

# KENYA PORTS AUTHORITY



## PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY

### VOLUME II: DRAWINGS

## Table of Contents

### **PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY:**

Cover sheet.....	4
Site Layout Plan.....	5
Site Plan.....	6
General Arrangement.....	7
General Arrangement.....	8
General Arrangement.....	9
General Arrangement.....	10
General Arrangement.....	11
General Arrangement.....	12
Pile Layout Plan.....	13
Pile Layout Plan.....	14
Pile Layout Plan.....	15
Pile Layout Plan.....	16
Pile Layout Plan.....	17
Typical Dolphin Details.....	18
North Elevation.....	19
North Elevation.....	20
North Elevation.....	21
North Elevation.....	22
North Elevation.....	23
North Elevation.....	24
Section Along The Jetty.....	25
Section Along The Jetty.....	26
Dolphins Sections.....	27
Dolphins Sections.....	28
Dolphins Sections.....	29
Dolphins Sections.....	30
Jetty Head Protection Dolphin Details.....	31
Dolphin Types.....	32
Isometric View.....	33
Isometric View (Relative to Dredging (by others).....	34

Berthing Dredging Drawing .....	35
Catwalk details .....	36
Demolition Plan .....	37
Demolition (Isometric View) .....	38
Bollard and Fender Details.....	39
Dolphin 6.4x6.4m RC Details.....	40
Dolphin 12.5x6.4m RC Details.....	41
RC Details For Jetty Head Protection Dolphin.....	42
Sea water Height At +4.4m, 0.0m & -5.0m ACD .....	43
Sections Along Sea Bed Ground .....	44
Sections Along Sea Bed Ground .....	45
Existing Jetty - General Arrangement 01 .....	46
Existing Jetty - General Arrangement 02 .....	47
Existing Jetty - Isometric View .....	48



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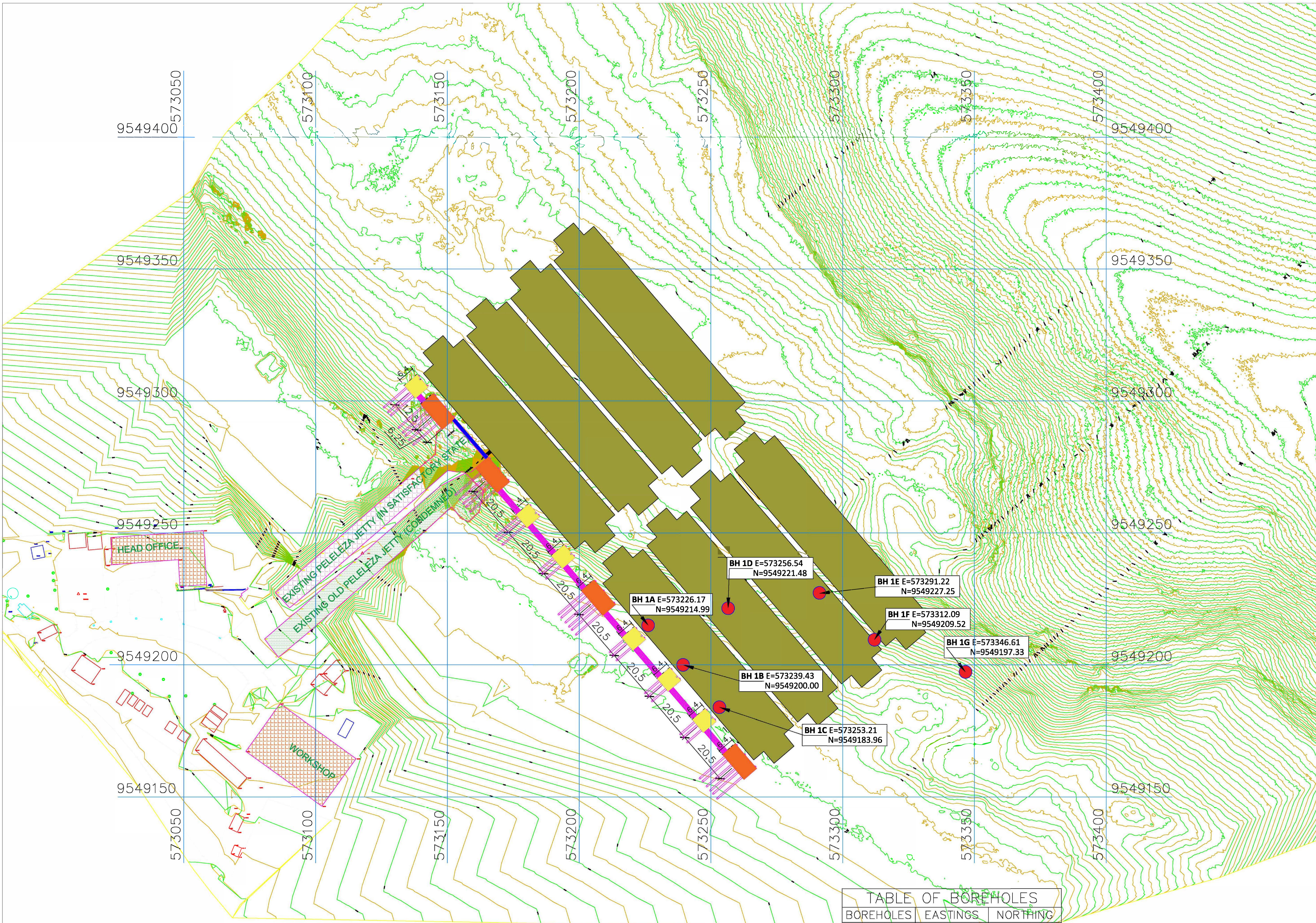
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PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY		
SHT NO.	TITTLE	DRG NO.
0	Cover Sheet	
1	Site Layout Plan	
1-3	Site Plan	
Sht 01	Jetty General Arrangement	KPA/PELELEZA/01
Sht 02	Jetty General Arrangement	KPA/PELELEZA/02
Sht 03	Jetty General Arrangement	KPA/PELELEZA/03
Sht 04	Jetty General Arrangement	KPA/PELELEZA/04
Sht 05	Jetty General Arrangement	KPA/PELELEZA/05
Sht 06	Jetty General Arrangement	KPA/PELELEZA/06
Sht 07	Pile Layout Plan	KPA/PELELEZA/07
Sht 08	Pile Layout Plan	KPA/PELELEZA/08
Sht 09	Pile Layout Plan	KPA/PELELEZA/09
Sht 10	Pile Layout Plan	KPA/PELELEZA/10
Sht 11	Pile Layout Plan	KPA/PELELEZA/11
Sht 12	Typical Dolphin Details	KPA/PELELEZA/12
Sht 13	Jetty North Elevation	KPA/PELELEZA/13
Sht 14	Jetty North Elevation	KPA/PELELEZA/14
Sht 15	Jetty North Elevation	KPA/PELELEZA/15
Sht 16	Jetty North Elevation	KPA/PELELEZA/16
Sht 17	Jetty North Elevation	KPA/PELELEZA/17
Sht 18	Jetty North Elevation	KPA/PELELEZA/18
Sht 19	Section Along The Jetty	KPA/PELELEZA/19
Sht 20	Section Along The Jetty	KPA/PELELEZA/20
Sht 21	Dolphins Sections	KPA/PELELEZA/21
Sht 22	Dolphins Sections	KPA/PELELEZA/22
Sht 23	Dolphins Sections	KPA/PELELEZA/23
Sht 24	Dolphin Sections	KPA/PELELEZA/24
Sht 25	Jett Head Protection Dolphin	KPA/PELELEZA/25
Sht 26	Dolphin Types	KPA/PELELEZA/26
Sht 27	Isometric View	KPA/PELELEZA/27
Sht 28	Berthing Drawing	KPA/PELELEZA/28
Sht 29	Berthing Drawing	KPA/PELELEZA/29
Sht 30	Catwalk Details	KPA/PELELEZA/30
Sht 31	Demolition Plan	KPA/PELELEZA/31
Sht 32	Demolition (Isometric View)	KPA/PELELEZA/32
Sht 33	Bollard and Fender Details	KPA/PELELEZA/33
Sht 34	Dolphin 6.4x6.4m RC Details	KPA/PELELEZA/34
Sht 35	Dolphin 12.5x6.4 RC Details	KPA/PELELEZA/35
Sht 36	RC Details For Jetty Head Protection Dolphin	KPA/PELELEZA/36
Sht 37	Sea water Height At +4.4m, 0.0m & -5.0m ACD	KPA/PELELEZA/37
Sht 38	Sections Along Dredged Ground	KPA/PELELEZA/38
Sht 39	Sections Along Dredged Ground	KPA/PELELEZA/39
Sht 40	Existing Jetty - General Arrangement 01	KPA/PELELEZA/40
Sht 41	Existing Jetty - General Arrangement 02	KPA/PELELEZA/41
Sht 42	Existing Jetty - Isometric View	KPA/PELELEZA/42

PROJECT NUMBER;

KPA/062/2022-23/PDM




**TABLE OF BOREHOLES**

BOREHOLES	EASTINGS	NORTHING
BH 1A	573226.17	9549214.99
BH 1B	573239.43	9549200.00
BH 1C	573253.21	9549183.96
BH 1D	573256.54	9549221.48
BH 1E	573291.22	9549227.25
BH 1F	573312.09	9549209.52
BH 1G	573346.61	9549197.33

