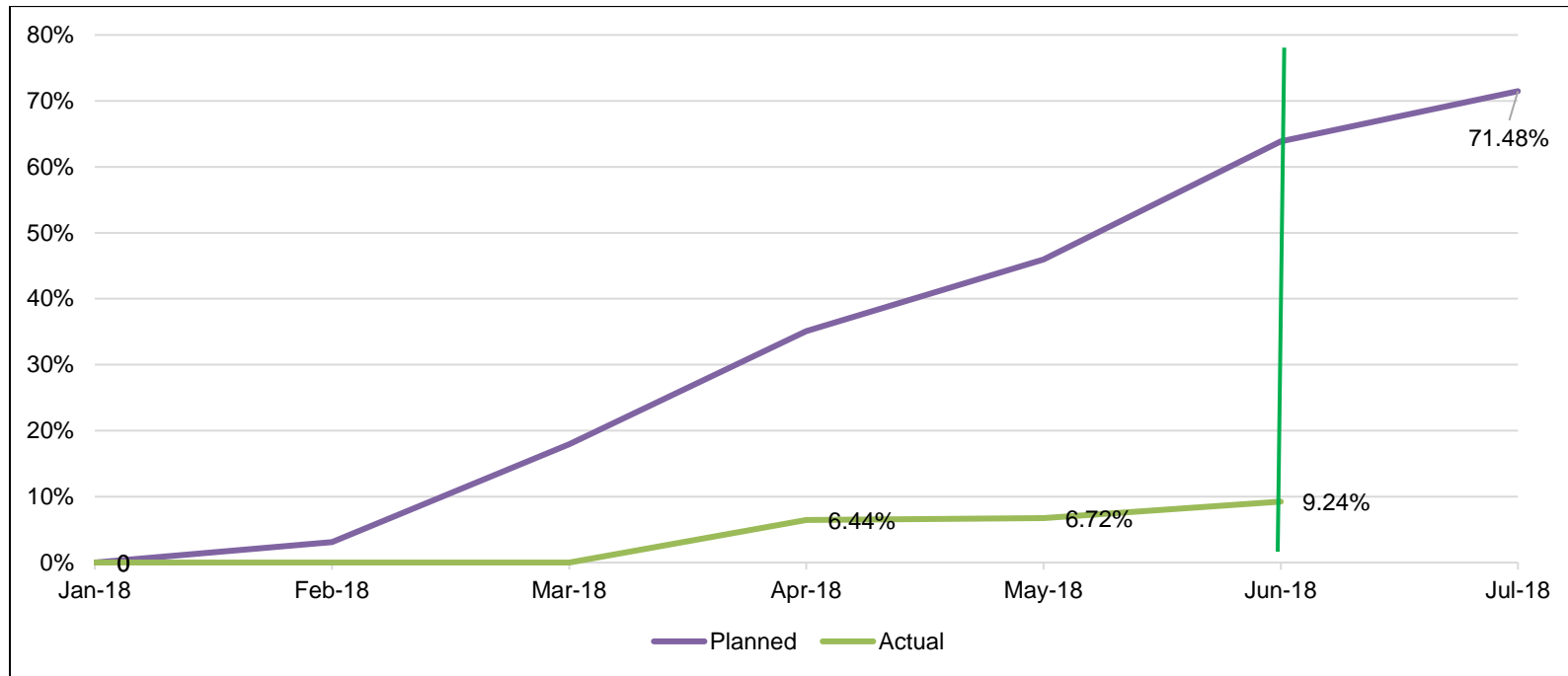
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Rehabilitation and construction of weir across Assi Nalla	20-Apr-18	18-Jun-18	100%			
Desilting of the MPS	20-Apr-18	19-May-18	100%	7%	79%	86%
Procurement & installation	20-Apr-18	17-Aug-18	60%			
Repair of equipment	20-Apr-18	18-Jun-18	100%			
Raising of height of Nalla tapping structure upto HFL	19-Jun-18	13-Jul-18	46%			
Construction of control room	19-Jun-18	8-Aug-18	22%			
Other works	8-Aug-18	23-Aug-18				
Rising main	10-Apr-18	2-Aug-18	81.90%		0.30%	0.30%
Submission & approval of drawings / documents	10-Apr-18	10-May-18	100%		10%	10%
Desilting & CCTV inspection	20-Apr-18	3-Jun-18	100%			
Strengthening and pipe protection of rising main	20-Apr-18	18-Jun-18	100%			
Shifting & laying of pipe near Samne Ghat bridge	20-Apr-18	3-Jun-18	100%			
Other repairing work	4-Jun-18	3-Jul-18	90%			
Extension of existing rising main to the inlet point at the STP site	4-Jun-18	3-Jul-18	90%			
Hydrotesting of the PSC	4-Jul-18	2-Aug-18				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Treated effluent disposal line	20-Feb-18	18-Nov-18	61.42%	8.35%	2.40%	10.75%
Survey	20-Feb-18	24-Feb-18	100%	100%		100%
Procurement	25-Feb-18	25-Apr-18	100%	14%		14%
Inspection	26-Apr-18	30-Apr-18	100%	14%		14%
Drawing submission	25-Feb-18	5-Apr-18	100%	80%		80%
Drawing approval	6-Apr-18	5-May-18	100%	50%	30%	80%
Excavation	6-May-18	2-Sep-18	46%		8%	8%
PCC	16-May-18	12-Sep-18	38%			
Pipe laying	23-May-18	19-Oct-18	26%		6.0%	6.0%
Hydrotesting	20-Oct-18	18-Nov-18				
Back filling	23-May-18	6-Jul-18	86%			

2.1.10. Associated works - Physical progress graph



Associated infrastructure - first milestone



2.1.11. Overall progress: 12.10%

2.2. Financial status

- Contract amount : Rs. 153.15 crores (Rs. 102 crores for construction + Rs. 51.15 crores for O&M)
- Expenditure
 - Mob. Adv : Rs. 10.20 crores
 - Work done - First milestone : Rs. 0.00 crores
 - Total : Rs. 10.20 crores**

2.3. Important issues

1. Action to be taken for shifting of domestic electric line on the east side of bund wall
2. Expediting the new grader as confirmed by the concessionaire
3. To increase the number of labours to ensure working in shift basis instead of working day and night with the same labour
4. Finalising the contractor for MPS renovation work
5. UPJN to provide existing structure details for MPS
6. Progress of work is lagging the schedule, it has to be expedited
7. Office setup for UPJN yet to be provided by Concessionaire
8. Expediting the design detailed engineering documents and drawings at the earliest by Concessionaire
9. Placement of work order for the bought-out items to be initiated at the earliest by Concessionaire
10. The machinery, material receipt at site, manpower to be increased to the levels mentioned in Annex 7, to achieve the targeted schedule and to compensate the delay occurred
11. Concessionaire has to commence the activities immediately which are already scheduled to start but not yet started
12. Concessionaire agreed to submit revised construction plan keeping the agreed milestone without changing by first week of July 2018

