



83 Registered Post



GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FORESTS & CLIMATE CHANGE

Central Zoo Authority



F. No. 19-113/92-CZA(140)(Vol. I)(NS) / 7546

DATE: 06.08.2015

To

The Additional Principal Chief Conservator of Forests (D&P) &
Special Officer,
Thrissur Zoological Park,
Pathur (Kerala)

Sub:- Revised Master (layout) Plan of the Thrissur Zoological Park, Kerala and proposed designs for the construction at the Thrissur Zoological Park, Kerala-Reg.

Ref:- Your office letter no. WL3-7551/95, Dt.23.05.2015.

Sir,

This has with reference to the power point presentation delivered by Mr. John Coe, consultant architect on the Revised Master (layout) Plan of Thrissur Zoological Park, Kerala and designs for the proposed construction at the Thrissur Zoological Park, Kerala before the members of the Expert Group on Zoo Designing of the Central Zoo Authority in its 62nd meeting held on 13.07.2015. After detailed deliberation the following observations were made:-

A. Revised Master Layout Plan:

Members on scrutiny of revised layout plan of Thrissur Zoological Park-Wildlife Conservation & Research Centre, Puthur, Kerala, recommended the same for approval.

B. Designs of enclosures:

Members on scrutiny of designs on proposed construction of following enclosures at Thrissur Zoological Park-Wildlife Conservation & Research Centre, Puthur, Kerala, approved the designs given below subject to incorporation of following suggestions:

1. Design of proposed construction of Biodiversity Centre:

- Advised to explore providing more space.
- Suggested to create a tunnel for Porcupine.
- Term 'office' may be replaced with 'Research Centre'.

Contd..

B-1 Wing, 6th Floor, Paryavaran Bhawan, CGO Complex, Lodhi Road, New Delhi-110003.

2. Design of proposed construction of enclosure for Mugger Crocodile and Gharial exhibit:

- a) Exhibit provided may be used to house not more than one male and two females.

3. Design of proposed construction of Great Aviary:

4. Design of proposed construction of enclosure for Nilgiri langur:

5. Design of proposed construction of enclosure for Lion tailed macaque:

6. Design of proposed construction of enclosure for Leopard:

- a) Care should be taken to avoid animal getting out of enclosure by care in joining moat and barrier.
b) Kraal corner should be rounded off.
c) Covered exercise yards may be provided elsewhere.
d) From feeding cells, access should be direct to paddock.
e) Suggested to provide one covered and one open kraal.

7. Design of proposed construction of enclosure for Tiger:

- a) Covered excessive yard may be removed.
b) Sharp edges to be removed.

8. Design of proposed construction of enclosure for Asiatic lion:

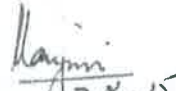
- a) Covered exercise yard may be removed.
b) Sharp edges to be removed.

9. Design of proposed construction of enclosure for Gaur:

(Revised Lay out plan)

The dully signed copies of Great Aviary, Nilgiri langur, Lion tailed macaque and others are enclosed with this letter with a request to submit the amended copies of Biodiversity Centre, enclosure for Mugger Crocodile , Gharial, Leopard, Tiger and Asiatic Lion for its final approval.

Yours faithfully


(Vinod Ranjan)
7.8.13
Member Secretary

Write
Encl: as above

Copy to The Chief Wildlife Warden, Govt. of Kerala for favour of information.

B-1 Wing, 6th Floor, Paryavaran Bhawan, CGO Complex, Lodhi Road, New Delhi-110003.



THRISSUR ZOOLOGICAL PARK
Wildlife Conservation & Research Centre, Puthur

DPR - STAGE 3
EXHIBIT DESIGNS
DRAWINGS FOR STATUTORY APPROVAL
27th March, 2015

GREAT AVIARY



EXHIBIT 03_ GREAT AVIARY

01_MACAWS

PROPOSED COLLECTION PLAN	MALE	FEMALE	TOTAL
GREEN WINGED MACAWS	2	2	4
SCARLET MACAWS	2	2	4
BLUE AND YELLOW MACAWS	2	2	4
HYACINTH MACAWS	2	2	4
AREA STATEMENT			
EXHIBIT AREA STANDARDS (as per CZA rules)	300 sqm, 8m height		(PROVISION FOR MIXED SPECIES ENCLOSURE)
PROPOSED AREAS			
GREEN WINGED MACAWS	104 sqm		
SCARLET MACAWS	79 sqm		
BLUE AND YELLOW MACAWS	68 sqm		
HYACINTH MACAWS	130 sqm		
TOTAL EXHIBIT AREA	381 sqm		
HOLDING/ BREEDING PENS	80 sqm		

02_COCKATOO

PROPOSED COLLECTION PLAN	MALE	FEMALE	TOTAL
COCKATOO	3	5	8
AREA STATEMENT			
EXHIBIT AREA STANDARDS (as per CZA rules)	300 sqm, 8m height		(PROVISION FOR MIXED SPECIES ENCLOSURE)
PROPOSED AREAS			
TOTAL EXHIBIT AREA	300sqm		
HOLDING/ BREEDING PENS	152.5sqm		

03_ALEXANDRINE PARAKEET, ROSE RINGED PARAKEET

PROPOSED COLLECTION PLAN	MALE	FEMALE	TOTAL
ALEXANDRINE PARAKEET	5	10	15
ROSE RINGED PARAKEET	22 UNSEXED		22
AREA STATEMENT			
EXHIBIT AREA STANDARDS (as per CZA rules)	300 sqm, 8m height		(PROVISION FOR MIXED SPECIES ENCLOSURE)
PROPOSED AREAS			
TOTAL EXHIBIT AREA	300 sqm		
HOLDING/ BREEDING PENS	80 sqm		

04, 05_MALABAR GREY HORNBILL

PROPOSED COLLECTION PLAN	MALE	FEMALE	TOTAL
MALABAR GREY HORNBILL	5	10	15
AREA STATEMENT			
EXHIBIT AREA STANDARDS (as per CZA rules)	300 sqm, 8m height		(PROVISION FOR MIXED SPECIES ENCLOSURE)
PROPOSED AREAS			
EXHIBIT NO.4 AREA	318 sqm		
EXHIBIT NO.5 AREA	305 sqm		

EXHIBIT NO.4 HOLDING/ BREEDING AREA	48 sqm
EXHIBIT NO.4 HOLDING/ BREEDING AREA	72 sqm

06_NILGIRI LAUGHING THRUSH

PROPOSED COLLECTION PLAN	MALE	FEMALE	TOTAL
NILGIRI LAUGHING THRUSH	3	6	9
AREA STATEMENT			
EXHIBIT AREA STANDARDS (as per CZA rules)	300 sqm, 8m height		(PROVISION FOR MIXED SPECIES ENCLOSURE)
PROPOSED AREAS			
EXHIBIT AREA	331 sqm		
HOLDING / BREEDING AREA	138 sqm		

07_GREAT INDIAN HORNBILL

PROPOSED COLLECTION PLAN	MALE	FEMALE	TOTAL
NILGIRI LAUGHING THRUSH	2	4	6
AREA STATEMENT			
EXHIBIT AREA STANDARDS (as per CZA rules)	300 sqm, 8m height		(PROVISION FOR MIXED SPECIES ENCLOSURE)
PROPOSED AREAS			
EXHIBIT AREA	350 sqm		
HOLDING / BREEDING AREA	130 sqm		

08_WATER FOWL

PROPOSED COLLECTION PLAN	MALE	FEMALE	TOTAL
BLACK IBIS	5	10	15
GREY HERON	3	6	9
WHITE STORK	3	7	10
AREA STATEMENT			
EXHIBIT AREA STANDARDS (as per CZA rules)	300 sqm		
PROPOSED AREAS			
EXHIBIT AREA	330 sqm		

BARRIER DETAILS PROPOSED	
FRONT, SIDE, REAR AND OVERHEAD BARRIER <i>(overhead barrier absent for water fowl)</i>	STAINLESS STEEL MESH WITH CABLES AND FERRULES (CARL STAHL MAKE OR EQUIVALENT) or HANDWOVEN STAINLESS STEEL MESH NETTING (CARLOS MESH MAKE OR EQUIVALENT) SUSPENDED ON A FRAMEWORK OF STEEL COLUMN MASTS, CABLES AND GUY WIRES.
HOLDING/ BREEDING PENS	STRUCTURE FRAMEWORK WITH MS RECTANGULAR SECTIONS, PANELS WITH STEEL STIFF WELD MESH, ROOF WITH GALVALUME SHEETS WITH SANDWICH PUF PANELS.
ENRICHMENT DETAILS	DEAD TREE LOGS, SWINGS AND TREATED TEAK TREES FOR BIRD PERCHING, SMALL POOLS, CREEPERS, REEDS, THICKETS, WOODEN NEST BOXES IN BREEDING PENS
ENCLOSURE HEIGHT	ALL ENCLOSURES SHALL BE MINIMUM OF 8M HEIGHT AT ALL POINTS

INTRODUCTION:

The Great Aviary is located in a well protected gently rolling valley formation after the Biodiversity centre. The Aviary has a total area of 5311 sq m (approx 120m x 50m avg) which includes the central visitor path network, exhibits and holding pens.