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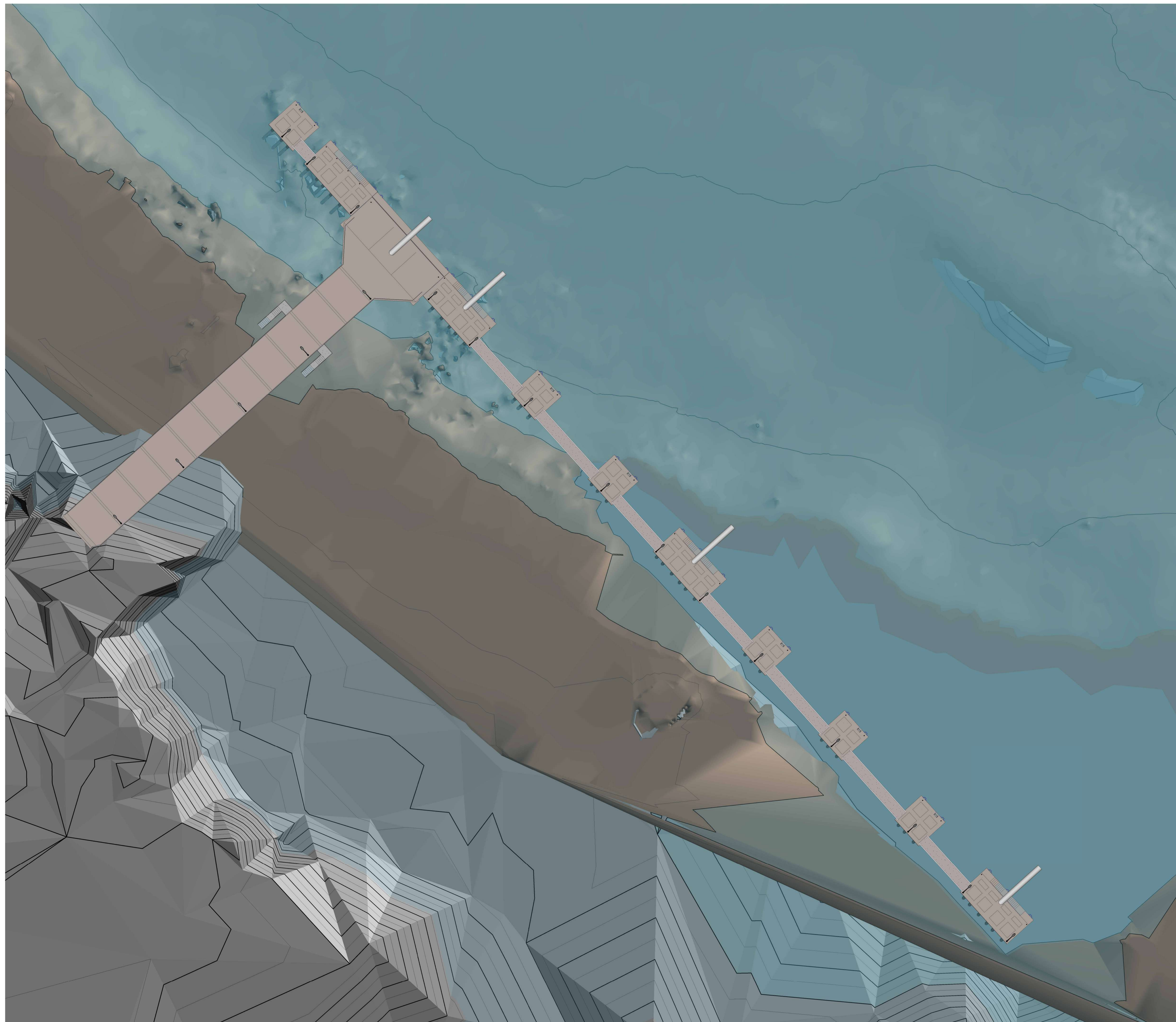
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**[ TENDER DRAWINGS ]**

DRG TITLE


**Site Location Plan**

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 21/11/2023
SCALE ( @A0 ) 1:500		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER 1	REV	



Rev	Description	Date

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**PROPOSED REHABILITATION  
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JETTY**

ENGINEER

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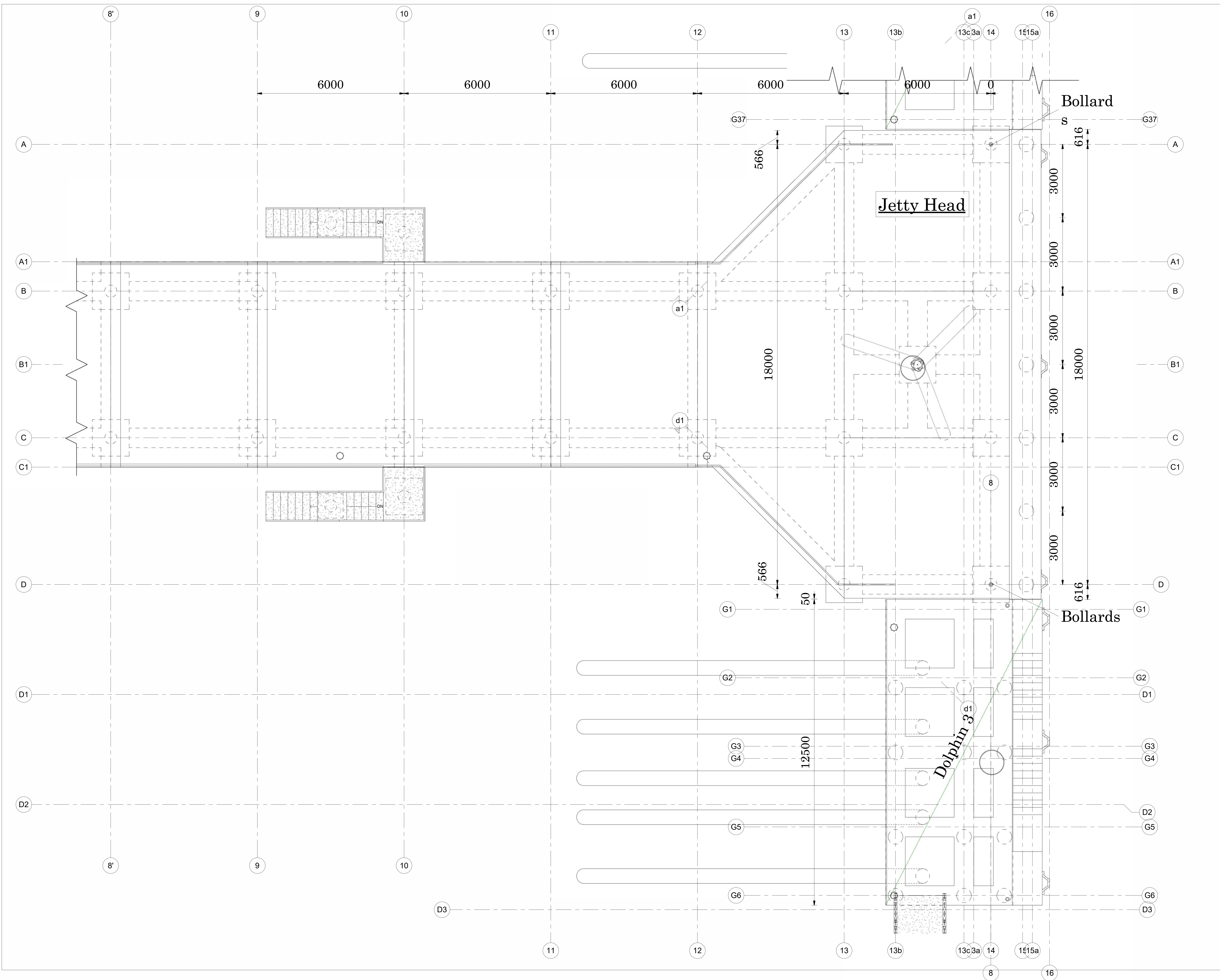
PRJ. TITLE

DRG TITLE

**Site Plan**


DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 )		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER 1-3		REV





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**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

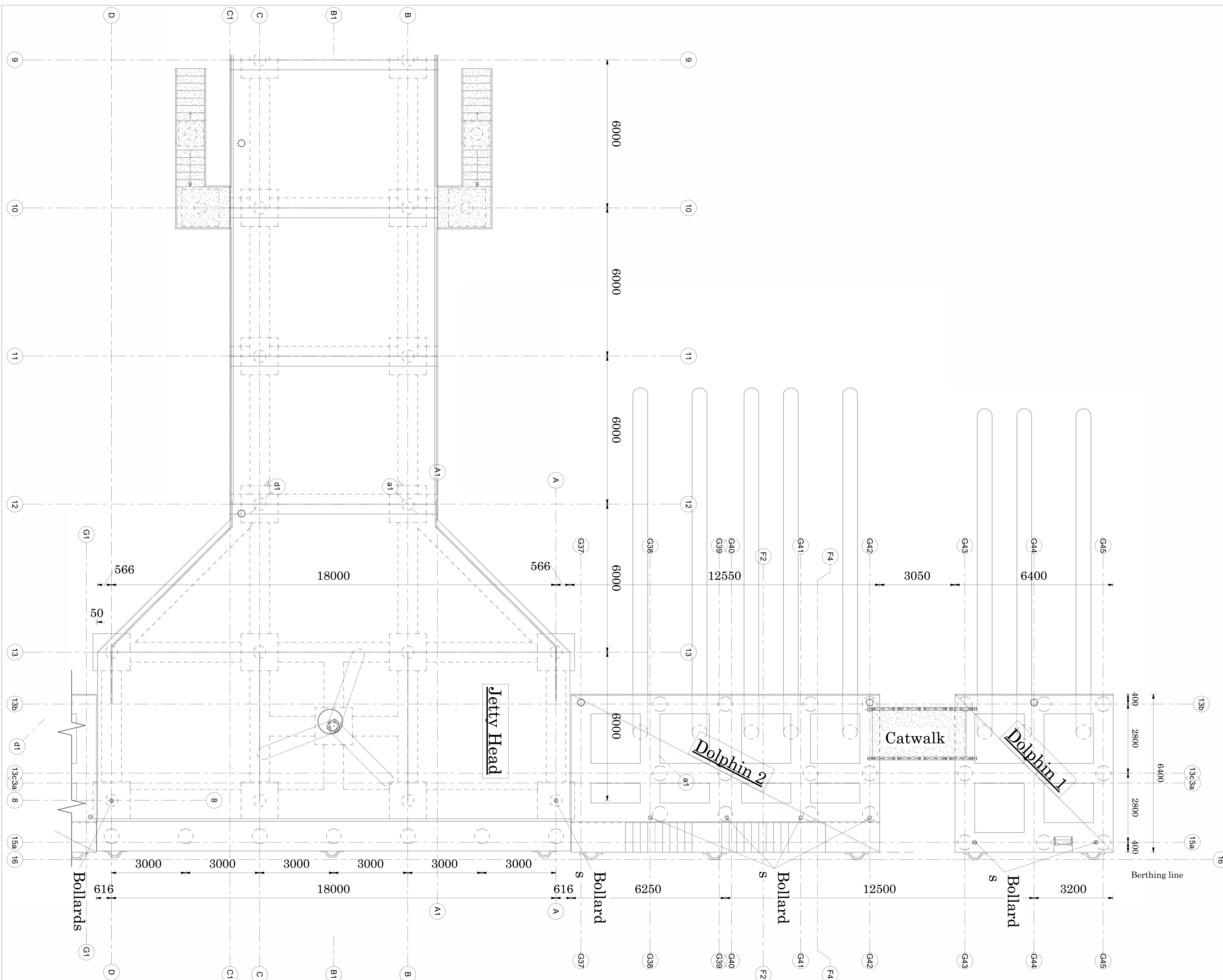
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DRG TITLE