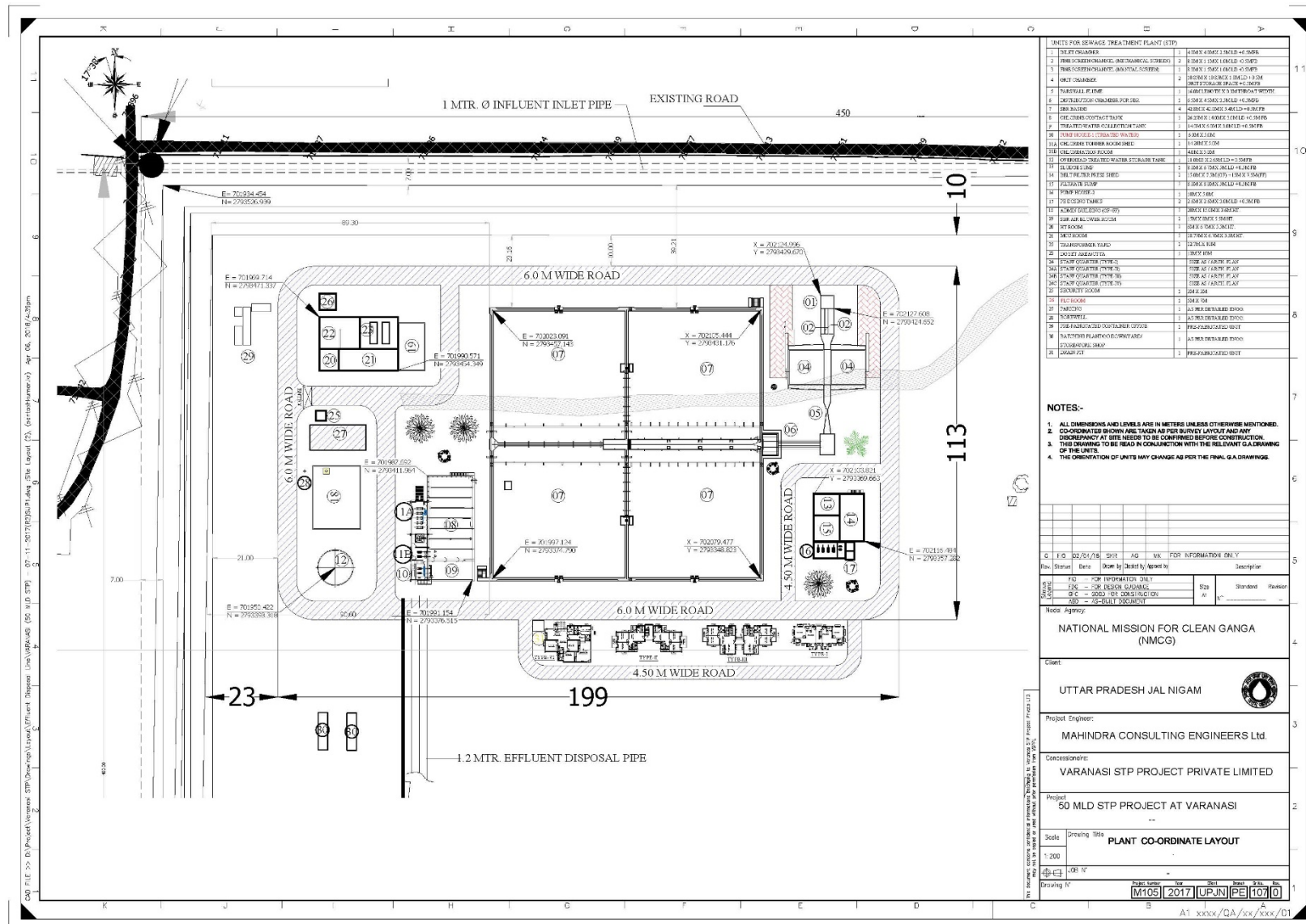


Figure 2: Development of sewage treatment plant and associated infrastructure under Hybrid Annuity based PPP mode at Varanasi

3.0. PROJECT ENGINEER ACTIVITIES

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
4.1 (i)	Review, analysis and qualifying assessment of field investigations carried out and reported by the Concessionaire in respect of topographical surveys, hydraulic & hydrologic data verification, sub- surface investigation including laboratory testing and reports of geologists wherever applicable, investigation of construction material including lab testing.	Yes	Yes	Review of construction material testing
4.1 (ii)	Review, analysis and qualifying assessment of design memorandums, specifications and construction drawings prepared and submitted by the concessionaire.	Yes	Review of construction drawings	Review of construction drawings
4.1 (iii)	Conduct kick off meetings			
4.1 (iv)	Review of the submissions of the Concessionaire such as <ul style="list-style-type: none"> a. Work schedule b. Detailed survey report c. Basic engineering d. Detailed design and drawings for <ul style="list-style-type: none"> i) Civil works <ul style="list-style-type: none"> 1. Geo-tech reports 	Yes	<ul style="list-style-type: none"> • Revised construction plan • Detailed design and drawings for blower room, 	<ul style="list-style-type: none"> • Revised construction plan • Remaining GA and structural Drawings of

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	2. Lab testing reports 3. Third Party Inspection report ii) Mechanical and Electrical Works iii) Automation and Instrumentation works iv) Any other allied works e. QA/QC plans f. Safety plan		treated water sump, effluent disposal line • QAP for decanter, blower, PLC, diffuser • Inspection of MS pipe at factory	civil structures • PSC pipe inspection • MS pipe inspection
4.1 (v)	Review of the drawings and documents	Yes	As mentioned above	As mentioned above
4.1 (vi)	Identification of milestones & verifications		Review of financial milestones	Regular review and monitoring
4.1 (vii)	To Assist NMCG for getting Statutory permissions		NA	NA
4.1 (viii)	Ensure compliance with Statutory provisions under various applicable laws		Yes	Yes
4.1 (ix)	Review, inspection, supervision and monitoring of construction works conducting tests on completion of	Yes	Day to day monitoring of	Day to day monitoring of

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	construction and issuing completion/ provisional certificate		construction activities by site personnel and Monthly inspection by Key experts	construction activities by site personnel and Monthly inspection by Key experts
4.1 (x)	Review, inspection and monitoring of O&M	NA	NA	NA
4.1 (xi)	Determining, as required under the Concession Agreement, the costs of any works or services and/or their reasonableness	NA	NA	NA
4.1 (xii)	Determining, as required under the Concession Agreement, the period or any extension thereof, for performing any duty or obligation	NA	NA	NA
4.1 (xiii)	Determining the events of default and guidance on consequent termination notices and payment as detailed in clauses 16.1 to 16.5 of the Concession Agreement	NA	NA	NA
4.1 (xiv)	Determine deficiencies in the commissioning & trial runs; prepare the final acceptance document for acceptance of commissioning & trial runs. Prepare & Issue Commercial Operation certificate through Uttar Pradesh Jal Nigam	NA	NA	NA

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
4.1 (xv)	Any other matter which is not specified in ((vi), (vii), or (viii) above and which creates an obligation or liability on the Employer /NMCG beyond the provisions of the Concession Agreement	NA	NA	NA
4.1 (xvi)	The Project Engineer shall submit regular periodic reports, as specified in the Concession Agreement to Uttar Pradesh Jal Nigam and NMCG, in respect of its duties and functions under the Concession Agreement		Monthly progress report	Preparation and review of monthly progress report
4.1 (xvii)	The Project Engineer shall aid and advise the Employer on any proposal for variation under Article 20 of the Concession Agreement	NA	NA	NA
4.1 (xviii)	Assisting the Parties in resolution of Disputes	NA	NA	NA
4.1 (xix)	Assisting the employer in the fulfilment of Hand back requirements as detailed in clause 19.3 of the Concession Agreement		NA	NA
4.1 (xx)	Undertaking all other duties and functions in accordance with this agreement	As mentioned above	As mentioned above	As mentioned above
4.2	The Project Engineer shall discharge its duties in an efficient manner, consistent with the highest standards of	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	professionalism and Good Industry Practice			
4.3(i)	The Project Engineer must function in a manner to assist and equip the employer to ascertain that the Concessionaire shall operate and maintain the Facilities and the Associated Infrastructure in a manner that: Is in compliance with the Technical Specifications, Applicable Laws, Applicable Permits and Good Industry Practice; Results in the Facilities and the Associated Infrastructure achieving the KPIs as detailed in schedule 10 of the Concession Agreement and certify within 7 days the KPI adherence Report as per clause 8.12 of the Concession Agreement;	Yes	Yes	Yes
4.3(ii)	Ensures that the Varanasi STP are capable of treating Sewage up to the Design Capacity on a daily basis;	Yes	Yes	Yes
4.3(iii)	Ensures efficient treatment of Sewage and handling and disposal of STP By- Products and the Treated Effluent	NA	NA	NA
4.3(iv)	STPs are safe and reliable, subject to normal wear and tear of the Facilities and the Associated Infrastructure;	NA	NA	NA