An Entrance structure marks the entry and shall have interpretive signage and drinking water. The Visitor path winds in and negotiates around 6m level difference through a series of steps and ramps as they chance upon 7 bird enclosures, (Exhibits 1-7) all suitable to exhibit mixed species (ie each of area 300 sqm and above). The whole network is accessible on wheel chair with a slope of 1:15.

A cascading set of ponds exhibits the Water fowl (Exhibit 8). This exhibit will not have mesh on top.

There are a total of nine Viewing shelters that offer closer bird viewing (through MESH). The Macaw exhibit (Exhibit 1) also has viewing from the main Visitor Path outside the Aviary entry structure.

BARRIER DETAILS:

- **EXHIBIT BARRIERS:** The Aviary exhibits have mesh enclosures on all sides made of Aviary mesh fixed on a system of cables, masts and guy cables. The Aviary mesh suggested is made of stainless steel. (Stainless steel mesh with cables and ferrules (Carl Stahl make or equivalent) OR hand-woven stainless steel mesh netting (Carlos Mesh make or equivalent).)
- **STAND OFF BARRIER:** The standoff barrier along the bird viewing pockets and in all viewing shelters is 1m high and is placed at a clear gap of 1m from the exhibit mesh to control visitor access to the aviary mesh.

EXHIBITS and EXHIBIT ENRICHMENT ASPECTS:

- The finished ground levels for bird exhibits follow the natural terrain. Each exhibit is decorated with plants that resemble the habitat of the exhibit bird.
- Teak vertical logs mounted on the ground are fixed with replaceable sway branches that provide gentle sway while the birds in flight land on them.
- Perching and nesting facilities shall be provided to the various species of birds in the exhibit as well as in the holding and breeding pens.

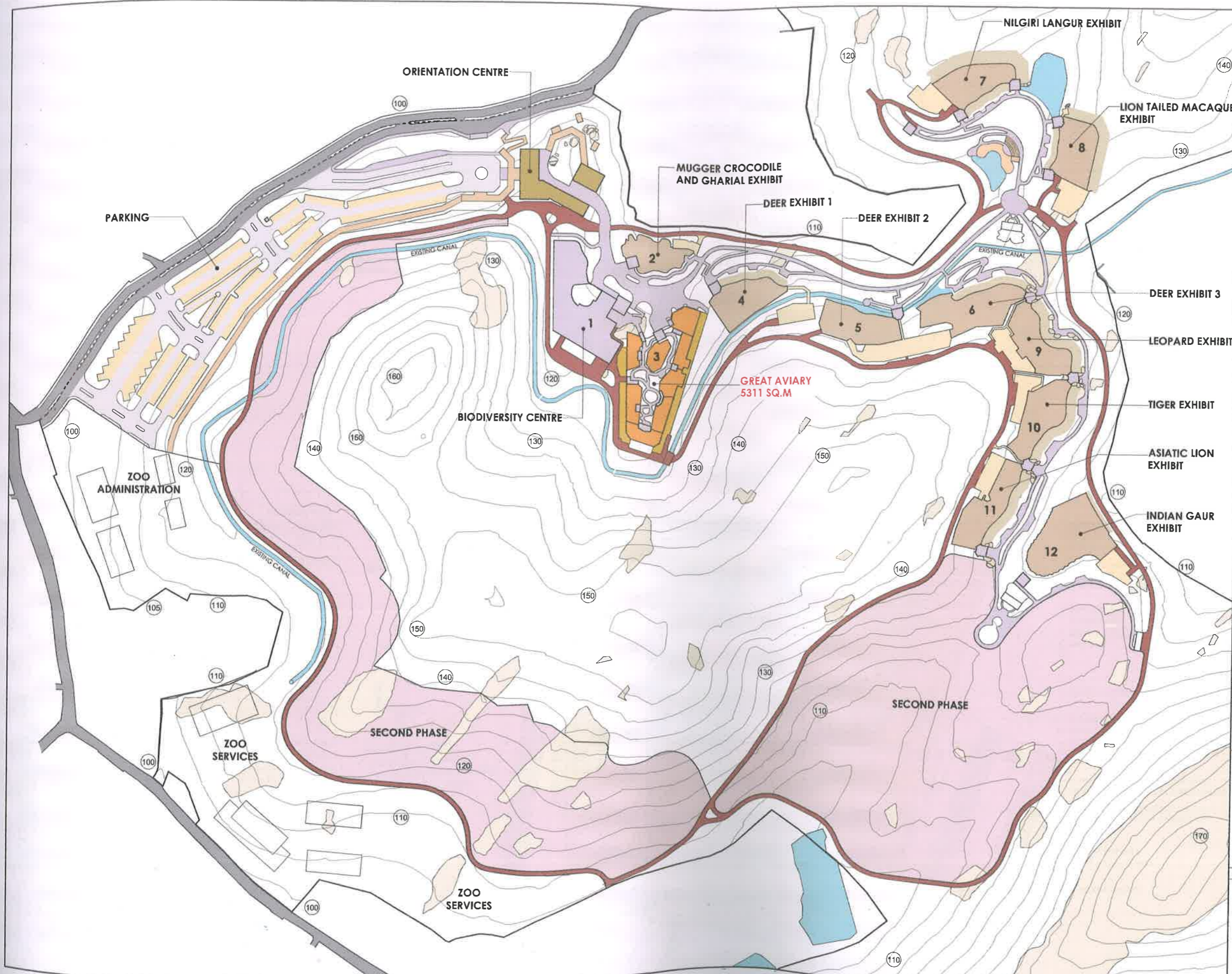
- The design provides for a stimulating and complex environment for the birds that demonstrate natural and socially desirable behaviour. These can be accommodated by the spacing of vegetation, replacement of rigid perching with flexible branches, small trees and ropes, provision of vertical logs for climbing birds, the size and depth of pools, the provision of different substrates – soil, rock, wood chip, pebbles, suitable vegetation such as reeds, creepers and thickets etc.

OFF EXHIBIT HOLDING PENS:

- The Off exhibit Bird Holding areas are provided for each exhibit (except Exhibit 8 – Water fowl). The Holding area is subdivided into holding pens, breeding pens, keeper rooms and keeper aisles.
- The Holding area have stiff weld mesh side partitions and Galvalume sheet roofing with sandwich PUF panels. They are appropriately provided with Nest boxes with CCTV provision, bird feeding trays, water bottles etc. They are also provided with floor drains and other appropriate electrical and plumbing service points.
- These holding pens also have appropriate enrichment elements.

SERVICE ASPECTS:

- Both the Exhibit area and the Off exhibit Animal Holding area are provided with adequate Service access from the Service road that runs parallel to the Holding areas.
- The entry/ exit gates for birds to / from the exhibit have provision for Keeper control and operation from Service areas. Keeper rooms and Service rooms provided in between have storage, kitchenette with sink etc.