**Jetty General Arrangement**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 02	REV	



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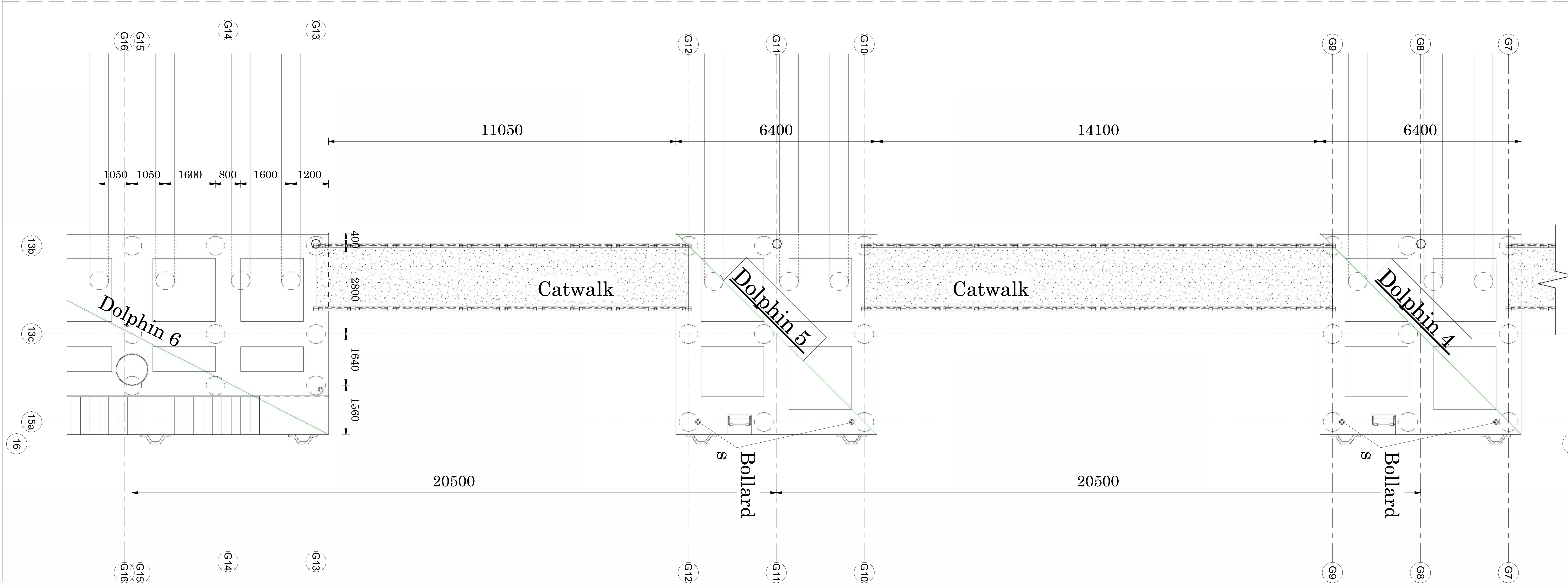
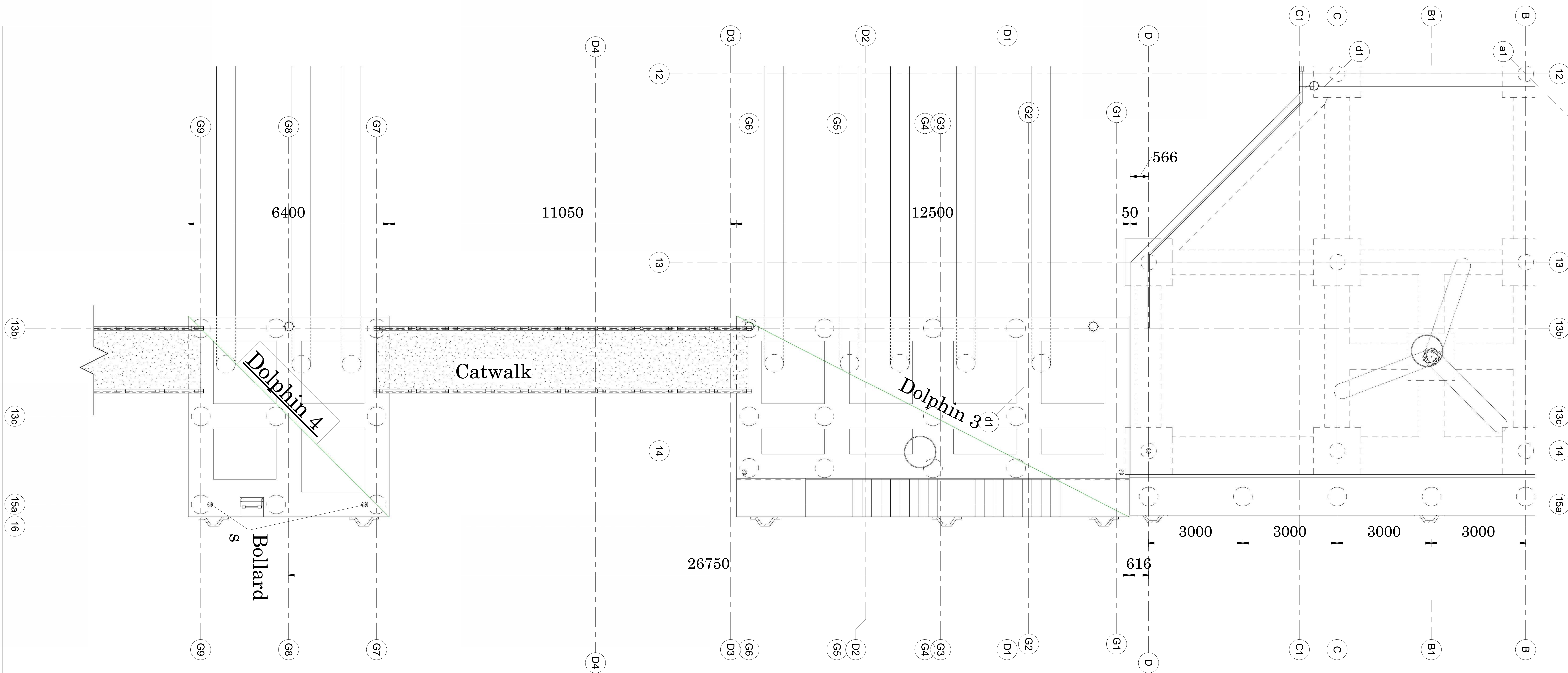
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**Jetty General Arrangement**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 03		REV



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**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

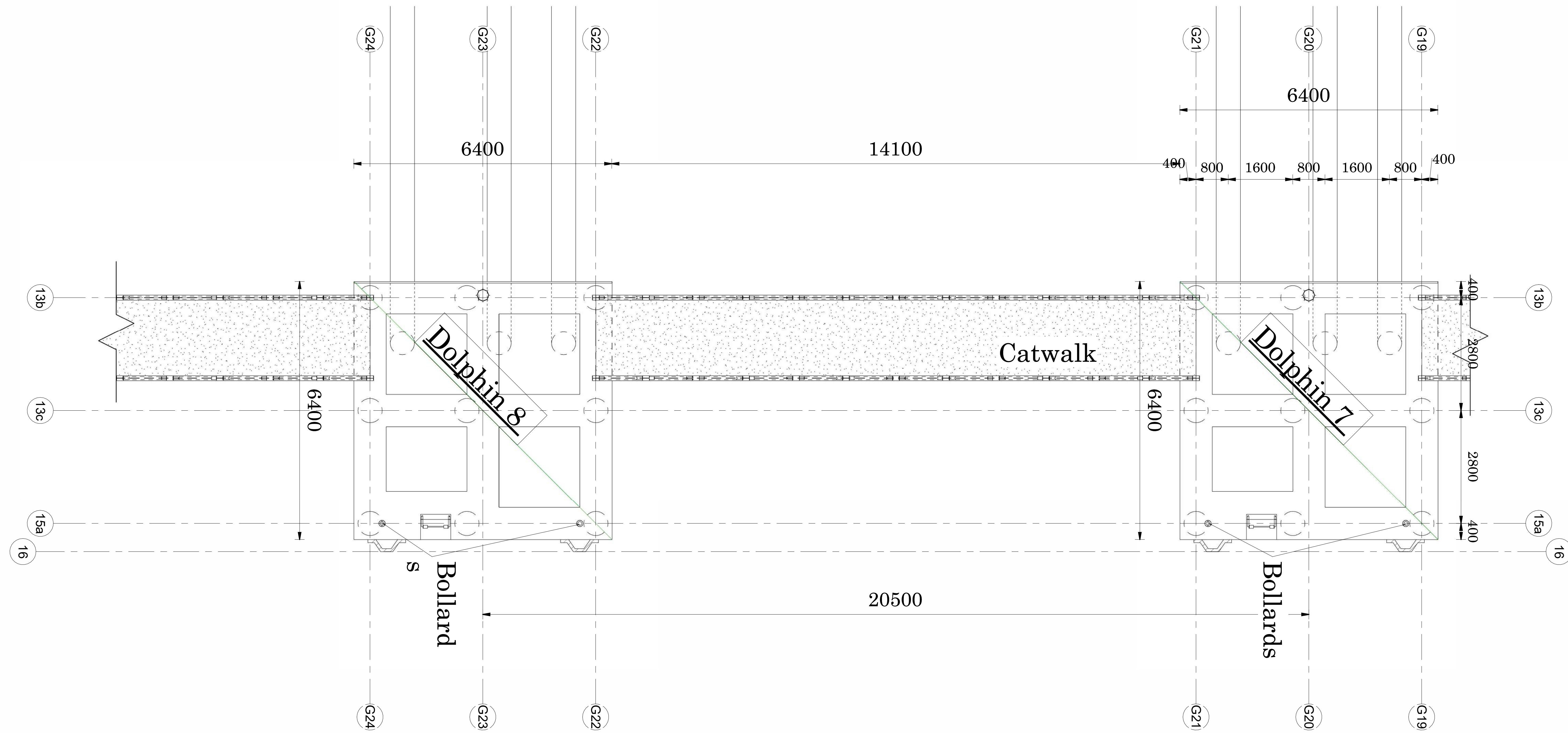
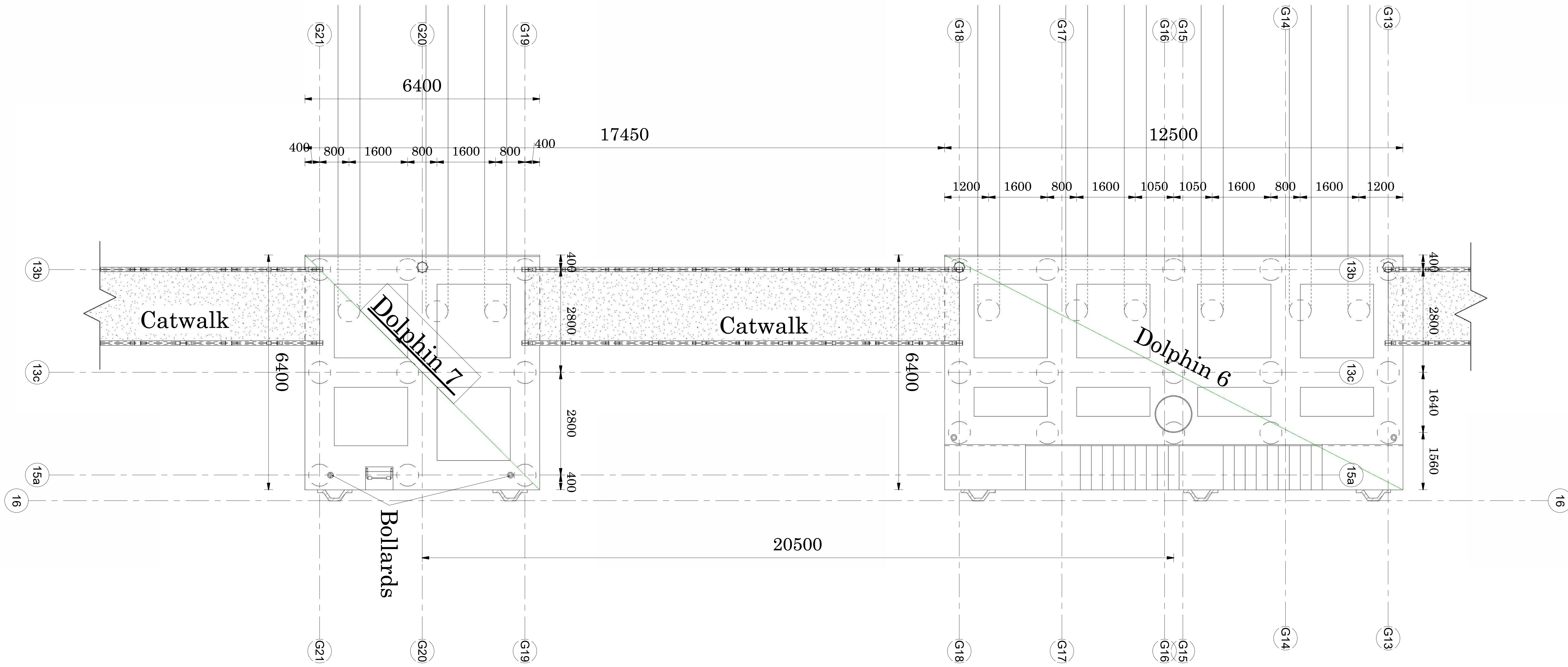
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**Jetty General Arrangement**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 04		REV