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
4.3(v)	Is in compliance with the technology license agreement executed by the Concessionaire for the technology, processes, know-how and systems used or incorporated into the Facilities and/or the Associated Infrastructure	Yes	NA	NA
4.3(vi)	Maintains the safety and security of personnel, material and property at the Site, in accordance with the approved EHS Plan, Applicable Laws and Applicable Permits; and	Yes	Yes	Yes
4.3(vii)	Ensures that all waste materials and hazardous substances are stored and/or disposed in accordance with the EHS Plan, Applicable Laws and Applicable Permits.	Yes	Yes	Yes
4.4	Overall, The Project Engineer shall assist the Uttar Pradesh Jal Nigam in supervising the construction, rehabilitation, operation and maintenance of the Facilities and the Associated Infrastructure and shall work closely with the Uttar Pradesh Jal Nigam and NMCG to monitor compliance with the KPIs.	Yes	Yes	Yes
5.1	During the Development Period, the Project Engineer shall undertake a detailed review of the basic engineering Designs, furnished by the Concessionaire along with supporting data, including the geo-technical and	Yes	Review of construction drawings submitted by	Review of construction drawings submitted by

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	hydrological investigations, characteristics of materials from borrow areas and quarry sites, topographical surveys and Sewage Flow Analysis. The Project Engineer shall complete such review and send its comments/observations to the NMCG/Name of the Employer (i.e. State Institution) and the Concessionaire within 10 (ten) days of receipt of such Drawings. In particular, such comments shall specify the conformity or otherwise of such Drawings with the Scope of the Project and Specifications and Standards		concessionaire	concessionaire
5.2	The Project Engineer shall review and assist the (Name of the Employer) in approval of the submissions by the concessionaire relating to the “ design and Construction Plan ” so as to confirm to the scope as per Schedule 1 of the Concession Agreement.	Yes	Yes	Yes
5.3	The basic engineering drawings in the above case shall mean the designs and documents to be submitted by the Concessionaire and approved by the Uttar Pradesh Jal Nigam as a Condition Precedent and shall include but not limited to:	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	a) Conduct Kick off meeting, Scrutiny of contractors submittals b) Process description, process calculations and hydraulic calculations; c) List of design codes and standards; d) Master drawing schedule; e) Drainage design; f) STP Facilities layout; g) Process flow diagram; h) Hydraulic flow diagram; i) Mass balance diagram; j) Process and instrumentation diagram; k) Single line diagram; l) Electrical load list; and m) General arrangement diagrams of all units of Facilities and Associated Infrastructure			
5.4	The Project Engineer shall review any modified Drawings or supporting Documents sent to it by the Concessionaire and furnish its comments within 10 (ten) days of receiving such Drawings or Documents.	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
5.5	The Project Engineer shall review the detailed design, construction methodology, quality assurance procedures and the procurement, engineering and construction time schedule sent to it by the Concessionaire and furnish its comments within 10 (ten) days of receipt thereof.	Yes	Yes	Yes
5.6	Upon reference by the NMCG/Uttar Pradesh Jal Nigam, the Project Engineer shall review and; comment on the EPC Contract or any other contract for construction, operation and maintenance of the Project, and furnish its comments within 10 (ten) days from receipt of such reference from the NMCG/Uttar Pradesh Jal Nigam.	NA	NA	NA
6.1	In respect of the Designs Drawing and Documents received by the Project Engineer for its review and comments during the Construction Period, the provisions of Paragraph 4 shall also apply, mutatis mutandis	Yes	Yes	Yes
6.2	The Project Engineer shall review, and assist the Uttar Pradesh Jal Nigam in reviewing the submissions by the concessionaire, the Construction plan as defined in clause 7.3 of the Concession Agreement including Phase 1 and Phase II drawings, as well as the 'As Built' drawings on	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	completion and EHS plans as defined in clause 7.4 of the Concession Agreement			
6.3	The Project Engineer shall assist the Uttar Pradesh Jal Nigam submit their comments on effectiveness or otherwise of the Work plan submitted for meeting the specified payment milestones and completion of the work on or before the scheduled construction completion date	Yes	Yes	Yes
6.4	The Project Engineer shall review, in particular, the submissions by the Concessionaire as per Schedule 1 of the Concession Agreement, and assist Uttar Pradesh Jal Nigam in assessing the effectiveness them	Yes	Yes	Yes
6.5	The Project Engineer shall review the monthly progress report furnished by the Concessionaire and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of receipt of such report	Yes	Submitted by the concessionaire only on 5 th of July. However, the report prepared by Project Engineer	Yes
6.6	The Project Engineer shall inspect the Construction Works and the Project as and when necessary, and submit a	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	report of such inspection (the "Inspection Report"), preferably after receipt of the monthly progress report from the Concessionaire, but before the 20th (twentieth) day of each month in any case. The report shall contain, an overview of the status, progress, quality and safety of construction, including the work methodology adopted, the materials used and their sources, and conformity of Construction Works with the Scope of the Project and the Specifications and Standards. In a separate section of the Inspection Report, the Project Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in the construction of the Project. The Project Engineer shall send a copy of its Inspection Report to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 3 (three) days of the inspection			
6.7	However serious lapses, defects and/or deficiencies shall be reported to the Uttar Pradesh Jal Nigam/NMCG immediately without waiting for the monthly progress submissions as mentioned in the previous paragraph	Yes	Yes	Yes
6.8	For determining that the Construction Works conform to	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	Specifications and Standards, the Project Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests on a sample basis, to be specified by the Project Engineer in accordance with approved norms/Good Industry Practice for quality assurance. The Project Engineer shall issue necessary directions to the Concessionaire for ensuring that the tests are conducted in a fair and efficient manner, and shall monitor and review the results thereof			
6.9	The timing of tests referred to in Paragraph 6.8, and the criteria for acceptance/ rejection of their results shall be determined by the Project Engineer in accordance with the norms /rules and Good Industry Practice. The tests shall be undertaken on a random sample basis and shall be in addition to, and independent of, the tests that may be carried out by the Concessionaire for its own quality assurance in accordance with Good Industry Practice	Yes	Yes	Yes
6.10	In the event that the Concessionaire carries out any remedial works for removal or rectification of any defects or deficiencies, the Project Engineer shall require the	NA	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	Concessionaire to carry out, or cause to be carried out, tests to determine that such remedial works have brought the Construction Works into conformity with the Specifications and Standards, and the provisions of this Paragraph 5 shall apply to such tests			
6.11	In the event that the Concessionaire fails to achieve any of the Project Milestones, the Project Engineer shall undertake a review of the progress of construction and identify potential delays, if any. If the Project Engineer identifies that completion of the Project is not feasible within the time specified in the Concession Agreement, it shall require the Concessionaire to indicate within 15 (fifteen) days the steps proposed to be taken to expedite progress, and the period within which COD shall be achieved. Upon receipt of a report from the Concessionaire, the Project Engineer shall review the same and send its comments to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire forthwith.	Yes	Yes	Yes
6.12	If at any time during the construction period, the Project Engineer determines that the Concessionaire has not	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	made adequate arrangements for the safety of workers and common public in the zone of construction or that any work is being carried out in a manner that threatens the safety of the workers and the common public, it shall make a recommendation to the NMCG/ Uttar Pradesh Jal Nigam forthwith, identifying the whole or part of the Construction Works that should be suspended for ensuring safety in respect thereof.			
6.13	In the event that the Concessionaire carries out any remedial measures to secure the safety of suspended works and common public, it may, by notice in writing, require the Project Engineer to inspect such works, and within 3 (three) days of receiving such notice, the Project Engineer shall inspect the suspended works and make a report to the NMCG/ Uttar Pradesh Jal Nigam forthwith, recommending whether or not such suspension may be revoked by the NMCG/ Uttar Pradesh Jal Nigam.	NA	NA	
6.14	If suspension of Construction Works is for reasons not attributable to the Concessionaire, the Project Engineer shall determine the extension of dates set forth in the	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	project completion schedule, to which the Concessionaire is reasonably entitled, and shall notify the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire of the same			
6.15	Upon reference from the NMCG/ Uttar Pradesh Jal Nigam, the Project Engineer shall make a fair and reasonable assessment of the costs of providing information, works and services and certify the reasonableness of such costs for payment by the NMCG/ Uttar Pradesh Jal Nigam to the Concessionaire	NA	NA	
6.16	The Project Engineer shall aid and advise the Concessionaire in preparing the Operation & Maintenance Manual	NA	NA	
6.17	Upon reference from the NMCG/ Uttar Pradesh Jal Nigam the Project Engineer shall undertake the assessment of cost of civil works, as per applicable schedule of rates, for the reduction of Scope of work if any as per Article 20.	NA	NA	
6.18	The Project Engineer shall review the construction progress as per payment milestones proposed by the concessionaire and provide necessary recommendation/s to Uttar Pradesh Jal Nigam for issuance of 'Milestone	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	Construction Certificates'			
6.19	The Project Engineer shall support the employer in ensuring that the provisions specified in Clause 7, of the Concession Agreement including those for liquidated damages and Bonus, are being complied with	NA	NA	
