

cherenkov telescope array

CTA-North Power Study Concept Review

Introduction



David Bristow, 23.02.18 Heidelberg.

Meeting Agenda



09:00 → 09:10	Welcome by the chairperson ③ 10m Speaker: David Bristow (CTAO)
09:10 → 09:20	Introduction to the review ③10m Speaker: Carla Crovari
09:20 → 10:00	Power Requirements © 40m Speakers: Alison Mitchell (Max-Planck-Institut fuer Kemphysik), Jim Hinton (MPIK)
10:00 → 11:00	Concept Study - Part 1 ③ 1h
	CTA-N Concept study for Power distribution 4 options, part 1
	Speaker: Mr. Manfred Engelmann
11:00 → 11:20	Coffee Break ③ 20m
11:20 → 11:40	Concept Study - Part 2 ③ 20m
	Concept study for Power distribution, 4 options, part 2
	Speaker: Mr. Manfred Engelmann
11:40 → 12:00	List of Interfaces © 20m Speaker: Carla Crovari
12:00 → 12:20	List of risks and Hazardous Situations © 20m Speaker: Carla Crovari
12:20 → 14:00	Lunch O 1h 40m
14:00 → 15:40	Panel Discussion ① 1h 40m Speaker: David Bristow (CTAO)
15:40 → 16:00	Conclusions ③ 20m Speaker: David Bristow (CTAO)



Study for Electrical Power for CTA-North

Concept Design Review Plan for CTA-North

List of Interfaces

Power Note v0.2

180215 Concept Design Review for CTA-North - Answers

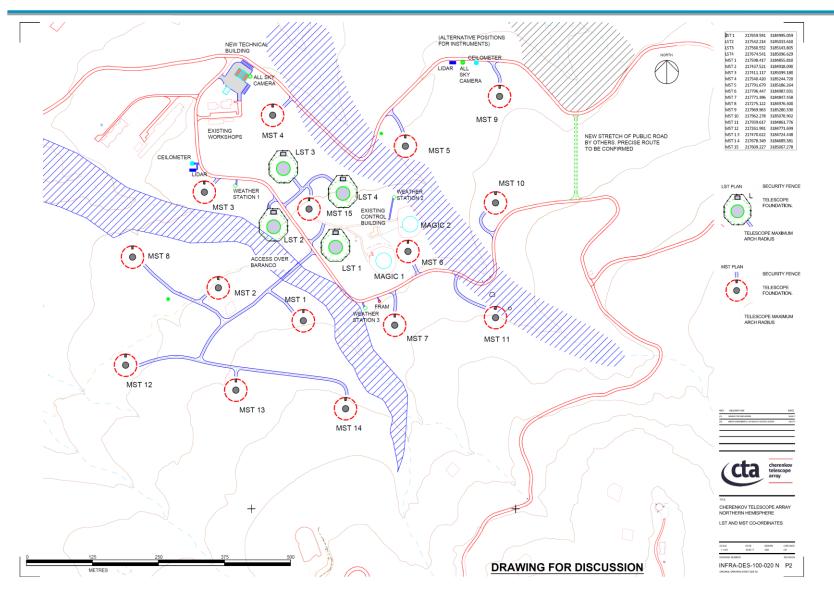
Location Plan - Context





Master Plan - Site







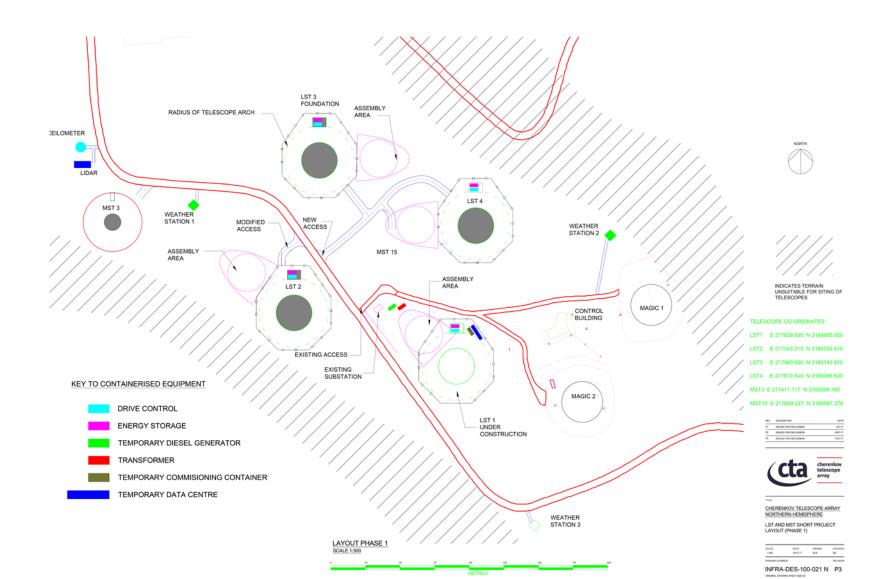
There are two phases to the Design and Construction:

<u>Phase 1</u> the Design and Construction of the '**short project'** the central part of the array.