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JETTY**

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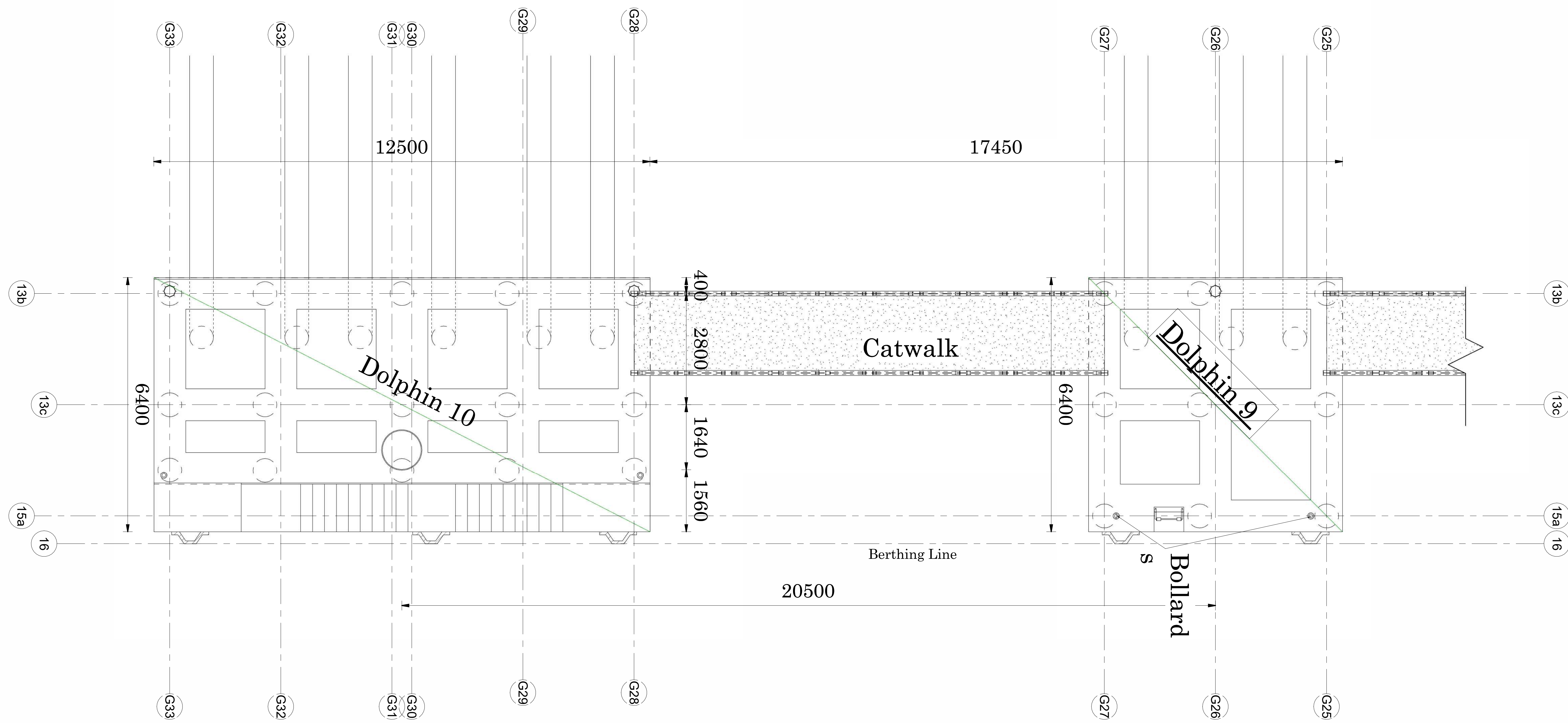
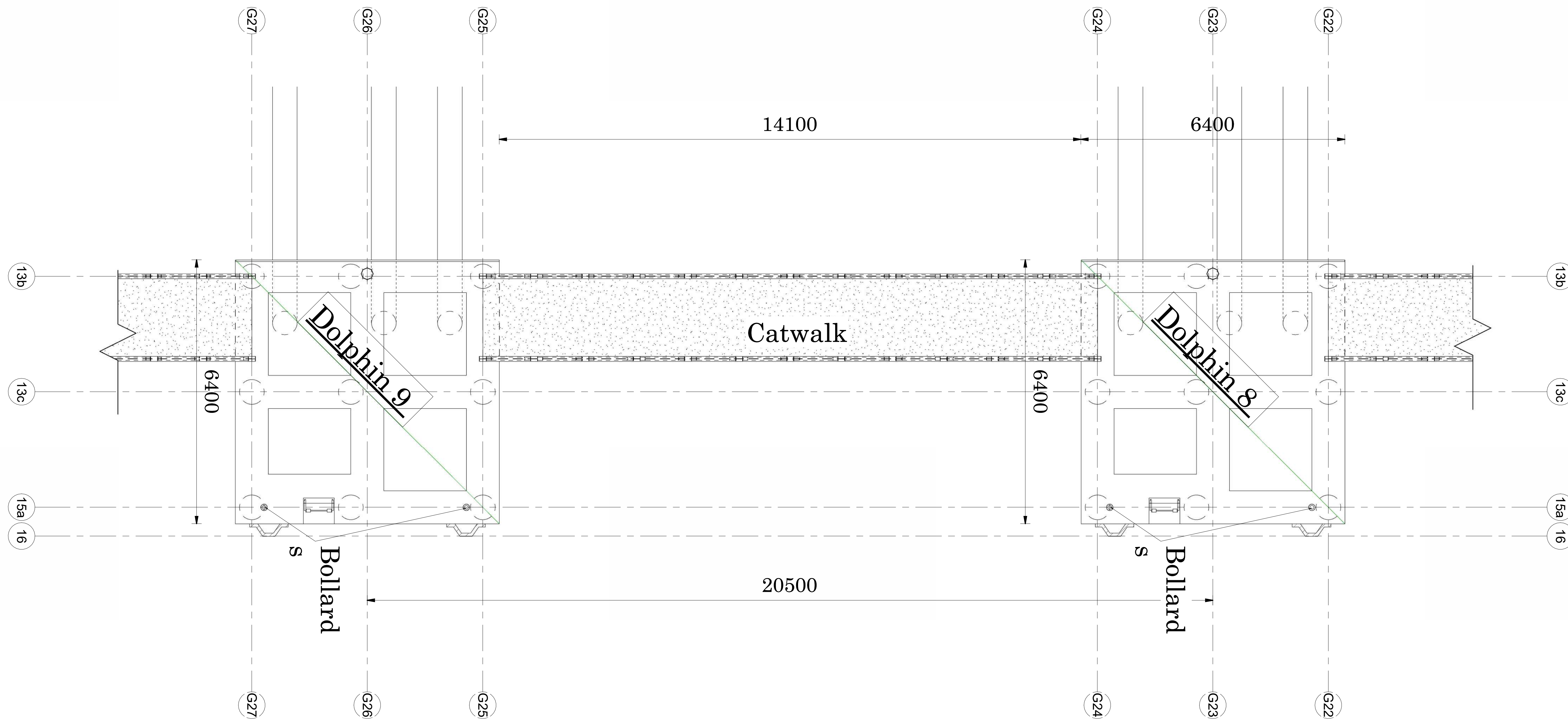
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**Jetty General Arrangement**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
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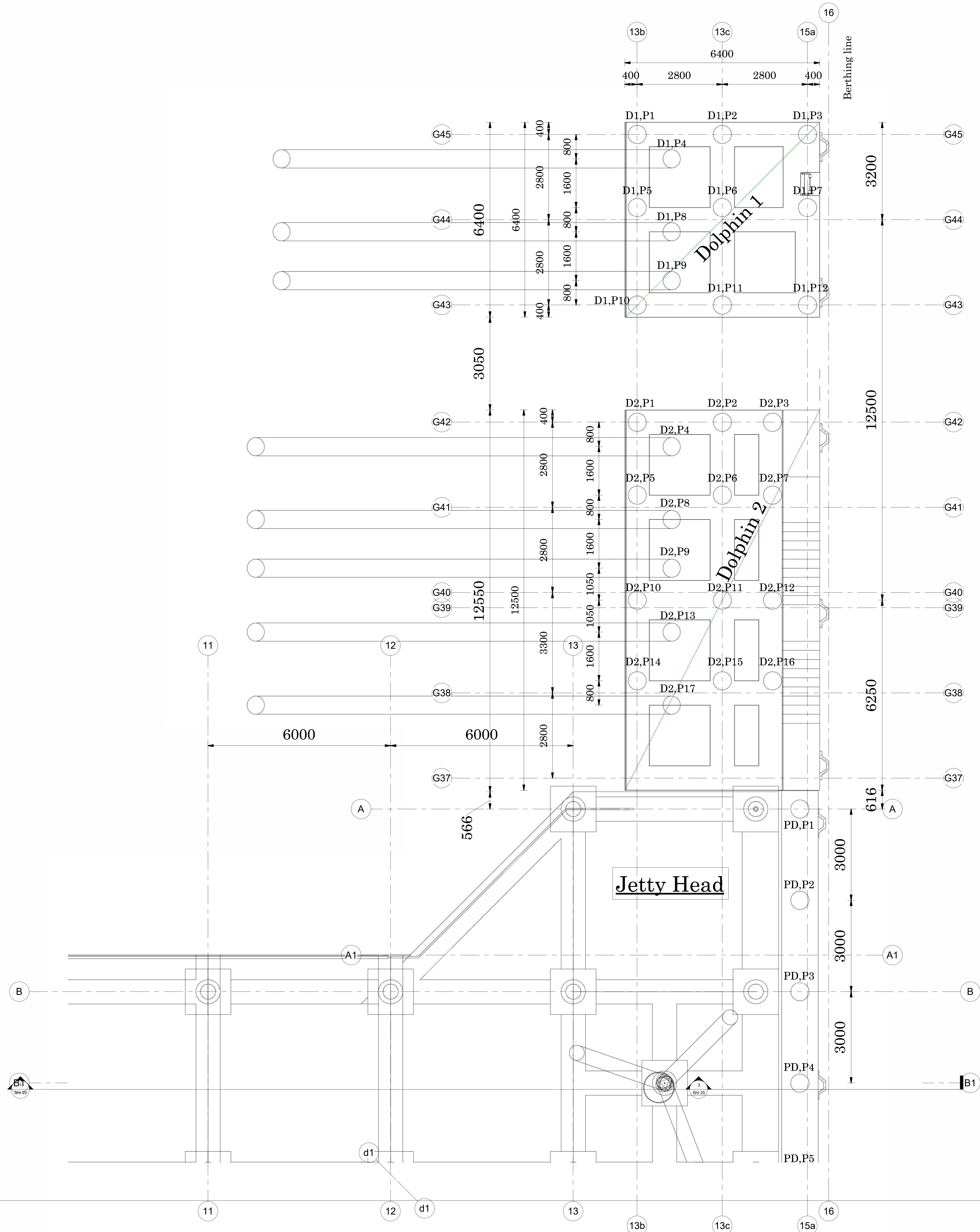
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**Jetty General Arrangement**


DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 06		REV



Pile No.	Easting	Northing
D1,P1	573134.27	9549305.81
D1,P2	573136.39	9549307.64
D1,P3	573138.52	9549309.48
D1,P4	573135.66	9549305.95
D1,P5	573135.85	9549303.99
D1,P6	573137.96	9549305.83
D1,P7	573140.09	9549307.66
D1,P8	573137.23	9549304.14
D1,P9	573138.27	9549302.92
D1,P10	573137.94	9549301.58
D1,P11	573140.06	9549303.41
D1,P12	573142.18	9549305.24
D2,P1	573140.45	9549298.66
D2,P2	573142.58	9549300.50
D2,P3	573143.82	9549301.57
D2,P4	573141.83	9549298.80
D2,P5	573142.02	9549296.85
D2,P6	573144.14	9549298.68
D2,P7	573145.39	9549299.75
D2,P8	573143.40	9549296.98
D2,P9	573144.45	9549295.77
D2,P10	573144.28	9549294.23
D2,P11	573146.39	9549296.06
D2,P12	573147.64	9549297.14
D2,P13	573145.82	9549294.18
D2,P14	573146.01	9549292.23
D2,P15	573148.13	9549294.06
D2,P16	573149.38	9549295.14
D2,P17	573147.39	9549292.36
PD,P1	573152.81	9549292.53
PD,P2	573154.77	9549290.26
PD,P3	573156.73	9549287.99
PD,P4	573158.69	9549285.72
PD,P5	573160.65	9549283.45
PD,P6	573162.61	9549281.18
PD,P7	573164.57	9549278.91

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ENGINEER

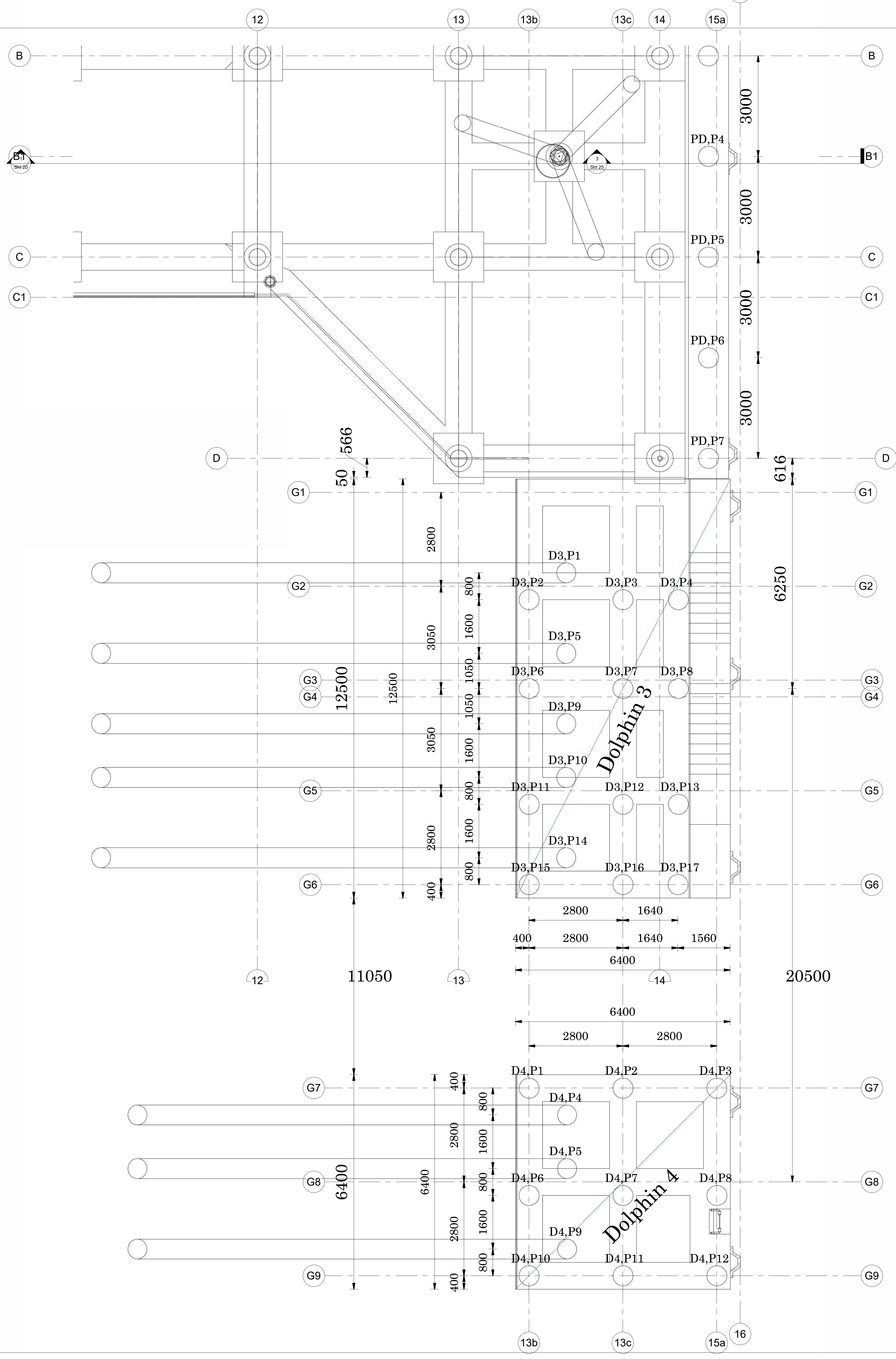
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**Pile Layout Plan**


DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50	PROJECT NUMBER KPA/062/2022-23/PDM	
DRAWING NUMBER Sht 07	REV	



Pile No.	Easting	Northing
PD,P1	573152.81	9549292.53
PD,P2	573154.77	9549290.26
PD,P3	573156.73	9549287.99
PD,P4	573158.69	9549285.72
PD,P5	573160.65	9549283.45
PD,P6	573162.61	9549281.18
PD,P7	573164.57	9549278.91
D3,P1	573163.59	9549273.55
D3,P2	573163.28	9549272.22
D3,P3	573165.40	9549274.05
D3,P4	573166.65	9549275.13
D3,P5	573165.16	9549271.73
D3,P6	573165.01	9549270.21
D3,P7	573167.13	9549272.04
D3,P8	573168.38	9549273.12
D3,P9	573166.53	9549270.14
D3,P10	573167.58	9549268.93
D3,P11	573167.26	9549267.60
D3,P12	573169.38	9549269.43
D3,P13	573170.63	9549270.51
D3,P14	573169.15	9549267.12
D3,P15	573168.83	9549265.78
D3,P16	573170.95	9549267.61
D3,P17	573172.19	9549268.69
D4,P1	573176.58	9549256.81
D4,P2	573178.69	9549258.64
D4,P3	573180.81	9549260.47
D4,P4	573177.96	9549256.95
D4,P5	573179.00	9549255.74
D4,P6	573178.67	9549254.39
D4,P7	573180.79	9549256.22
D4,P8	573182.91	9549258.05
D4,P9	573180.57	9549253.92
D4,P10	573180.23	9549252.58
D4,P11	573182.35	9549254.40
D4,P12	573184.47	9549256.23