THIRISSUR ZOOLOGICAL PARK
Wildlife Conservation & Research Centre, Puthur

DPR - STAGE 3:

DRAWINGS FOR STATUTORY APPROVAL

EXHIBIT NAME:

GREAT AVIARY

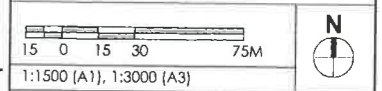
DRAWING TITLE:

LOCATION PLAN

DRAWING NO: DATE: REVISION:

DPR/S3/GA/01 27.03.2015

SCALE:



LEGEND:

- VISITOR PATH
- TRAM / SERVICE ROAD
- ORIENTATION CENTRE
- EXHIBITS
- 1. BIODIVERSITY CENTRE
- 2. MUGGER CROCODILE AND GHARIAL
- 3. GREAT AVIARY
- 4. DEER 1
- 5. DEER 2
- 6. DEER 3
- 7. NILGIRI LANGUR
- 8. LION TAILED MACAQUE
- 9. LEOPARD
- 10. TIGER
- 11. ASIATIC LION
- 12. INDIAN GAUR

CONSULTANTS:

Jon Coe Design - Idea Design Consortium
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Chitra Biley, B Arch, MIA, AISOIA
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Michael Little, MIA
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PROJECT BY:

KERALA FOREST DEPARTMENT
GOVERNMENT OF KERALA
FOREST HEADQUARTERS, VAZHUTHACAUD,
THIRUVANANTHAPURAM - 695014
KERALA, INDIA

Handwritten signature and name: S. Yalakan



THRISSUR ZOOLOGICAL PARK
Wildlife Conservation & Research Centre, Puthur

DPR - STAGE 3:
DRAWINGS FOR STATUTORY APPROVAL

EXHIBIT NAME:
GREAT AVIARY

DRAWING TITLE:
EXHIBIT PLAN

DRAWING NO: DPR/S3/GA/02
DATE: 27.03.2015
REVISION:

SCALE:
2 0 2.5 5 12.5M
1:250 (A1), 1:500 (A3)

- LEGEND:**
- (25) EXISTING CONTOUR LEVEL
 - +120 PROPOSED LEVEL
 - GA1 SECTION NAME
 - PROPOSED LOW PLANTING
 - PROPOSED PLANTING
 - PROPOSED ROCK
 - AVIARY MESH
 - HOLDING/ VESTIBULE MESH
 - TEMPORARY PARTITION MESH

AREA STATEMENT:

EX. NO.	EXHIBIT AREA	OFF EXHIBIT HOLDING AREA AND SERVICES
1	381 SQ.M.	80 SQ.M.
2	300 SQ.M.	152.5 SQ.M.
3	300 SQ.M.	80 SQ.M.
4	318 SQ.M.	68 SQ.M.
5	305 SQ.M.	92 SQ.M.
6	331 SQ.M.	138 SQ.M.
7	350 SQ.M.	130 SQ.M.
8	330 SQ.M.	-
TOTAL	2615 SQ.M.	732 SQ.M.

CONSULTANTS:

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GOVERNMENT OF KERALA
FOREST HEADQUARTERS, VAZHUTHACAUD,
THIRUVANANTHAPURAM - 695014
KERALA, INDIA

May be approved,
PK
13/1/16

VIEWING SHELTER 1
4.25 M x 2.5 M (+110.5)
AVIARY ENTRANCE
8 M x 8 M (+111)
UPPER LEVEL ENTRY FROM
BIO DIVERSITY CENTRE +114
VIEWING SHELTER 9
2.5 M x 7.25 M (+114)

2 M WIDE SERVICE ACCESS TO
BIO DIVERSITY CENTRE TERRACE

VIEWING SHELTER 8
4.25 M x 3 M (+114)
STAND OFF BARRIER

REED BED WITH CLAY BASED
PLANTING MEDIUM IN RCC TROUGH
CASCADE POOL WITH
ROCKS AND PLANTING

VIEWING SHELTER 7: 8.75M x 3 M (+114.8)
PITCHED ROOF WITH ARTIFICIAL STRAW
AND VERTICAL MESH FOR VIEWING

STAND OFF BARRIER

WATER BODY @ +114.5

VIEWING SHELTER 6
2.5 M x 5 M (+115.7)

Kari
7.8.15

Member Secretary
Central Zoo Authority
(Ministry of Environment & Forests)
Govt. of India, New Delhi

(C.S. Yalackhi)

EXHIBIT	ENCLOSURE DETAILS									
	SPECIES NAME			ENCLOSURES			HOLDING PENS			
	M	F	U.S.	NAME	AREA	TOTAL	M.F	NAME	AREA	M.F
1	GREEN WINGED MACAW			1A	104 m ²	381 m ²	1.1	1.1	20 m ²	1.1
	SCARLET MACAW			1B	79 m ²		1.1	1.1	20 m ²	1.1
	BLUE AND YELLOW MACAW			1C	68 m ²		1.1	1.1	20 m ²	1.1
	GREEN WINGED MACAW			1D	130 m ²		1.1	1.1	20 m ²	1.1
2	COCKATOO			2A	121 m ²	300 m ²	1.1	2.I	35 m ²	0.1
				2B	64 m ²		1.1	2.II	37.5 m ²	0.1
				2C	115 m ²		1.1	2.III	80 m ²	
3	ALEXANDRINE PARAKEET			3	300 m ²			3.I	20 m ²	
	ROSE RINGED PARAKEET							3.II	20 m ²	
								3.III	20 m ²	
								3.IV	20 m ²	
4/B	MALABAR GREY HORNBILL			4A	118 m ²	318 m ²	1.1	4.I	24 m ²	0.1
				4B	150 m ²		1.1	4.II	24 m ²	0.1
				4C	50 m ²		1.1			
				4D	164 m ²		1.1	5.I	24 m ²	0.1
				4E	141 m ²		1.1	5.II	24 m ²	0.1
6	NILGIRI LAUGHING THRUSH			6	331 m ²			6.I	18 m ²	
								6.II	24 m ²	
								6.III	24 m ²	
								6.IV	24 m ²	
								6.V	24 m ²	
								6.VI	24 m ²	
7	GREAT INDIAN HORNBILL			7A	78 m ²	350 m ²	0.1	7.I	24 m ²	
				7B	92 m ²		1.1	7.II	25 m ²	
				7C	105 m ²		1.1	7.III	25 m ²	
				7D	74 m ²		0.1	7.IV	28 m ²	
8	BLACK IBIS			8	330 m ²			5.10		
	GREY HERON							3.6		
	WHITE STORK							3.7		



STAND OFF BARRIER

VIEWING SHELTER 2
6.6 M x 3 M (+111)

VIEWING SHELTER 2
3.6 M x 3 M (+113.1)

SERVICE ROOM
4 M x 5 M

VIEWING SHELTER 2
3.6 M x 3 M (+113.1)

SERVICE ROOM
4 M x 5 M

TEMPORARY ROLL DOWN PARTITION

MASTS: 25CM Ø MILD STEEL CIRCULAR
HOLLOW SECTIONS WITH 8 MM WALL
THICKNESS

VIEWING SHELTER 4: 3 M x 10M (+115.4)
PITCHED ROOF WITH ARTIFICIAL STRAW
AND VERTICAL MESH FOR VIEWING

BIRD VIEWING THROUGH
AVIARY MESH
SERVICE ROOM
4M x 5M

SEASONAL STREAM

AVIARY MESH: STAINLESS STEEL MESH
MADE OF STAINLESS STEEL CABLES AND
STAINLESS STEEL FERRULES FRICTION
PRESSED-BLACKENED (CARL STAHL OR
EQUIVALENT)
OR
HANDWOVEN STAINLESS STEEL MESH
NETTING (CARLOS MESH OR EQUIVALENT)

HOLDING/ VESTIBULE MESH: 2.5 CM X
2.5CM 16 GAUGE GALVANISED STIFF
WELD MESH

VIEWING SHELTER 5
8.5 M x 4.5 M (+116.5)

STAND OFF BARRIER



THRISSUR ZOOLOGICAL PARK
Wildlife Conservation & Research Centre, Puthur

DPR - STAGE 3:
DRAWINGS FOR STATUTORY APPROVAL

EXHIBIT NAME:
GREAT AVIARY

DRAWING TITLE:
EXHIBIT - STRUCTURAL PLAN

DRAWING NO: DPR/S3/GA/02A DATE: 27.03.2015 REVISION:

SCALE:
1:250 (A1), 1:500 (A3)

- LEGEND:**
- (115) EXISTING CONTOUR LEVEL
 - GAA SECTION NAME
 - EXISTING BAMBOO CLUMPS
 - EXHIBIT WITH ROOF MESH
 - EXHIBIT OPEN TO SKY
 - OFF EXHIBIT HOLDING/BREEDING PENS
 - STRUCTURAL GRID LINES
 - MAJOR CABLE
 - MINOR CABLE
 - ENCLOSURE MESH
 - ANCHOR CABLE
 - STIFF MESH
 - TEMPORARY MESH
 - COLUMN MASTS
 - GUY ANCHOR

AREA STATEMENT:

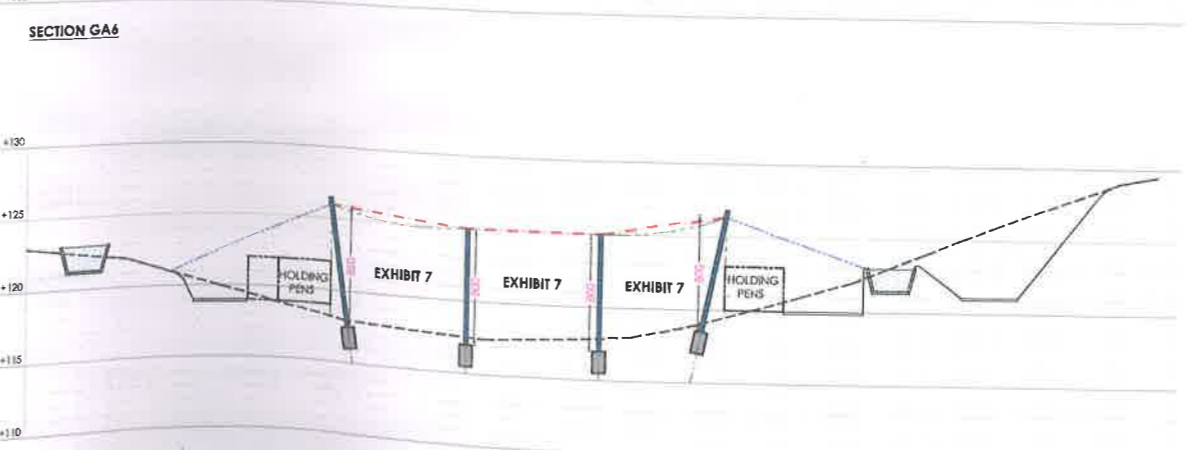
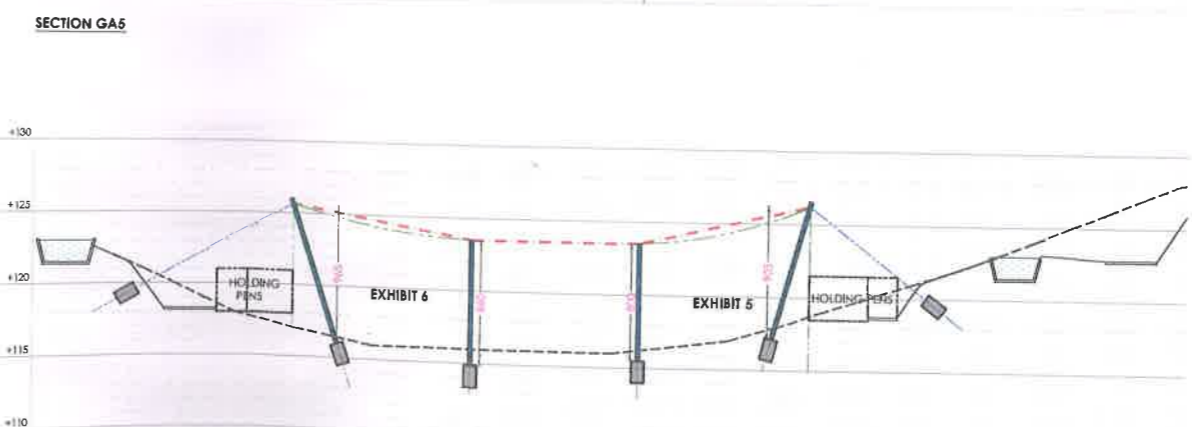
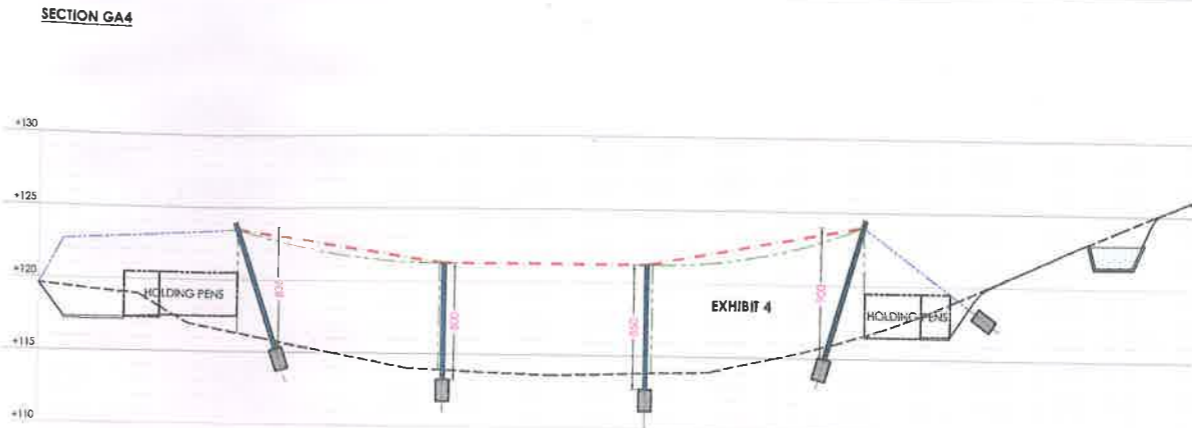
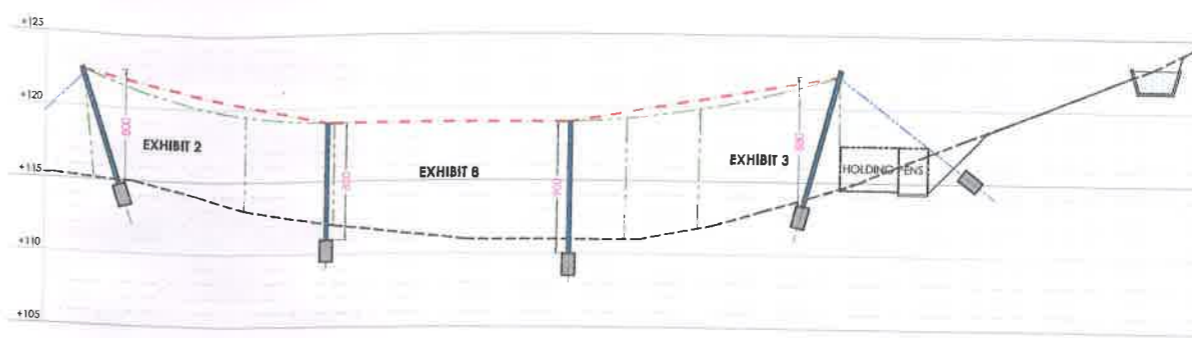
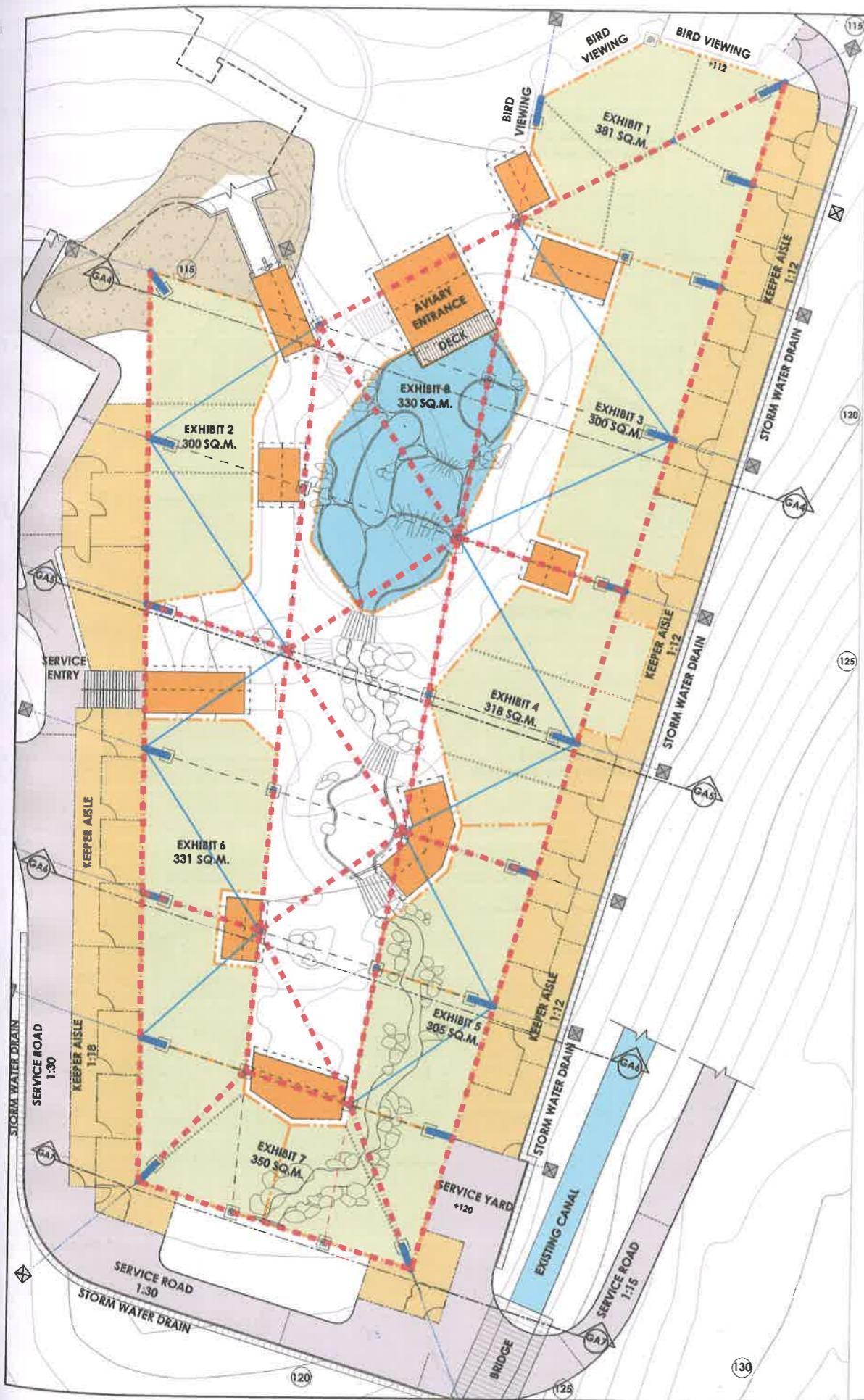
TOTAL EXHIBIT AREA (MESH ENCLOSED)	2615 Sq.m
TOTAL ROOF MESH AREA	2285 Sq.m
TOTAL VISITOR AREA	1576 Sq.m
TOTAL SERVICE AREA	1120 Sq.m
TOTAL AREA OF AVIARY	5311 Sq.m