6.20	On completion of construction and at behest of Employer, the Project Engineer may review the work done as per 'as built' drawings and identify defects and suggest changes as per clause 7.13(v) of the Concession Agreement	NA	NA	
6.21	Similarly, the Project Engineer may inspect the trial process and may point out the defects and cause changes or retrial of the process as per clause 7.14(d) of the Concession Agreement	NA	NA	
7.1	In respect of the Designs, Drawings, and Documents received by the Project Engineer for its review and comments during the Operation Period, the provisions of Paragraph 4 shall apply, mutatis mutandis	NA	NA	
7.2	The Project Engineer shall review the O&M Manual (Clause 8.2) and the Scheduled Maintenance Programme submitted by the concessionaire and provide its recommendations on the same, including suggestions for	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	change, if any. The O&M Manual shall cover: <ul style="list-style-type: none"> a) O&M Procedures; b) O&M Plan; c) Provision of Spare Parts; d) Sampling and Testing Methodologies; e) Storage and control of Inventory; f) Arrangements for data security and Integrity; g) Procedures for recording and disposal of complaints; h) Operational Contingencies Plans; i) Human Resources Plans; j) EHS Plans; k) Emergency procedures; l) Management of Assets Plans. And m) Annual Scheduled Maintenance Programme. 			
7.3	The Project Engineer shall review the annual Maintenance Program furnished by the Concessionaire and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 10 (ten) days of receipt of	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	the Maintenance Program			
7.4	The Project Engineer shall review the reports generated from online monitoring systems to assess adherence to KPIs and submit the monthly KPI Adherence Report to Uttar Pradesh Jal Nigam	NA	NA	
7.5	The Project Engineer shall verify the daily reports submitted by the concessionaire regarding the volume of sewage and its quality re influent standards and monitor and record the same on regular basis	NA	NA	
7.6	The Project Engineer shall monitor, review and advise the Uttar Pradesh Jal Nigam on the reports submitted by the concessionaire as per clause 8.8(b)(iii) (A) to (G) of the Concession Agreement	NA	NA	
7.7	The Project Engineer shall regularly verify the report submitted by the concessionaire on the tests conducted at the Inlet Point, the Outlet Point or at any other point at the Varanasi STP for the Digested Sludge. Separately, the Project Engineer shall also have the right to take random samples of the incoming Sewage, the Digested Sludge and the Treated Effluent at any time during the O&M Period to test compliance with the Influent Standards and the	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	Discharge Standards.			
7.8	The Project Engineer shall review the monthly status report furnished by the Concessionaire (as required under clause 812(c) of the Concession Agreement) and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of receipt of such report	NA	NA	
7.9	The Project Engineer shall inspect the Project once every month, preferably after receipt of the monthly status report from the Concessionaire, but before the 20th (twentieth) day of each month in any case, and make out an O&M Inspection Report setting forth an overview of the status, quality and safety of O&M including its conformity with the Maintenance Requirements and Safety Requirements. In a separate section of the O&M Inspection Report, the Project Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in O&M of the Project. The Project Engineer shall send a copy of its O&M Inspection Report to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of the	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	inspection			
7.10	The Project Engineer may inspect the project more than once in a month, if any lapses, defects or deficiencies require such inspections.	NA	NA	
7.11	The Project Engineer shall in its O&M Inspection Report specify the tests, if any, that the Concessionaire shall carry out, or cause to be carried out, for the purpose of determining that the project is in conformity with the Maintenance Requirements. It shall monitor and review the results of such tests and the remedial measures, if any, taken by the Concessionaire in this behalf.	NA	NA	
7.12	The Project Engineer shall determine if any delay has occurred in completion of repair or remedial works in accordance with the Concession Agreement, and shall also determine the Damages, if any, payable by the Concessionaire to the NMCG/ Uttar Pradesh Jal Nigam for such delay.	NA	NA	
7.13	The Project Engineer shall monitor and review the curing of defects and deficiencies by the Concessionaire.	NA	NA	
7.14	In the event that the Concessionaire notifies the Project	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	Engineer of any modifications that it proposes to make to the project, the Project Engineer shall review the same and send its comments to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 15 (fifteen) days of receiving the proposal.			
7.15	The Project Engineer shall undertake sewage flow sampling, as and when required by the NMCG/ Uttar Pradesh Jal Nigam, under and in accordance with the provisions of this agreement	NA	NA	
7.16	The Project Engineer shall review and report to the employer on all the reports (Daily, Monthly, Quarterly and Annual), including monthly Environmental Monitoring Reports as detailed in Schedule 11(Part G) of the Concession Agreement.	NA	NA	
7.17	The Project Engineer shall provide necessary training/capacity building to the operators/technicians of the STP, as and when required, so as to address the gap in skill sets of the manpower deployed by the Concessionaire	NA	NA	
9.1	The Project Engineer shall determine the costs, and/or their reasonableness, that are required to be determined	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	by it under the Concession Agreement			
9.2	The Project Engineer shall determine the period, or any extension thereof, that is required to be determined by it under the Concession Agreement	NA	NA	
10.1	When called upon by either Party in the event of any Dispute, the Project Engineer shall mediate and assist the Parties in arriving at an amicable settlement	NA	NA	
10.2	In the event of any disagreement between the Parties regarding the meaning, scope and nature of Good Industry Practice, as set forth in any provision of the Concession Agreement, the Project Engineer shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature	NA	NA	
11.0	As and when requested by NMCG/ Uttar Pradesh Jal Nigam, the Project Engineer shall provide its opinion and assessment on the events related to Emergency, Change in Law, Force Majure, Minor or total Casualties, Variation and unforeseen Site conditions etc	NA	NA	
12.1	The Project Engineer shall notify its programme of	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	inspection to the NMCG/ Uttar Pradesh Jal Nigam and to the Concessionaire, who may, in their discretion, depute their respective representatives to be present during the inspection.			
12.2	A copy of all communications, comments, instructions, Drawings or Documents sent by the Project Engineer to the Concessionaire pursuant to this TOR, and a copy of all the test results with comments of the Project Engineer thereon shall be furnished to the NMCG/ Uttar Pradesh Jal Nigam forthwith.	Yes	Yes	Yes
12.3	The Project Engineer shall retain at least one copy each of all Drawings and Documents received by it, including 'as-built' Drawings, and keep them in its safe custody.	Yes	Yes	Yes
12.4	Upon completion of its assignment hereunder, the Project Engineer shall duly classify and list all Drawings, Documents, results of tests and other relevant records, and hand them over to the NMCG/ Uttar Pradesh Jal Nigam or such other person as the NMCG/ Uttar Pradesh Jal Nigam may specify, and obtain written receipt thereof. Two copies of the said documents shall also be furnished in their	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	editable digital format or in such other medium or manner as may be acceptable to the NMCG/Uttar Pradesh Jal Nigam			
12.5	Wherever no period has been specified for delivery of services by the Project Engineer, the Project Engineer shall act with the efficiency and urgency necessary for discharging its functions in accordance with Good Industry Practice.	Yes	Yes	Yes
12.6	Project Engineers shall be expected to fully comply with all the provisions of the "Terms of Reference", and shall be fully responsible for supervising the Design, Construction and maintenance and operation of the Facility in accordance with the provisions of the Concession Agreement and other schedules. Any failure of the Project Engineer in notifying to the Employer and the Concessionaire on non-compliance of the provisions of the Concession Agreement and other schedules by the Concessionaire, non-adherence to the provision of this ToR and non-adherence to the time schedule prescribed under this ToR shall amount to non-performance.	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
12.7	The project Engineer shall develop & maintain a project website and with the approval of NMCG/UPJN post from time to time, information (textual and Audio- Visual) on project progress on a continuous basis. On completion of services as per this RFP document, the website with all necessary technical information shall be handed over to UPJN.	Yes	Yes	Yes
14.1	Uttar Pradesh Jal Nigam may review with the Project Engineer, any or all of the documents and advice forming part of the Consultancy, in meetings and conferences which will be held at the office of the Uttar Pradesh Jal Nigam / NMCG. Uttar Pradesh Jal Nigam / NMCG may, in its discretion, require the Project Engineer to participate in extended meetings and/ or work from the offices of Uttar Pradesh Jal Nigam /NMCG and the Project Engineer shall, on a best endeavour basis and without unreasonable delay, provide such services at the offices of the Uttar Pradesh Jal Nigam/NMCG.	Yes	Yes	Yes
15.1	The Project Engineer may prepare Issue Papers	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: May 2018 to June 2018		
		Undertaken till previous month - May 2018	Undertaken during this month - June 2018	Expected for next month July 2018
	highlighting issues that could become critical for the timely completion of the Project and that require attention from Uttar Pradesh Jal Nigam/NMCG. The Project Engineer shall report to UPJN for routine activities and deliverables. All major and critical issues shall be reported to NMCG and UPJN simultaneously.			
15.2	The Project Engineer will make a presentation on the inception report for discussion with the Uttar Pradesh Jal Nigam /NMCG at a meeting. This will be a working document. Regular communication with Uttar Pradesh Jal Nigam/NMCG is required in addition to all key communications. This may take the form of telephone/teleconferencing, emails, and occasional meetings.	Yes	Yes	Yes
15.3	The Deliverables will be submitted as per schedule provided in this RFP	Yes	Yes	Yes