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JETTY**

ENGINEER

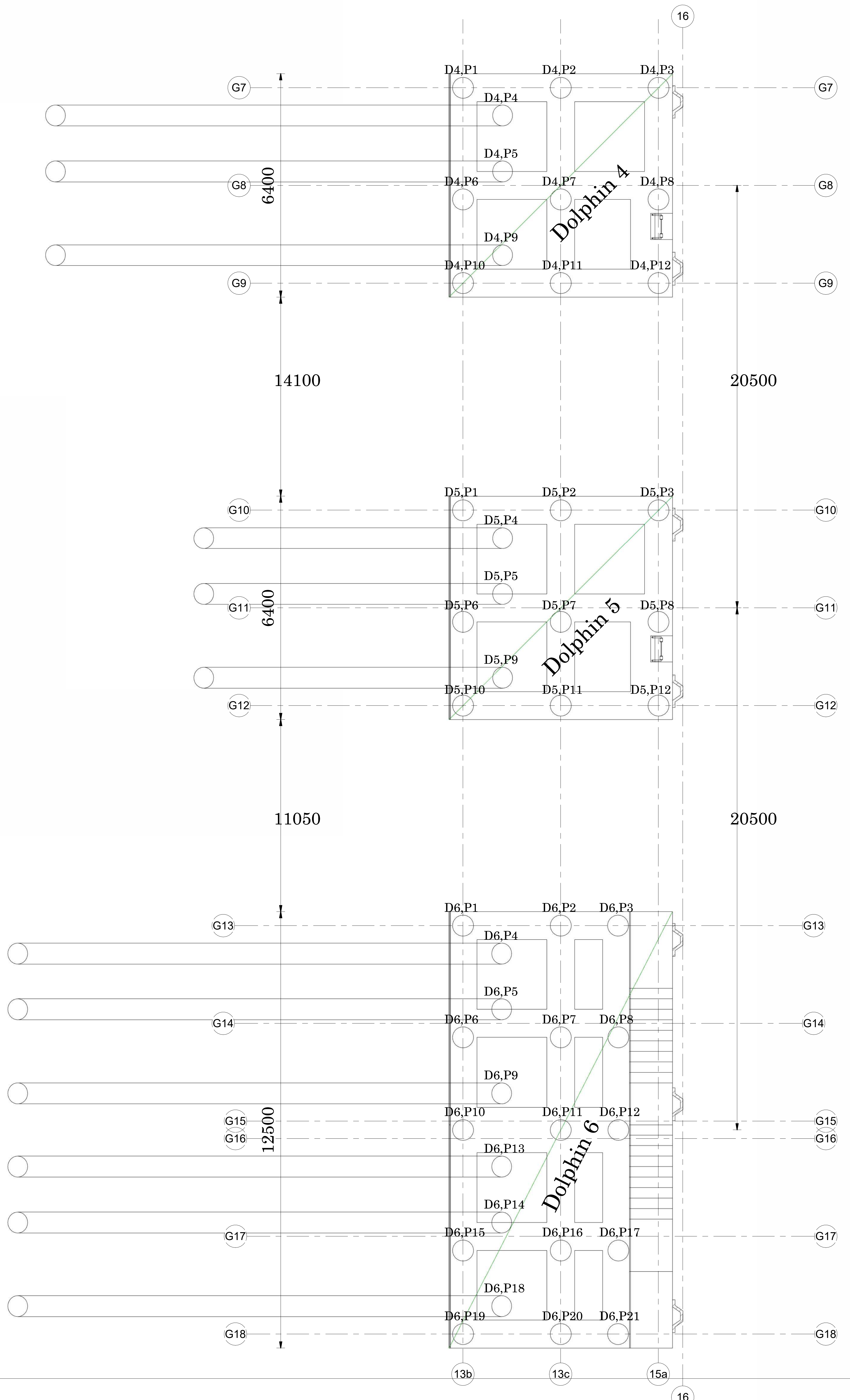
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**Pile Layout Plan**


DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50	PROJECT NUMBER KPA/062/2022-23/PDM	
DRAWING NUMBER Sht 08	REV	



File No.	Easting	Northing
D4,P1	573176.58	9549256.81
D4,P2	573178.69	9549258.64
D4,P3	573180.81	9549260.47
D4,P4	573177.96	9549256.95
D4,P5	573179.00	9549255.74
D4,P6	573178.67	9549254.39
D4,P7	573180.79	9549256.22
D4,P8	573182.91	9549258.05
D4,P9	573180.57	9549253.92
D4,P10	573180.23	9549252.58
D4,P11	573182.35	9549254.40
D4,P12	573184.47	9549256.23
D5,P1	573189.97	9549241.30
D5,P2	573192.09	9549243.13
D5,P3	573194.21	9549244.96
D5,P4	573191.35	9549241.43
D5,P5	573192.40	9549240.22
D5,P6	573192.06	9549238.87
D5,P7	573194.18	9549240.70
D5,P8	573196.30	9549242.53
D5,P9	573193.96	9549238.40
D5,P10	573193.63	9549237.06
D5,P11	573195.75	9549238.89
D5,P12	573197.87	9549240.72
D6,P1	573201.37	9549228.09
D6,P2	573203.49	9549229.92
D6,P3	573204.73	9549230.99
D6,P4	573202.73	9549228.20
D6,P5	573203.78	9549226.99
D6,P6	573203.46	9549225.66
D6,P7	573205.58	9549227.49
D6,P8	573206.83	9549228.57
D6,P9	573205.35	9549225.18
D6,P10	573205.20	9549223.66
D6,P11	573207.31	9549225.49
D6,P12	573208.56	9549226.57
D6,P13	573206.72	9549223.59
D6,P14	573207.76	9549222.38
D6,P15	573207.45	9549221.05
D6,P16	573209.57	9549222.88
D6,P17	573210.82	9549223.95
D6,P18	573209.33	9549220.56
D6,P19	573209.01	9549219.23
D6,P20	573211.14	9549221.06
D6,P21	573212.38	9549222.13

Rev	Description	Date

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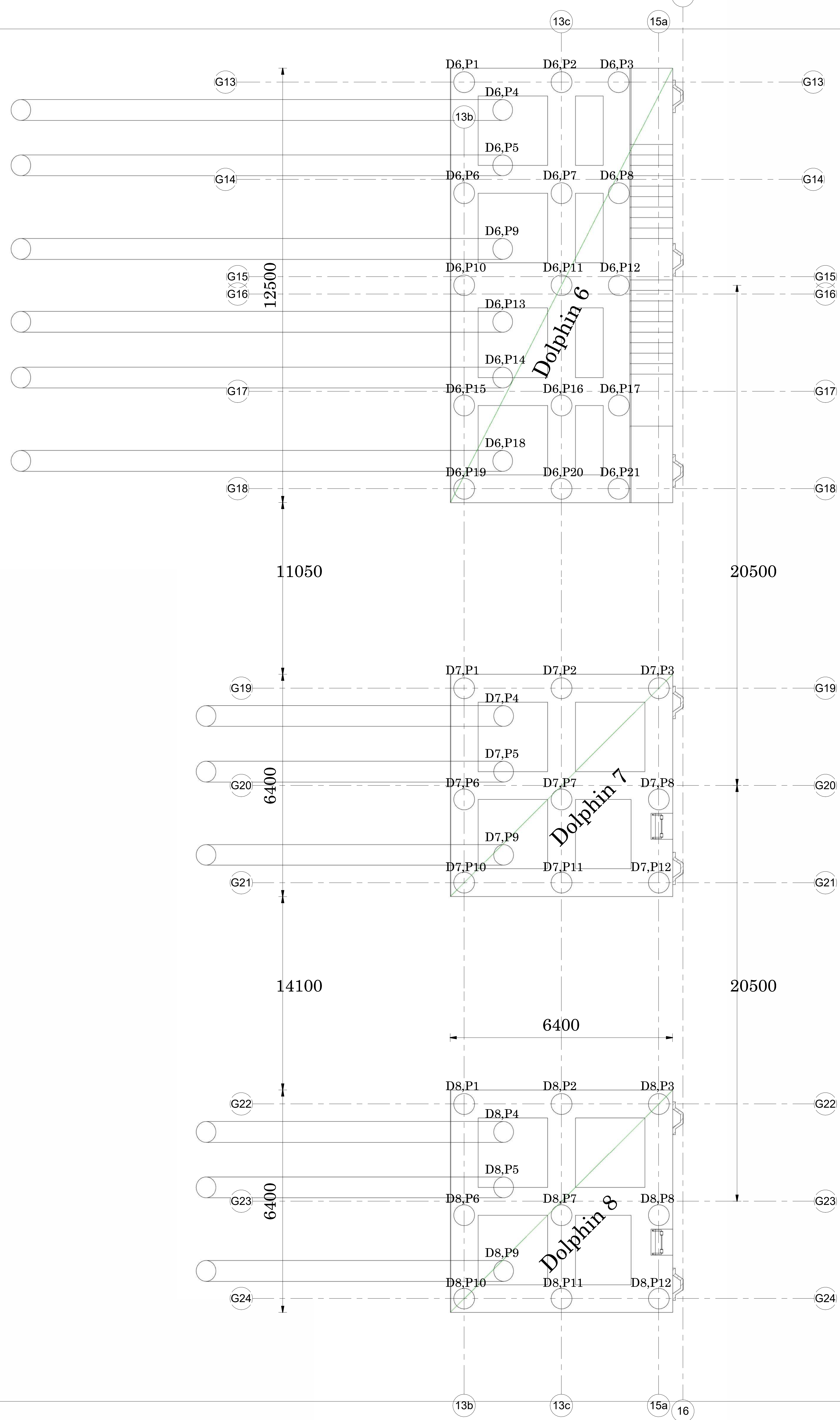
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**Pile Layout Plan**


DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50	PROJECT NUMBER KPA/062/2022-23/PDM	14:34:30
DRAWING NUMBER Sht 09	REV	