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KERALA, INDIA



C.S. Jalakki



THRISSUR ZOOLOGICAL PARK
Wildlife Conservation & Research Centre, Puthur

DPR - STAGE 3:

DRAWINGS FOR STATUTORY APPROVAL

EXHIBIT NAME:

GREAT AVIARY

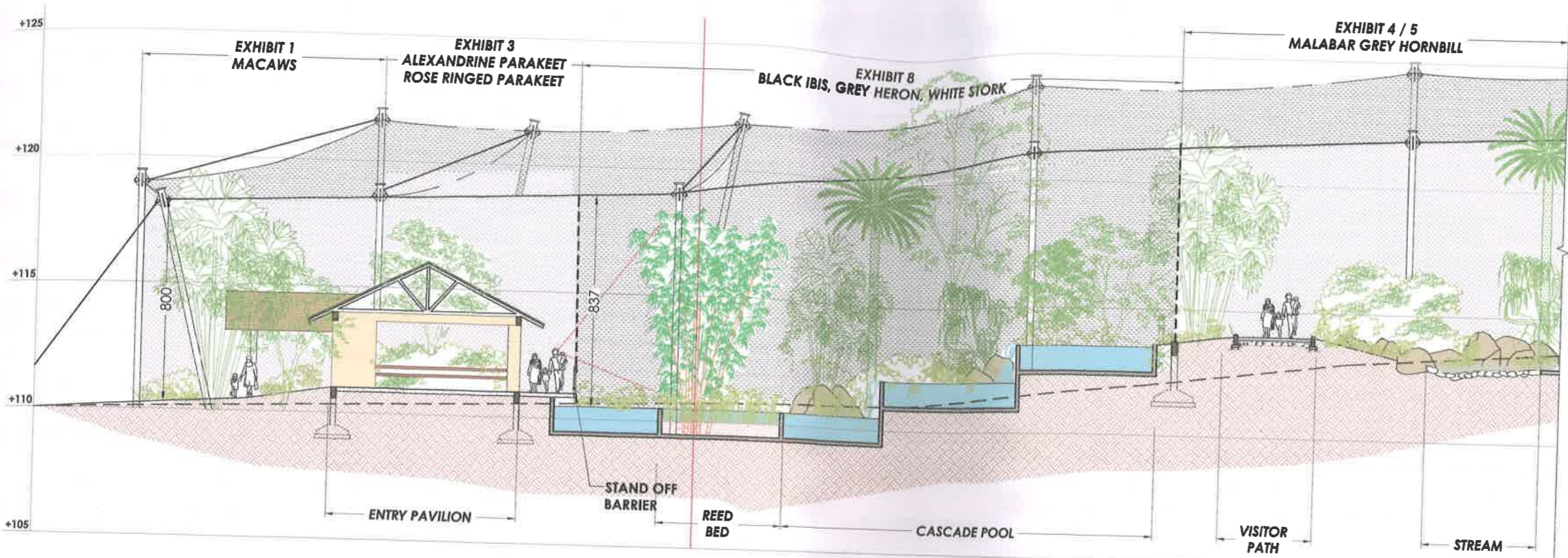
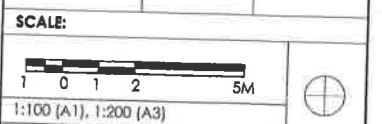
DRAWING TITLE:

SECTION GA1

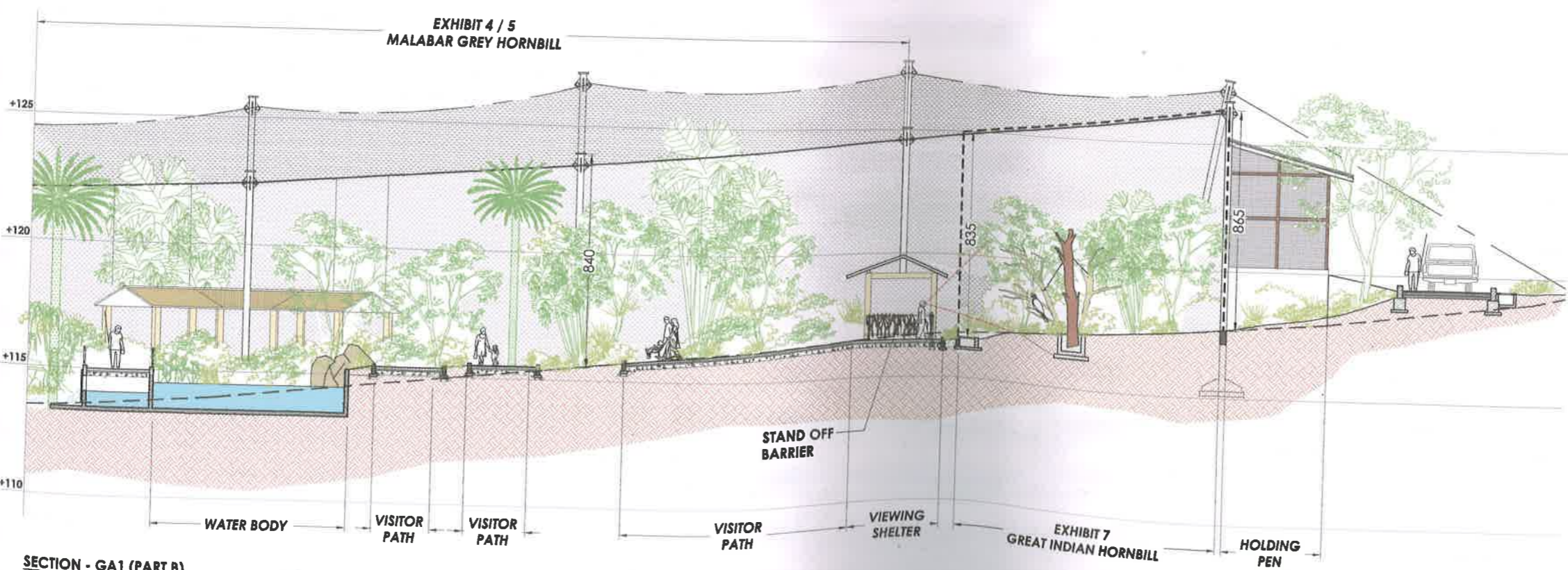
DRAWING NO: DATE: REVISION:

DPR/S3/GA/04 27.03.2015

SCALE:



SECTION - GA1 (PART A)



SECTION - GA1 (PART B)

CONSULTANTS:

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Idea Design, Cochin.