4.0. MEETINGS

Project Engineer undertaken and planned services.

Sl. No.	Services	Undertaken by	Period: June 2018	Period: July 2018
			Description	Expected for next month
1	Site inspection and progress review meeting	Project Manager, UPJN	07/06/2018	Project review meeting and site inspection
2	Site inspection	General Manager & Project Manager UPJN	19/06/2018	
3	Site inspection	Senior Engineer, MACE	27/06/2018	
4	Project review meeting	General Manager & Project Manager UPJN, Senior Engineer MACE & J.K. Sing, Dy TL, TCE	28/06/2018	

5.0. STAFF DEPLOYMENT

The work had commenced on 15.02.2018 the same has been communicated to NMCG vide letter number P968:8230 dated 05.03.2018.

The Project Engineer office shifted on 20/06/2018 at the following address in Varanasi:

Mahindra consulting Engineers Limited

"K Lion Enclave",
"A "Block,
Flat No: 118, 1st Floor,
Opposite to Vishal Mega Mart,
Nevada, Sundarpur,
Varanasi – 221005,
Uttar Pradesh.

The position of staff deployment since beginning of the project till end of May 2018 is given in the following table:

Staff deployed on site at Ramana, Varanasi			Date of deployment	
Sl. No.	Designation	Name of staff	From	To
1	Team Leader	Jiut Bandhan Rai	07/05/2018	
2	Project Manager	G. Sathiskumar	19/02/2018	21/05/2018
3	Civil Engineer	M. Sivapriyan	15/02/2018	
4	Civil Engineer	T. Sathyamoorthy	20/04/2018	07/05/2018
5	Senior Engineer (Electrical & Instrumentation)	R. Satish	20/04/2018	28/05/2018
6	Civil Engineer	P. Ramasubramanian	20/04/2018	
7	Civil Engineer	Imran Khadhar Mohideen	20/04/2018	
8	Structural Engineer	S. Varun Athithiya	20/04/2018	
9	Liaison Officer	O. B. Shivakumar	20/04/2018	
10	QA QC Expert	L. Selva Kumar	29/05/2018	

ANNEX - 1

PROJECT PROGRESS (PHYSICAL)

ANNEX 1 - PROJECT PROGRESS (PHYSICAL)

Sl. No.	Component / Package	Physical Progress in Percentage			Remarks
		Up to Previous month	During month	Total	
1	2	3	4	5	6
1	Development of sewage treatment plant and associated infrastructure under Hybrid Annuity based PPP mode at Varanasi	5.72%	6.38%	12.10%	Physical progress observed to be very slow and needs to be accelerated by Concessionaire.