Pile No.	Easting	Northing
D6,P1	573201.37	9549228.09
D6,P2	573203.49	9549229.92
D6,P3	573204.73	9549230.99
D6,P4	573202.73	9549228.20
D6,P5	573203.78	9549226.99
D6,P6	573203.46	9549225.66
D6,P7	573205.58	9549227.49
D6,P8	573206.83	9549228.57
D6,P9	573205.35	9549225.18
D6,P10	573205.20	9549223.66
D6,P11	573207.31	9549225.49
D6,P12	573208.56	9549226.57
D6,P13	573206.72	9549223.59
D6,P14	573207.76	9549222.38
D6,P15	573207.45	9549221.05
D6,P16	573209.57	9549222.88
D6,P17	573210.82	9549223.95
D6,P18	573209.33	9549220.56
D6,P19	573209.01	9549219.23
D6,P20	573211.14	9549221.06
D6,P21	573212.38	9549222.13
D7,P1	573216.76	9549210.26
D7,P2	573218.88	9549212.09
D7,P3	573221.00	9549213.92
D7,P4	573218.14	9549210.39
D7,P5	573219.19	9549209.18
D7,P6	573218.85	9549207.84
D7,P7	573220.97	9549209.67
D7,P8	573223.09	9549211.50
D7,P9	573220.75	9549207.37
D7,P10	573220.42	9549206.02
D7,P11	573222.54	9549207.85
D7,P12	573224.66	9549209.68
D8,P1	573230.15	9549194.74
D8,P2	573232.27	9549196.57
D8,P3	573234.39	9549198.40
D8,P4	573231.54	9549194.88
D8,P5	573232.58	9549193.66
D8,P6	573232.25	9549192.32
D8,P7	573234.37	9549194.15
D8,P8	573236.48	9549195.98
D8,P9	573234.15	9549191.85
D8,P10	573233.81	9549190.50
D8,P11	573235.93	9549192.33
D8,P12	573238.05	9549194.16

Rev	Description	Date

CLIENT



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PROJECT

**PROPOSED REHABILITATION  
AND EXTENSION OF PELELEZA  
JETTY**

ENGINEER

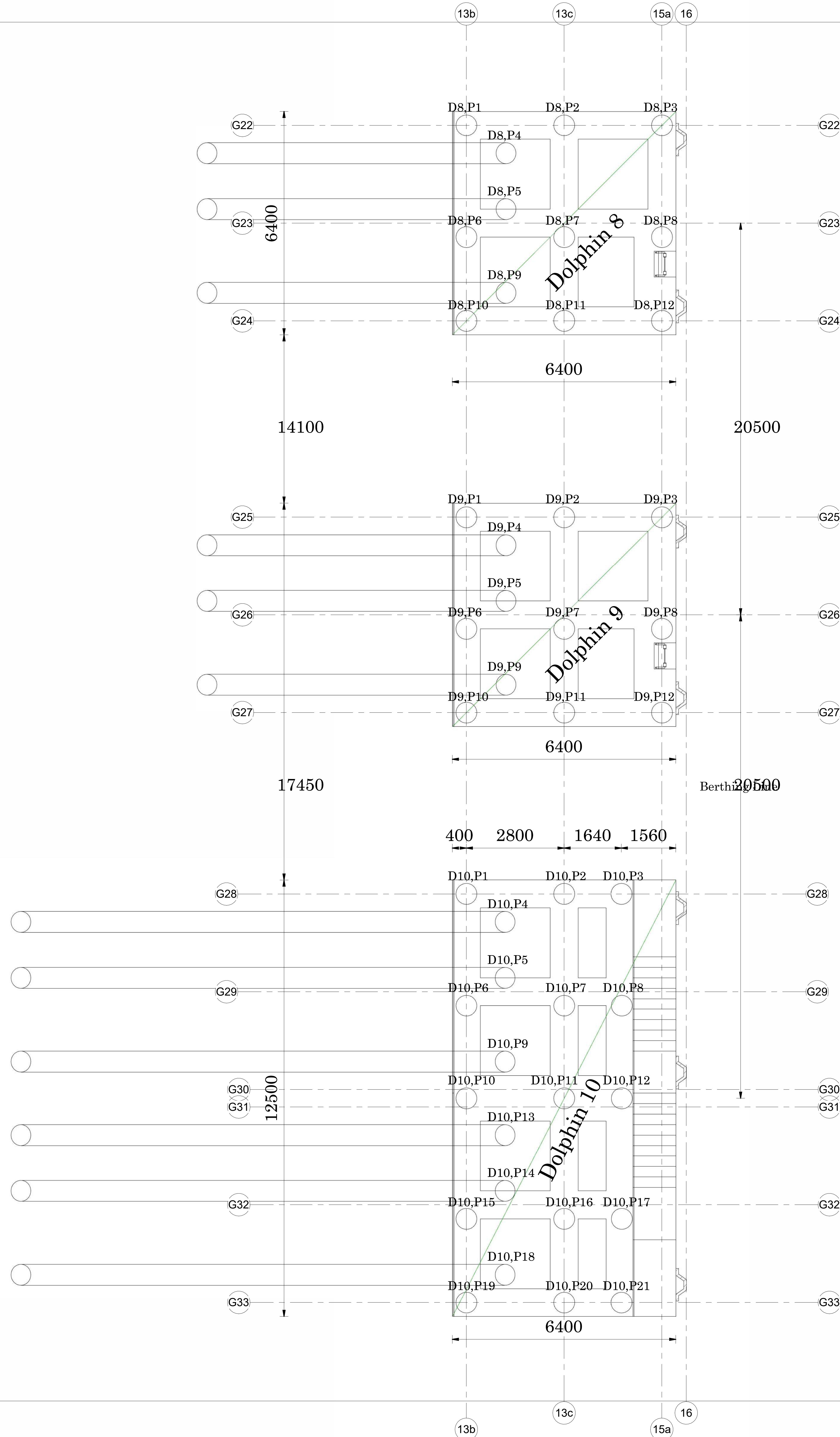
**MAXCAD CONSULTING  
ENGINEERS LTD**  
PALM BREEZE, 1st FLOOR, SUITE  
8, LINKS ROAD, NYALI  
P.O. BOX 40482-80100  
MOMBASA

PRJ. TITLE

DRG TITLE

**Pile Layout Plan**


DESIGNED BY: G.Eng Harris      CHECKED BY: Eng. Omenda M.K      DATE: 29/02/2024  
 SCALE ( @A0 ) : 1 : 50      PROJECT NUMBER: KPA/062/2022-23/PDM  
 DRAWING NUMBER: Sht 10      REV



Pile No.	Easting	Northing
D8,P1	573230.15	9549194.74
D8,P2	573232.27	9549196.57
D8,P3	573234.39	9549198.40
D8,P4	573231.54	9549194.88
D8,P5	573232.58	9549193.66
D8,P6	573232.25	9549192.32
D8,P7	573234.37	9549194.15
D8,P8	573236.48	9549195.98
D8,P9	573234.15	9549191.85
D8,P10	573233.81	9549190.50
D8,P11	573235.93	9549192.33
D8,P12	573238.05	9549194.16
D9,P1	573243.55	9549179.22
D9,P2	573245.67	9549181.05
D9,P3	573247.79	9549182.88
D9,P4	573244.93	9549179.36
D9,P5	573245.98	9549178.15
D9,P6	573245.64	9549176.80
D9,P7	573247.76	9549178.63
D9,P8	573249.88	9549180.46
D9,P9	573247.55	9549176.33
D9,P10	573247.21	9549174.98
D9,P11	573249.33	9549176.81
D9,P12	573251.45	9549178.64
D10,P1	573254.95	9549166.01
D10,P2	573257.07	9549167.84
D10,P3	573258.31	9549168.91
D10,P4	573256.31	9549166.13
D10,P5	573257.36	9549164.92
D10,P6	573257.04	9549163.59
D10,P7	573259.16	9549165.42
D10,P8	573260.41	9549166.50
D10,P9	573258.93	9549163.10
D10,P10	573258.77	9549161.58
D10,P11	573260.89	9549163.41
D10,P12	573262.14	9549164.49
D10,P13	573260.30	9549161.51
D10,P14	573261.35	9549160.30
D10,P15	573261.03	9549158.97
D10,P16	573263.15	9549160.80
D10,P17	573264.40	9549161.88
D10,P18	573262.91	9549158.49
D10,P19	573262.60	9549157.16
D10,P20	573264.72	9549158.99
D10,P21	573265.96	9549160.06

Rev	Description	Date

CLIENT



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PROJECT

**PROPOSED REHABILITATION  
AND EXTENSION OF PELELEZA  
JETTY**

ENGINEER

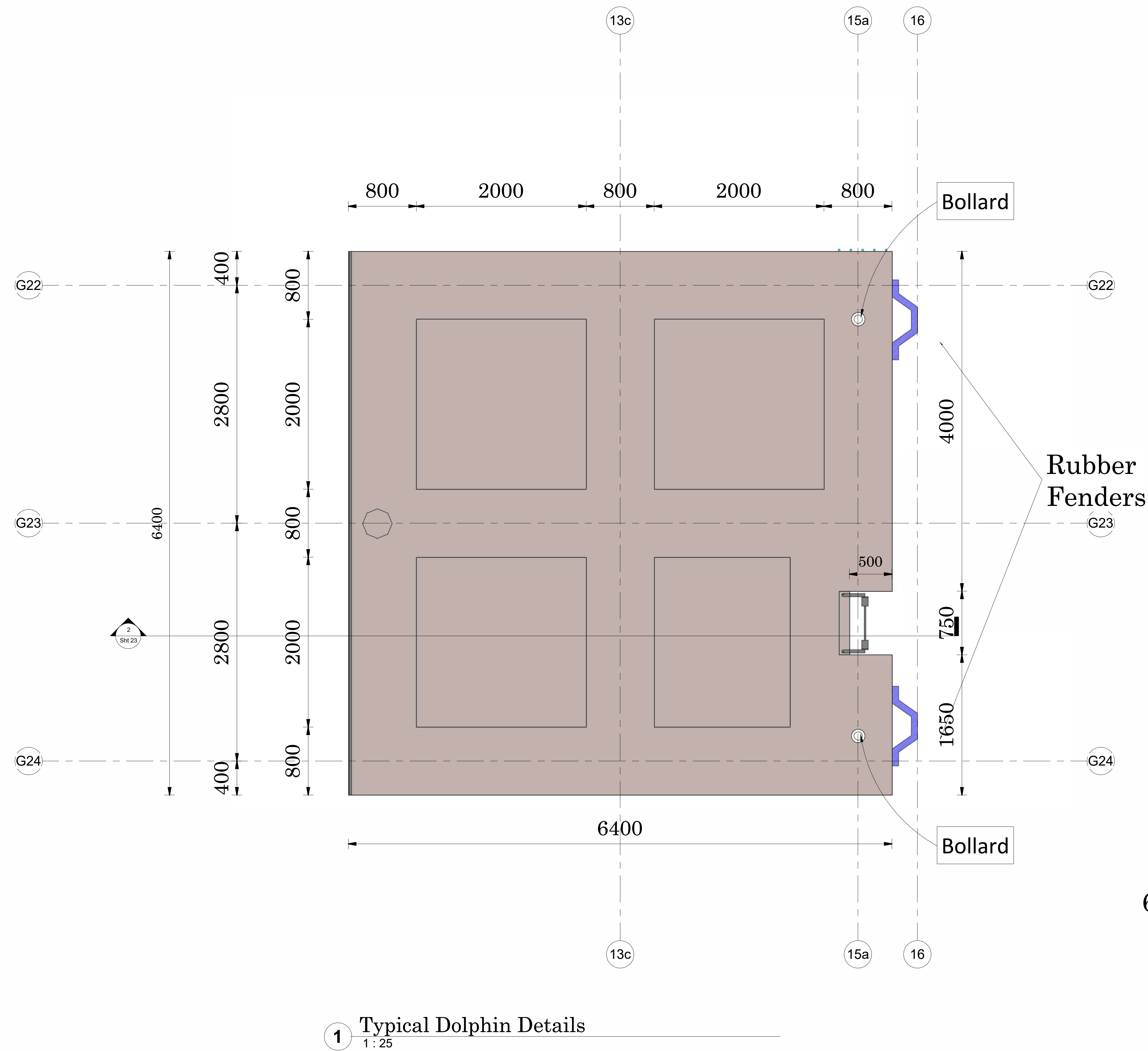
**MAXCAD CONSULTING  
ENGINEERS LTD**  
PALM BREEZE, 1st FLOOR, SUITE  
8, LINKS ROAD, NYALI  
P.O. BOX 40482-80100  
MOMBASA