- LST 2-4
- MST 3
- Roads, Power, Data Networks
- Landscaping

Construction - Phase 1







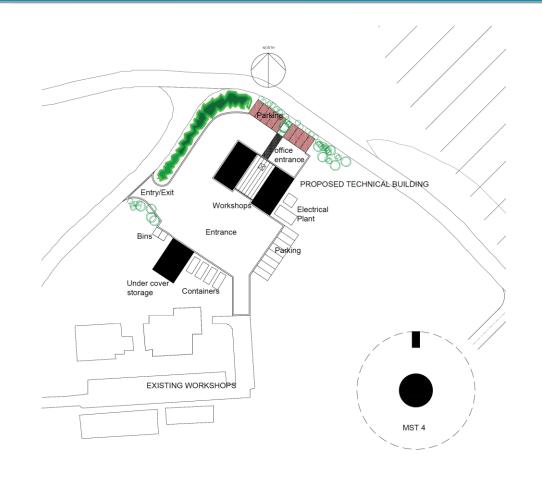
Phase 2 of the Design and Construction:

Phase 2 the 'RIBA 3' study for the site.

- Technical Building
- Remaining MSTs
- Roads
- Power and Data Networks
- Landscaping

CTA-North Technical Building





SITE PLAN 1:50 FOR LOCATION SEE INFRA-DES-100-022

Preliminary Concept for Technical Building and Facilities

Technical Building – Front Elevation





Preliminary Concept

Technical Building – Rear Elevation





Preliminary Concept

CTA-N Schedule



ID		Duration	Start	Finish	%																
	Task Name				Comp	Die 2	2017 Q1	02	02	01	2018	3 1	02	02	04	2019	Q2	02	01	2020	
1	PROCUREMENT ARCHITECT (preparation of detailed design tender)	275 days	04-09-17	21-09-18	33%	+	QI	QZ	 	Q4	Q		Qz	0	<u>Q</u> 4	Q	Qe	03	Q4	QI	
2	Prepare Eofl Document	2 days	04-09-17	05-09-17	100%	6															
3	Send out E of I Document	5 days	06-09-17	12-09-17	100%	6			E)											
4	Prepare Statement of works	8 days	13-09-17	22-09-17	100%	6			0	Ð											
5	Review Statement of Works	9 days	10-10-17	20-10-17	100%	6				œ											
6	Tender Period	15 days	23-10-17	10-11-17	100%	6															
7	Appraise Tender	5 days	13-11-17	17-11-17	100%	6				F											
8	Prepare Order and Contract	2.5 mons	20-11-17	26-01-18	100%	6				90	0										
9	Prepare CTA Strategy for North-site management	1 mon	05-02-18	02-03-18	30%						e										
10	Procurement contract excecution period	2 mons	29-01-18	23-03-18	0%							G									
11	Civil/Mech/Electrical package tender documents available	0 days	23-03-18	23-03-18	0%							•									
12	Review Procurement Documents by CTA/IAC (mechanical erection, telescopes foundations, trenches/roads, power)	0.5 mons	26-03-18	06-04-18	0%																
13	Approve Tender Documents and hand-over to IAC	0 days	06-04-18	06-04-18	0%							•									
14	Prepare for CDR LST1 civil works and foundation	1 mon	09-04-18	04-05-18	0%								0								
15	Tender Detailed Design of CTA-N infrastructure (mechanical, foundations, power,) - publication period	1.5 mons	09-04-18	18-05-18	0%							40	G								
16	Detailed Design preparation of offers	1 mon	21-05-18	15-06-18	0%							(10G								
17	Detailed Design apparise of offers	0.5 mons	18-06-18	29-06-18	0%								-								
18	Prepare Orders and Detalied design contract	3 mons	02-07-18	21-09-18	0%								-	Θ	1						
19	SHORT PROJECT NORTH (detailed design and permits 3xLST, 1xMST)	170 days	24-09-18	17-05-19	0%									90	5		0				
20	Environmental Study	2 mons	24-09-18	16-11-18	0%									0	0						
21	Geotechnical Study	2 mons	24-09-18	16-11-18	0%									0	0						
22	Prepare preliminary design documentation to present to authorities	3 mons	24-09-18	14-12-18	0%									0	G	•					
23	Internal Review with LST, MST and IAC	0 mons	14-12-18	14-12-18	0%											5					
24	Adjust documentation for authorities	1 mon	17-12-18	11-01-19	0%										4	D OJ					
25	Submit documentation to authrities	0 days	11-01-19	11-01-19	0%										(
26	Authorities review and approval	3 mons	14-01-19	05-04-19	0%											+0	0				
27	Tender Construction of CTA-N infrastructure (mechanical, foundations, J	01.5 mons	14-01-19	22-02-19	0%																
28	Providers preparation of Construction offers	1 mon	14-01-19	08-02-19	0%										l	YOG					
29	Apparise of Construction offers	0.5 mons	11-02-19	22-02-19	0%											F					
30	Prepare Orders and Construction contract signing	3 mons	25-02-19	17-05-19	0%											40	G				
31	Construction Stage	240 days	20-05-19	17-04-20	0%												0				
32	Construction Phase infrastructure for 1+3xLST + 1xMST	12 mons	20-05-19	17-04-20	0%												40				







Any Questions?

Thank you.