ANNEX - 2

FINANCIAL STATEMENTS

ANNEX 2 - FINANCIAL STATEMENTS

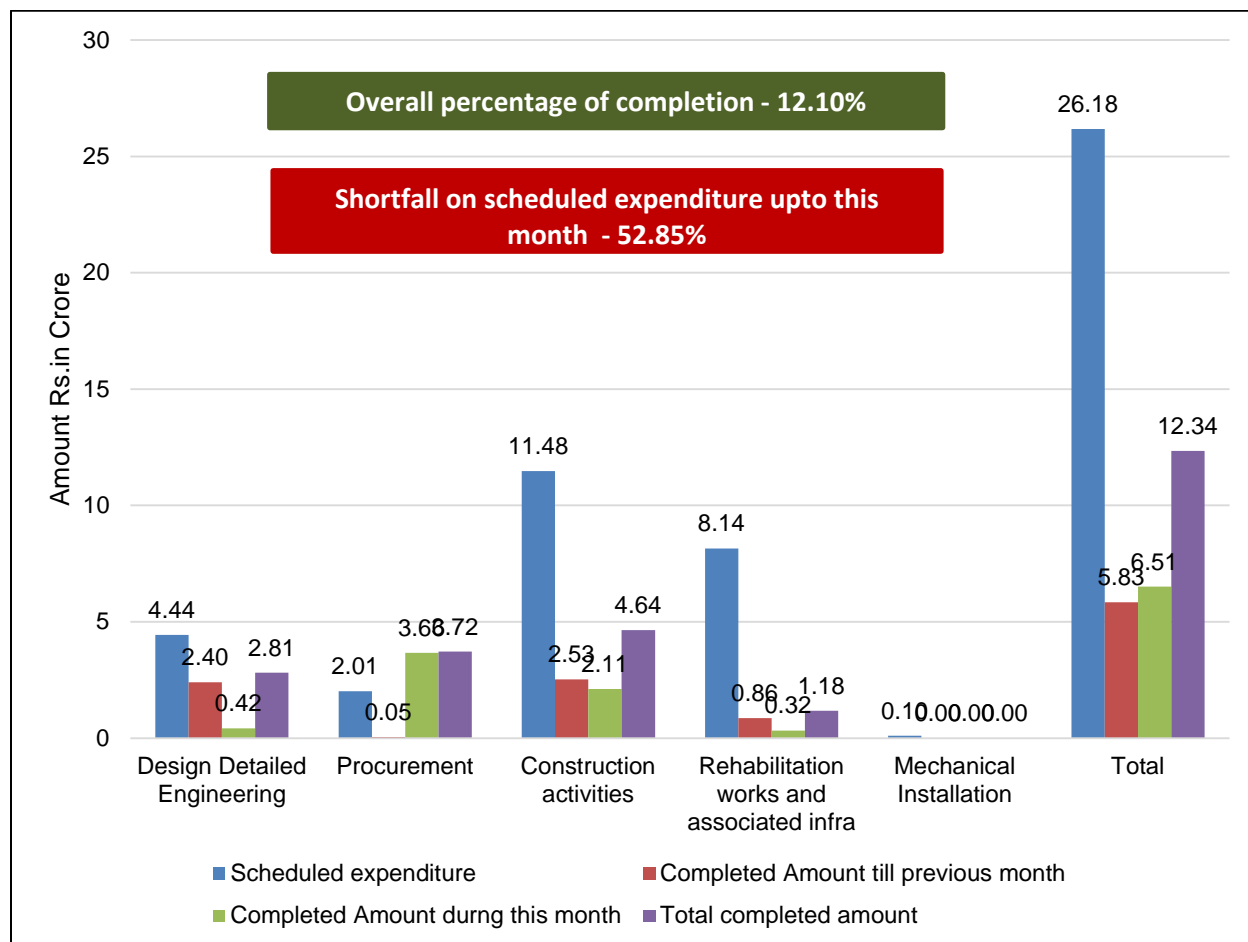
Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
Design detailed engineering				
Phase - I D&E (BEP)	7,650,000	7,650,000	-	7,650,000
Phase - II D&E (Civil, Mechanical, Electrical, Inst. drawings)	5,100,000	3,325,200	-	3,325,200
Structural drawings submissions & approvals	12,750,000	5,100,000	1,275,000	6,375,000
Mechanical & piping drawings submissions & approvals	10,200,000	4,671,600	714,000	5,385,600
Electrical drawings submissions & approvals	1,164,886	114,750	57,375	172,125
Miscellaneous documents & drawings	899,781	35,700	71,400	107,100
Instrumentation document submissions & approvals	1,008,409	-	-	-
Miscellaneous drawings	520,200	-	-	-
Associated				
MPS pumping station	6,263,757	57,120	721,140	778,260
Rising Main	12,530,172	-	45,900	45,900
Treated Effluent disposal line	62,650,195	8,512,364	2,448,000	10,960,364
Equipment procurement, logistics and receipt of equipment at Site				
Fine Screen / Coarse Screen / Belt Conveyors	2,396,231	-	-	-
Grit Removal Mechanism	986,683	-	561,000	561,000
SBR System	8,969,849	-	25,500,000	25,500,000

Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
SAS / RAS pumps/booster pumps / treated water pumps / drain pumps	3,139,447	-	-	-
Air blowers	2,306,533	510,000	4,590,000	5,100,000
Chlorination system	-	-	5,100,000	5,100,000
Tube well	1,268,593	-	-	-
Piping & fittings, valves, flanges, other associated connections	1,067,120	-	-	-
Miscellaneous	-	-	-	-
VCB Panel / APFC panel / transformer / DG Set / PMCC / synchronizing panel	-	-	892,500	892,500
Power, control, lighting cables / plant lighting / cable trays/other electrical accessories	-	-	-	-
Analysers – TDS / Total Nitrogen / TSS / COD-BOD / pH / Total phosphorus	-	-	-	-
Flow meters-Magnetic Flow meters/Differential LT/Weir Type Flowmeter/	-	-	-	-
Motorised-Gate Valves & Butterfly valves & Pressure Release Valves	-	-	-	-
Transmitter-Temp./Level/ Temperature	-	-	-	-
Level Switches	-	-	-	-
Pressure & Temperature Gauges	-	-	-	-

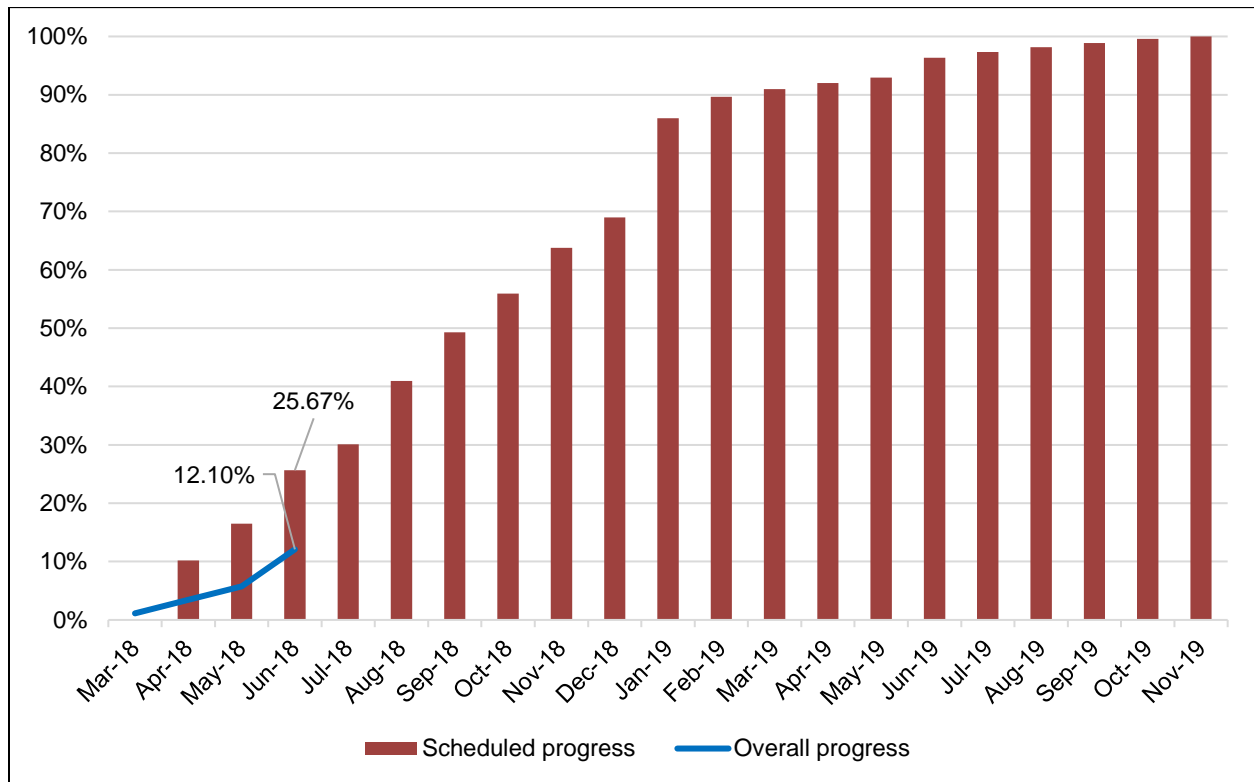
Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
Other Accessories- Cables, Cable Trays, SCADA, PLC system/GPRS system	-	-	-	-
Civil Executions				
Band Wall / Earthen Embankment	38,680,604	13,056,000	5,304,000	18,360,000
Inlet Chamber Manual & Mechanical Screen Chamber	6,387,966	-	-	-
Grit Chamber & Outlet Channel of Grit Chamber	4,564,068	-	-	-
Parshall Flume (I) & Distribution Chamber of SBR Basin	6,800,000	-	-	-
SBR Basins & SBR outlet Chamber	33,660,000	12,201,750	15,371,400	27,573,150
Chlorination Building	7,480,000	-	-	-
Chlorine Contact Tank & Treated Water Collection Tank, Treated water Pumps	5,522,069	45,900	382,500	428,400
SBR air blower room	1,337,087	-	4,590	4,590
HT room	1,915,138	-	4,590	4,590
MCC room	714,000	-	4,590	4,590
Transformer Yard	1,204,875	-	2,295	2,295
DG set area	1,530,000	-	2,295	2,295
Security room	-	-	-	-
DP structure	-	-	-	-
Mechanical Installation	1,005,429	-	-	-
Other Mechanical Installation	-	-	-	-

Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
Electrical & Instrumentation Installation	-	-	-	-
Pre - Commissioning	-	-	-	-
Trail Run - COD	-	-	-	-
Commissioning	-	-	-	-
	261,806,847	58,340,384	65,092,575	123,432,959
	Percentage completion of overall project			12.10%

Financial status for the month of June 2018



Progress status scheduled vs Actual - June 2018



ANNEX - 3

QUALITY ASSURANCE / QUALITY CONTROL

ANNEX 3 – QUALITY ASSURANCE / QUALITY CONTROL

1. Bund wall

S. No.	Description	IS Code	Up to Previous Month				During this month (June 2018)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	Soil compaction test at source (Barrow pit) - MDD, OMC & Soil characteristics	2720 Part VIII	5	5	5	0					
2	Soil compaction test at Site - OMC & Degree of compaction	2720 Part II	72	72	49	23	71	71	58	*13	*Rectification suggested for the rejects and re test is recommended

2. Sequential Batch Reactor (SBR)

S. No.	Description	IS Code	Up to Previous Month				During this month (June 2018)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	Concrete Ingredients Coarse Aggregate 20mm down	IS 383-2001					10	20	10	*10	Rejected material contains Improper grading, oversized, more flaky, and has been removed from batching plant, Witnessed by Upjn
2	Concrete Ingredients Coarse Aggregate 10mm down	IS 383-2001					10	12	8	*4	*Rejected material contains Improper grading, oversized, more flaky, and has been removed from batching plant, Witnessed by Upjn
3	Concrete Ingredients Fine aggregate 4.75 mm down	IS 383-2001					4	6	4	*2	Acceptable range, FM =2.65, 2 loads Rejection due to oversized pebbles, hence recommended to concessionaire to provide 4.75 mm screen mesh before using batching

S. No.	Description	IS Code	Up to Previous Month				During this month (June 2018)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
4	Combined Grading as per approved IIT Mix design	IS 383-2001					**whenever required	3	3	0	As per Approved mix 20mm with 55%, 10mm with 45%
5	Harden concrete Compressive strength	IS 516 & IS 456					every 50 M3 or part thereof	30	30	0	Specimen 11 nos tested at age 7 and Final Acceptance based on 28 days design stipulated value in N/mm ² , Yet to come,
6	OPC Cement 43 Grade	IS 8112-2013					Every consignment or whenever required	1	1	0	Ultratech source / MTC
7	Reinforcement TMT Bars	IS 456-2001, IS 1786-1987 & IS 800-2007					50 Metric tonne/one sample for each diameter	18	18	0	TATA Steel - MTC available at site
8	Admixers	IS 9103-1979					Every new consignment once reach site	1	1	0	Fosroc Conplast - MTC available at site
9	Water	IS 456 - 2001					6 months once	1	1	0	Tested by IIT, BHU

S. No.	Description	IS Code	Up to Previous Month				During this month (June 2018)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
10	Concrete Mix design	IS 10262-2000					**whenever changed source of ingredients	Grade of M10, M15, M20, M25 & M30 (including all physical test)	Approved given by IIT VARANASI AND ACCEPTED BY CLIENT	0	Mix design approved by IIT, BHU
11	Field control test: Slump / Concrete temperature / unit weight	IS 456, SP 23 & IS 516					Every alternative truck of concrete mixer	45	45	0	* Due to zero slump/over slump and realtered the concrete using admixture to bring specification design value.

3. Treated Effluent disposal line

S. No.	Description	IS Code	Up to Previous Month				During this month (June 2018)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	PSC Pipes 1200mm dia - characteristics Test (Dimension, Straightness, Thickness, Hydrostatic & Permeability)	IS 784 & IS 3597	16 Nos	16 Nos	16 Nos						
2	Soil test - SBC of soil	IS 6403	4 Nos	4 Nos	4 Nos						
3	EPDM Gasket	IS 5389-1979	65 Nos	65 Nos	65 Nos						

4. Raising main

S. No.	Description	IS Code	Up to Previous Month				During this month (June 2018)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	MS Pipes 1000mm dia - characteristics Test (Dimension, Thickness, Hydro testing, Epoxy coating, Anti corrosive coating & Marking)	IS 3589:2001					5.45 Mtr	50.45 Mtr	50.45 Mtr	0	

5. Construction Running Materials / Equipment's

S. No.	Description	IS Code	Up to Previous Month				During this month (June 2018)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	Auto level (SBR / Pipe lines / bundwall)	BIS 1492	Yearly once	3	3	0					Verification done for all instruments with Calibration certificates and found within range of required specified specification ,soft copies sent through mail for further processing, ** whenever necessary if RMC disturbed recalibration to be done
2	Cube testing Machine	IS 516-2001	Yearly once	1	1	0					
3	Laboratory weighing machine	IS 460-1980	Yearly once	2	2	0					
4	Ready Mix Concrete plant	IS 4926-2013	Whenever required	1	1	0					

ANNEX - 4 PHOTOGRAPHS

ANNEX 4 – PHOTOGRAPHS

SBR basin	 <p>Overall view</p>
	 <p>RCC Raft</p>

SBR basin



RCC Footing



Site inspection

Bund wall



Levelling and compaction



Levelling and compaction

Bund wall



Site inspection



Formation of bund

Bund wall



Levelling and compaction

MPS



Desilting Inlet chamber

MPS



Desilting inlet chamber



Existing collection well





PCC



PCC

Treated Effluent disposal pipe line



PSC Pipe laying



Site Inspection

Blower Room, HT, MCC, Transformer yard & DG set area



Earth work excavation

ANNEX - 5
OUTWARD CORRESPONDENCE LIST
OF JUNE 2018

ANNEX 5 - OUTWARD CORRESPONDENCE LIST OF JUNE 2018

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
1	MACE: P968:8363	01-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval with comments on layout of STP layout
2	MACE: P968:8364	01-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval on raw sewage sump with fine screen, grit removal & Parshall flume
3	MACE: P968:8365	01-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval of subcontractor – observation
4	MACE: P968:8366	02-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval and comments in civil GA and reinforcement drawing of staff quarters (Type I, III & IV)
5	MACE: P968:8369	04-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval with comments in architectural drawing of administrative building
6	MACE: P968:8370	04-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval for electrical load lists & electrical calculations.
7	MACE: P968:8370A	04-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Monthly progress report for the month of May 2018
8	MACE: P968:8375	07-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval on design calculation of PSC pipe.
9	MACE: P968:8376	07-06-2018	GM, UPJN	NMCG, PM,	NA	Observations on civil and structural

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
				UPJN		drawings of CCT & Treated water PH
10	MACE: P968:8377	08-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Air blower electromechanical document and drawings approval
11	MACE: P968:8378	09-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval of P & ID
12	MACE: P968:8381	09-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Observations on Civil and structural drawings for air blower & MCC room
13	MACE: P968:8388	12-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Observations on Civil GA and reinforcement details of inlet chamber, Fine screen, Grit chamber & Parshall flume.
14	MACE: P968:8389	12-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Request to issue a notice to speed up the progress at site to achieve the first milestone within the scheduled timeline as per approved construction plan and concession agreement.
15	MACE: P968:8390	12-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval with comments on civil and structural drawings of chlorine contact tank & treated water PH.
16	MACE: P968:8391	13-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Data sheet, drawings and QAP documents of SBR fine approval.