Chitra Biley, B Arch, MLA, ASIOLA
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KERALA, INDIA

(Handwritten signature and name)
C.S. Y. Lakshmi



THRISSUR ZOOLOGICAL PARK
Wildlife Conservation & Research Centre, Puthur

DPR - STAGE 3:

DRAWINGS FOR STATUTORY APPROVAL

EXHIBIT NAME:

GREAT AVIARY

DRAWING TITLE:

SECTION GA2 & GA3

DRAWING NO:

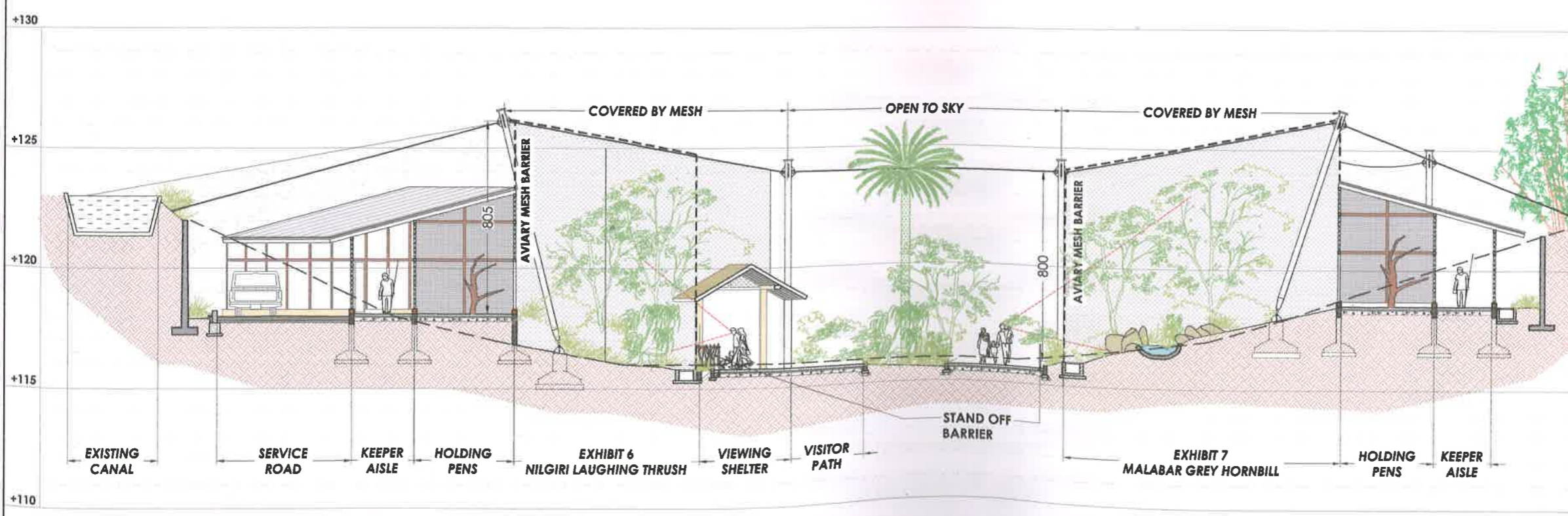
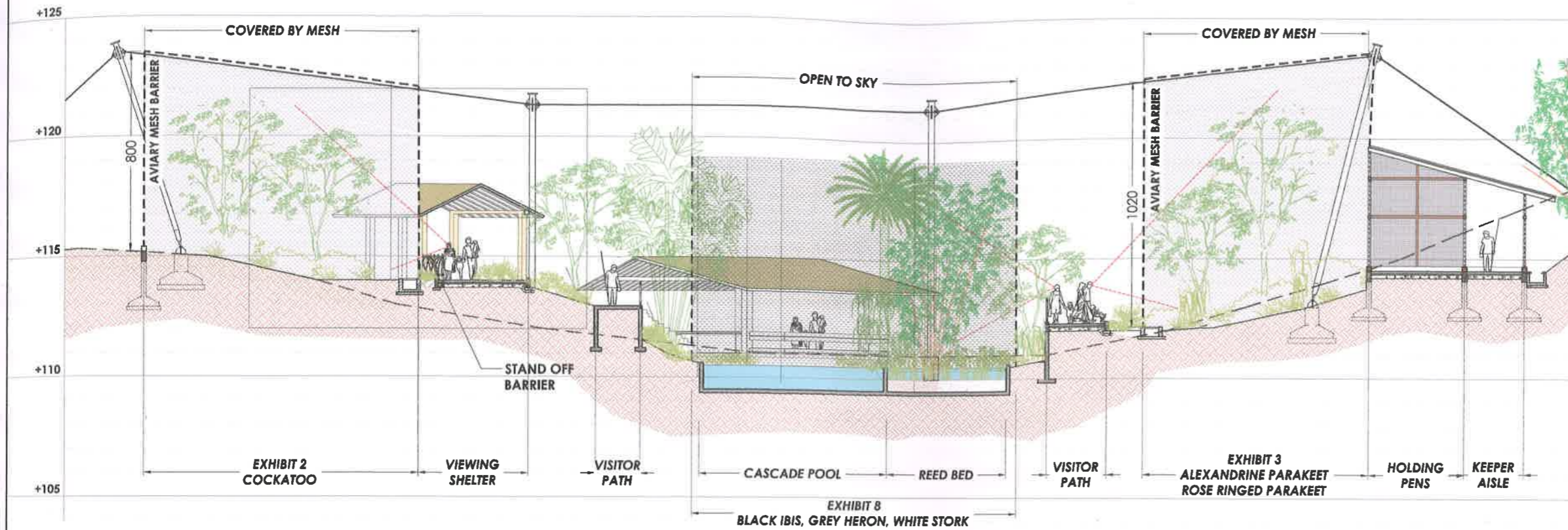
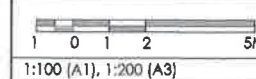
DATE:

REVISION:

DPR/S3/GA/05

27.03.2015

SCALE:



CONSULTANTS:

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PROJECT BY:

KERALA FOREST DEPARTMENT
GOVERNMENT OF KERALA
FOREST HEADQUARTERS, VAZHUTHACAUD,
THIRUVANANTHAPURAM - 695014
KERALA, INDIA

(Handwritten signature and name)
C.S. Yalakar



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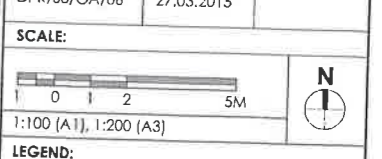
DPR - STAGE 3:
DRAWINGS FOR STATUTORY APPROVAL

EXHIBIT NAME:
GREAT AVIARY

DRAWING TITLE:
TYPICAL EXHIBIT - GREAT INDIAN HORNBILL

DRAWING NO: DPR/S3/GA/06
DATE: 27.03.2015
REVISION:

SCALE:
1:100 (A1), 1:200 (A3)



- LEGEND:**
- (15) EXISTING CONTOUR LEVEL
 - +120 PROPOSED LEVEL
 - (GK) SECTION NAME
 - PROPOSED LOW PLANTING
 - PROPOSED PLANTING
 - PROPOSED ROCK
 - AVIARY MESH
 - HOLDING/ VESTIBULE STIFF MESH
 - TEMPORARY ROLL UP PARTITION

COLLECTION PLAN:

MALE	FEMALE	TOTAL
2	4	6

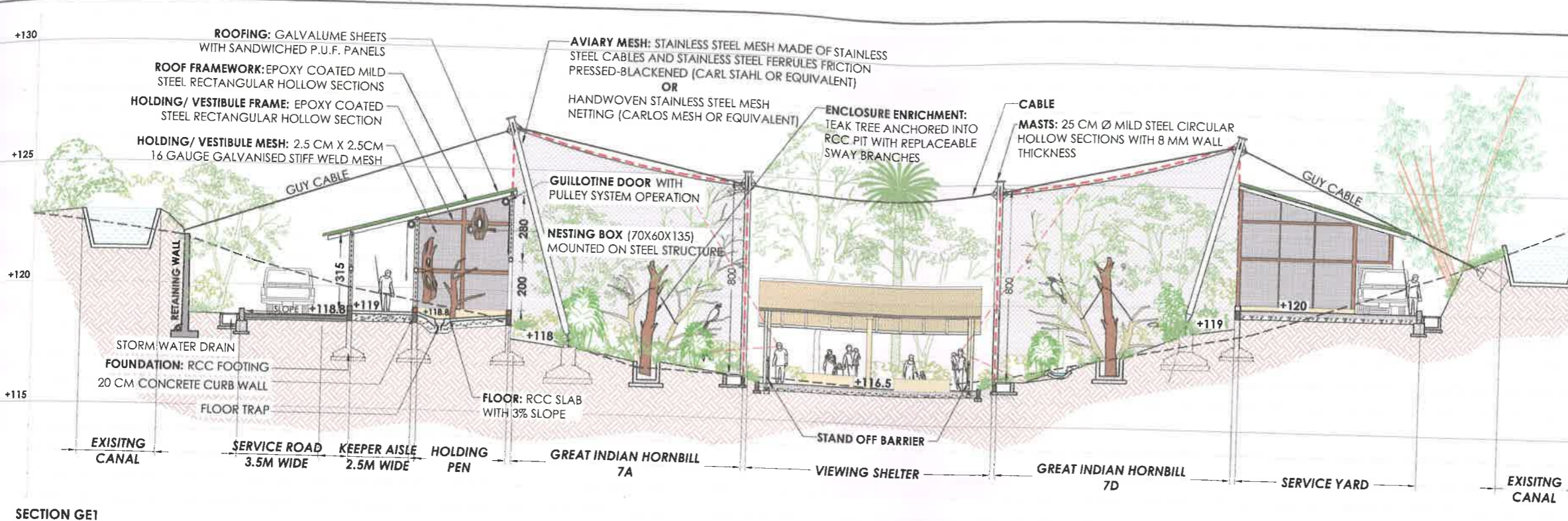
AREA STATEMENT:

GREAT INDIAN HORNBILL EXHIBIT	350 Sq.m
SERVICE/ HOLDING PEN	101 Sq.m
BREEDING PEN TYPICAL	21.5 Sq.m
HOLDING PEN TYPICAL	17.3 Sq.m

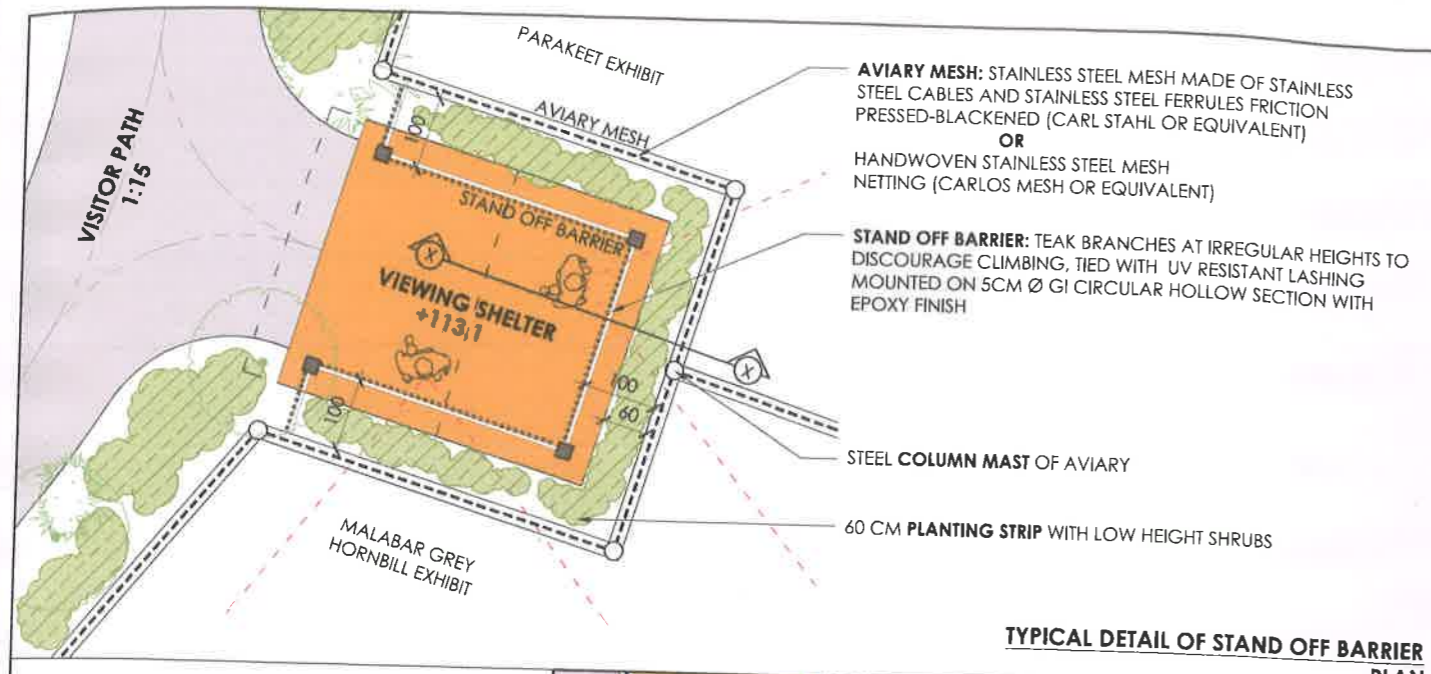
CONSULTANTS:
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Jon Coe Design Pty Ltd, Idea Design
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Idea Design, Bangalore
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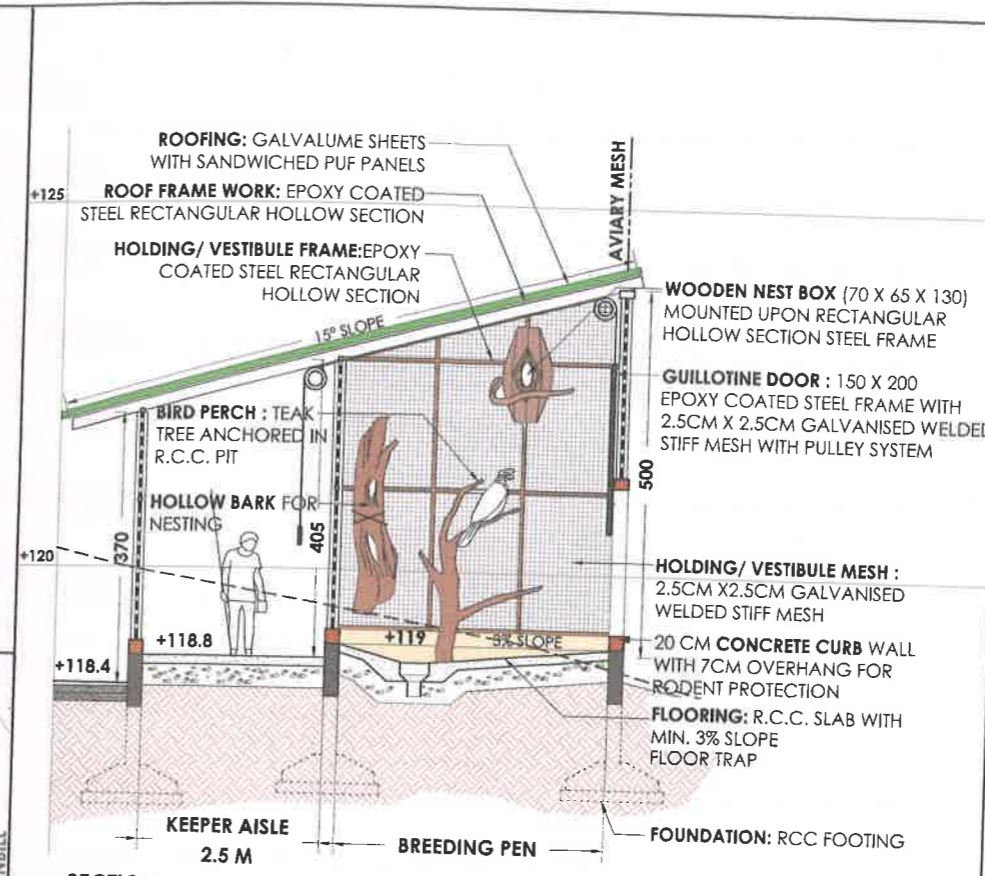
PROJECT BY:
KERALA FOREST DEPARTMENT
GOVERNMENT OF KERALA
FOREST HEADQUARTERS, VAZHUTHACAUD,
THIRUVANANTHAPURAM - 695014
KERALA, INDIA