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
17	MACE: P968:8392	14-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval with comments on civil and structural drawing Air Blower & MCC Room.
18	MACE: P968:8393	14-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Observations on Mix design calculation.
19	MACE: P968:8395	18-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval with comments on Civil and structural drawings Air Blower & MCC Room
20	MACE: P968:8398	19-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval with comments on Civil and structural drawings of Inlet Chamber, fine screen, Grit chamber & Parshall flume.
21	MACE: P968:8400	20-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommendation for approval with comments for civil and structural drawings of parshall flume
22	MACE: P968:8402	21-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Observations on civil GA and reinforcement details of administrative building.
23	MACE: P968:8405	25-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation on Effluent disposal line L-Section and plan.
24	MACE: P968:8408	28-06-2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for Approval of P&ID of MPS drawings.

ANNEX - 6
INWARD CORRESPONDENCE LIST OF
JUNE 2018

ANNEX 6 - INWARD CORRESPONDENCE LIST OF JUNE 2018

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
1	EIL/VSPPL/2018/19 -100	2/6/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of Civil GA & Structural drawings of CCT & TW Pump House and P & I drawings
2	EIL/VSPPL/2018/19 -102	4/6/2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of Arch drawing of Admin Building for approval
3	EIL/VSPPL/2018/19 -104	5/6/2018	VSPPL / UPJN	Amit B Ghorpade	Y	6	Submission of Structural Drawings for Air Blower & MCC Room
4	EIL/VSPPL/2018/19 -106	6/6/2018	VSPPL / UPJN	Amit B Ghorpade	Y	7	Submission of Civil G.A. & Reinforcement Detail of Inlet chamber, Fine screen, Grit chamber & Parshall flume along with the calculation
5	EIL/VSPPL/2018/19 -112	11/6/2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of Civil GA & Structural drawings of CCT & TW Pump House and P & ID of MPS

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
							drawings.
6	E-Mail	11/6/2018	VSPPL	Santhosh Kumar	Y	14	Revised Civil G.A. & Reinforcement drawing for CCT & TW pump house
7	EIL/VSPPL/2018/19 -116	14/6/2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of additional credential and undertaking for Vendor approval of M/s Gardner Denver Engineered Products IPL for supply of Air blowers
8	EIL/VSPPL/2018/19 -121	18/6/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of Civil GA & Reinforcement details of Parshall Flume, Air Blower, MCC Room & Admin Building
9	E-Mail	22/6/2018	VSPPL	Amit B Ghorpade	Y	2	Submission of Puddle pipe Schedule
10	EIL/VSPPL/2018/19 -127	26/6/2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Offer for Inspection of PSC PIPE DN 1200mm

ANNEX - 7

**ADDITIONAL RESOURCE REQUIRED TO
MITIGATE DELAY OCCURRED BASED
ON CURRENT DEPLOYMENT AND ITS
OUTPUT**

ANNEX 7 – ADDITIONAL RESOURCE REQUIRED TO MITIGATE DELAY OCCURRED BASED ON CURRENT DEPLOYMENT AND ITS OUTPUT

1. Abstract

S. No.	Description	Status	Remarks
1	Band wall / earthen embankment	Work is in progress	
2	Inlet chamber manual & mechanical screen chamber	Work yet to start	Awaiting for IIT, BHU approval
3	Grit chamber & outlet channel of grit chamber	Work yet to start	Awaiting for IIT, BHU approval
4	Parshall flume (I) & distribution chamber of SBR basin	Work yet to start	Awaiting for IIT, BHU approval
5	SBR basins & SBR outlet Chamber	Work is in progress	
6	Chlorination building & Chlorine contact tank & Treated water collection tank, treated water pumps	Work is in progress	
7	Belt filter press/ sludge sump / filtrate sump	Work yet to start	Awaiting for IIT, BHU approval
8	Administrative Building & Overhead Tank	Work yet to start	Awaiting for IIT, BHU approval
9	SBR air blower room, HT room, MCC room, Transformer yard & DG set area	Work is in progress	

2. Band wall / earthen embankment

2.1. Major components

S. No.	Description	Estimate		As per construction plan up to 30 th June 2018		Actual work done up to 30 th June 2018		Shortfall as on 30 th June 2018	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Excavation	13888	Cum	13888	Cum	13888	Cum	0	Cum
2	Borrow Earth	86000	Cum	76540	Cum	35808	Cum	40732	Cum
3	Soil Filling	86000	Cum	76540	Cum	20222	Cum	56318	Cum
4	Soil Compaction	86000	Cum	76540	Cum	12061	Cum	64479	Cum
5	Stone Pitching	32400	Sqm	6804	Sqm	0	Sqm	6804	Sqm

2.2. The following requirements are arrived assuming that the shortfall quantity will be completed within 30 days from the date of mobilising the additional resources

2.2.1. Major components

S. No.	Description	Required per day		Additional resource required to the fold based on current deployment
1	Borrow Earth	1358	Cum	4 times
2	Pitching Stone	6804	Sqm	Concessioner yet to start the work and plan the required resource

2.2.2. Additional equipment's required

S. No.	Description	Quantity	Unit	Capacity	Unit
1	Tipper	4	No	8.5	Cum
2	Tipper	4	No	14	Cum
3	Tractor	36	Nos	2.8	Cum
4	Water tanker	14	Nos	5000	Litters
5	Roller	4	No	11	Tonne

3. SBR, CCT, Blower room, HT, MCC, Transformer Yard & DG set Area

3.1. Major components

S. No.	Description	Estimate		As per construction plan up to 30 th June 2018		Actual work done up to 30 th June 2018		Shortfall as on 30 th June 2018	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Excavation	4545	Cum	6880	Cum	3438	Cum	3442	Cum
2	PCC	1800	Cum	2175	Cum	953	Cum	1222	Cum
3	RCC	6690	Cum	440	Cum	377	Cum	63	Cum

3.2. The following requirements are arrived assuming that the shortfall quantity will be completed within 10 days from the date of mobilising the additional resources

3.2.1. Major components

S. No.	Description	Required per day		Additional resource required to the fold based on current deployment
1	Ready Mix Concrete	122	Cum	2

3.2.2. Additional equipment's required

S. No.	Description	Quantity	Unit	Capacity	Unit
1	JCB (0.3 Cum)	5	No	0.3	Cum
2	Transit mixer	5	No	7	Cum
3	Tipper	5	Nos	5.5	Cum
4	Tractor	2	Nos	2.8	Cum
5	Batching Plant	2	No	20	Cum/Hr
6	Concrete Pump	5	No	40	Cum/Hr