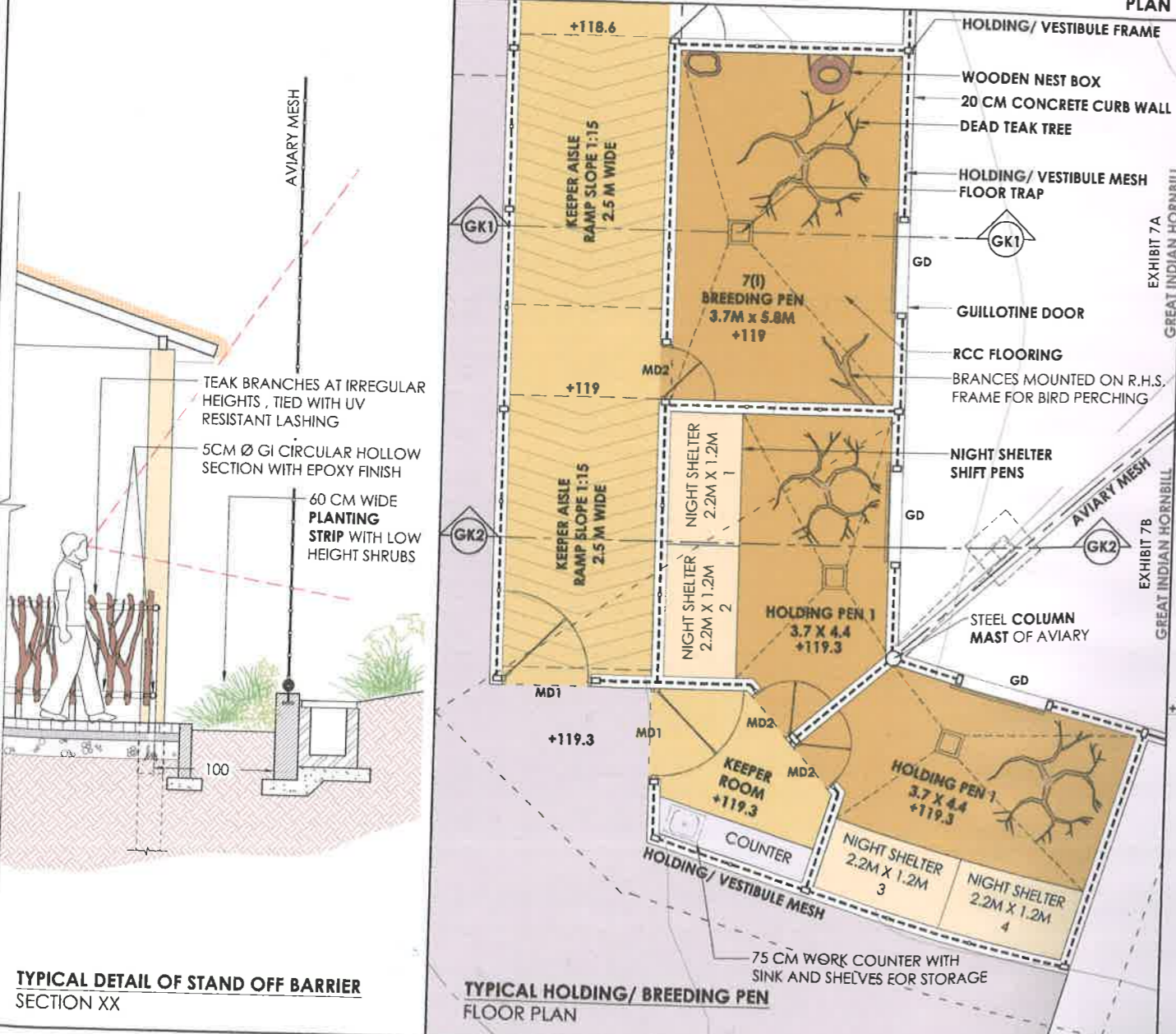
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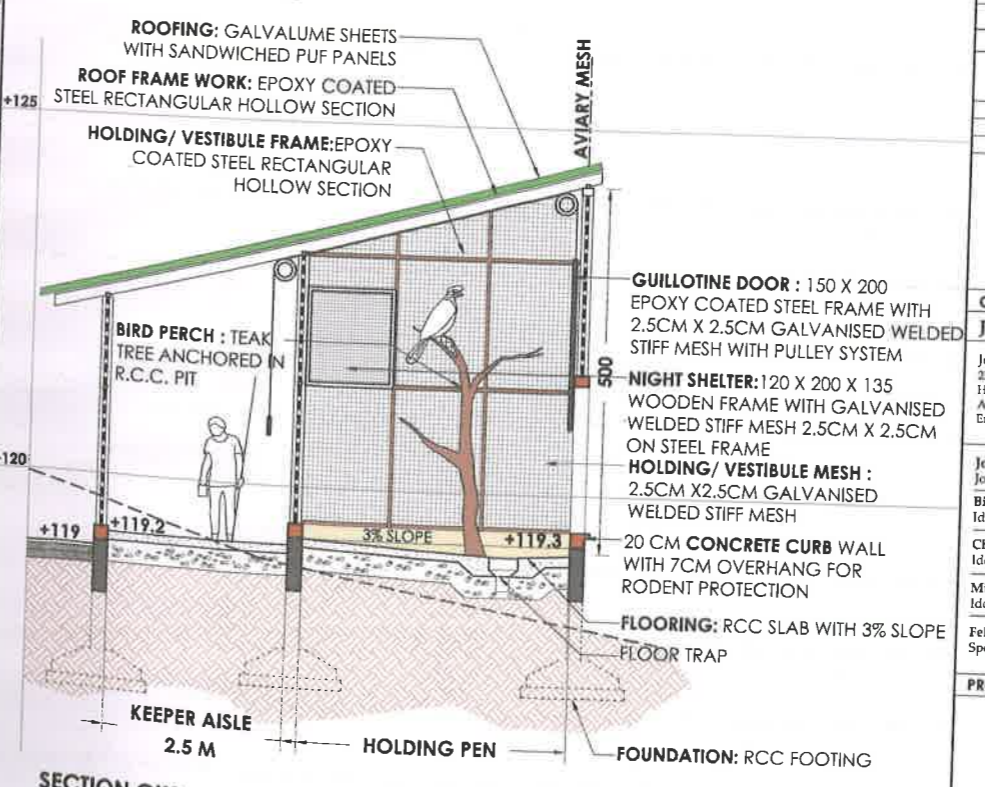
TYPICAL DETAIL OF STAND OFF BARRIER PLAN



SECTION GK1 TYPICAL BREEDING PEN



TYPICAL HOLDING/ BREEDING PEN FLOOR PLAN



SECTION GK2 TYPICAL HOLDING PEN

TYPICAL DETAIL OF STAND OFF BARRIER SECTION XX



THRISSUR ZOOLOGICAL PARK
Wildlife Conservation & Research Centre, Puthur

DPR - STAGE 3:

DRAWINGS FOR STATUTORY APPROVAL

EXHIBIT NAME:

GREAT AVIARY

DRAWING TITLE:

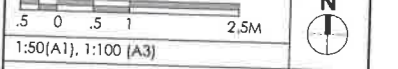
TYPICAL OFF EXHIBIT HOLDING & STAND OFF BARRIER - GREAT INDIAN HORNBILL

DRAWING NO: DPR/S3/GA/07

DATE: 27.03.2015

REVISION:

SCALE:



LEGEND:

(115) EXISTING CONTOUR LEVEL

+120 PROPOSED LEVEL

(HK) SECTION NAME

--- HOLDING/ VESTIBULE MESH

--- AVIARY MESH

COLLECTION PLAN:

MALE	FEMALE	TOTAL
2	4	6

AREA STATEMENT:

BREEDING PEN 21.5 SQ.M.

HOLDING PEN 17 SQ.M.

SCHEDULE OF OPENINGS

Symbol	Type	Size	Slit Level	Nos.
		Width (Height)	from FFL	
MD1	Main door	90 210	±0.00	2
MD2	Mesh door	150 210	±0.00	3
GD	Guillotine door	150 200	±0.20	3

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