PRJ. TITLE

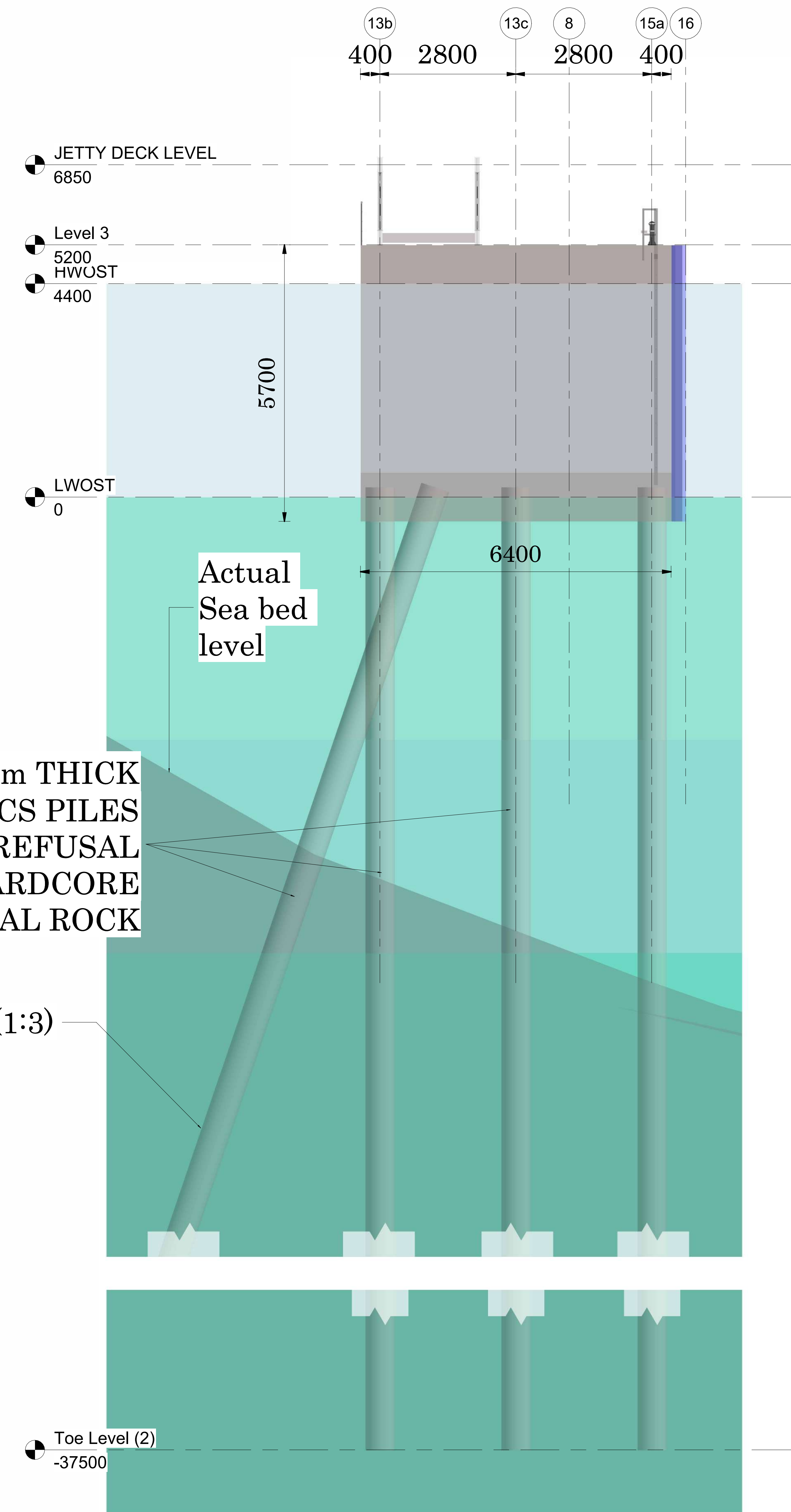
DRG TITLE

**Pile Layout Plan**

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50	PROJECT NUMBER KPA/062/2022-23/PDM	
DRAWING NUMBER Sht 11		REV



1 Typical Dolphin Details  
1:25




610Ø X 20.0mm THICK  
291KG/M HCS PILES  
DRIVEN TO REFUSAL  
INTO HARDCORE  
CORAL ROCK

Racked Piles (1:3)

2 Typical Dolphin Sectional Elevation  
1:50

Rev	Description	Date

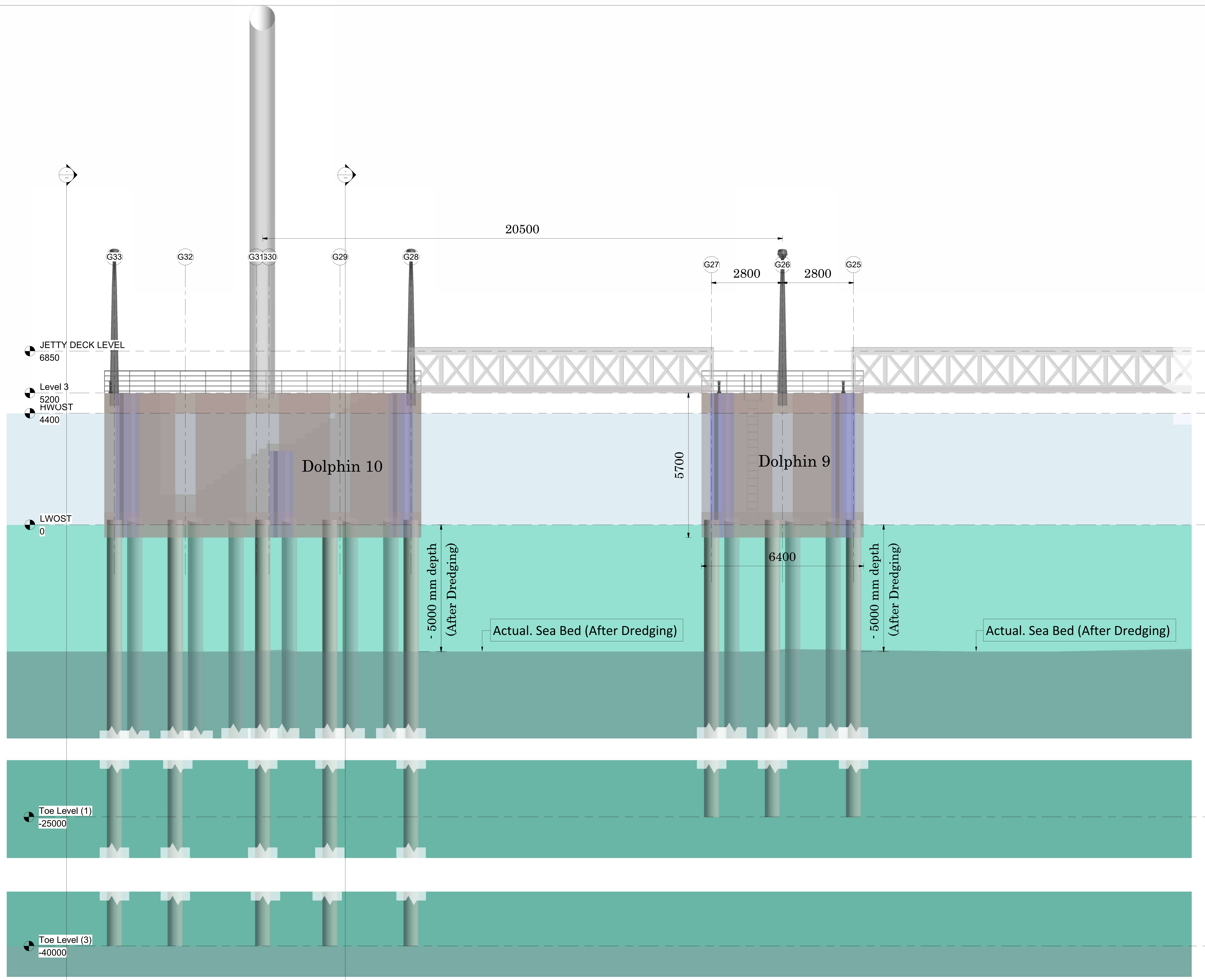
CLIENT  
  
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PROJECT  
**PROPOSED REHABILITATION  
 AND EXTENSION OF PELELEZA  
 JETTY**

ENGINEER  
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PRJ. TITLE  
 DRG. TITLE

<b>Typical Dolphin Details</b>		
DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) As indicated	PROJECT NUMBER KPA/062/2022-23/PDM	14:35:10
DRAWING NUMBER Sht 12	REV	



Rev	Description	Date

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PROJECT

**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

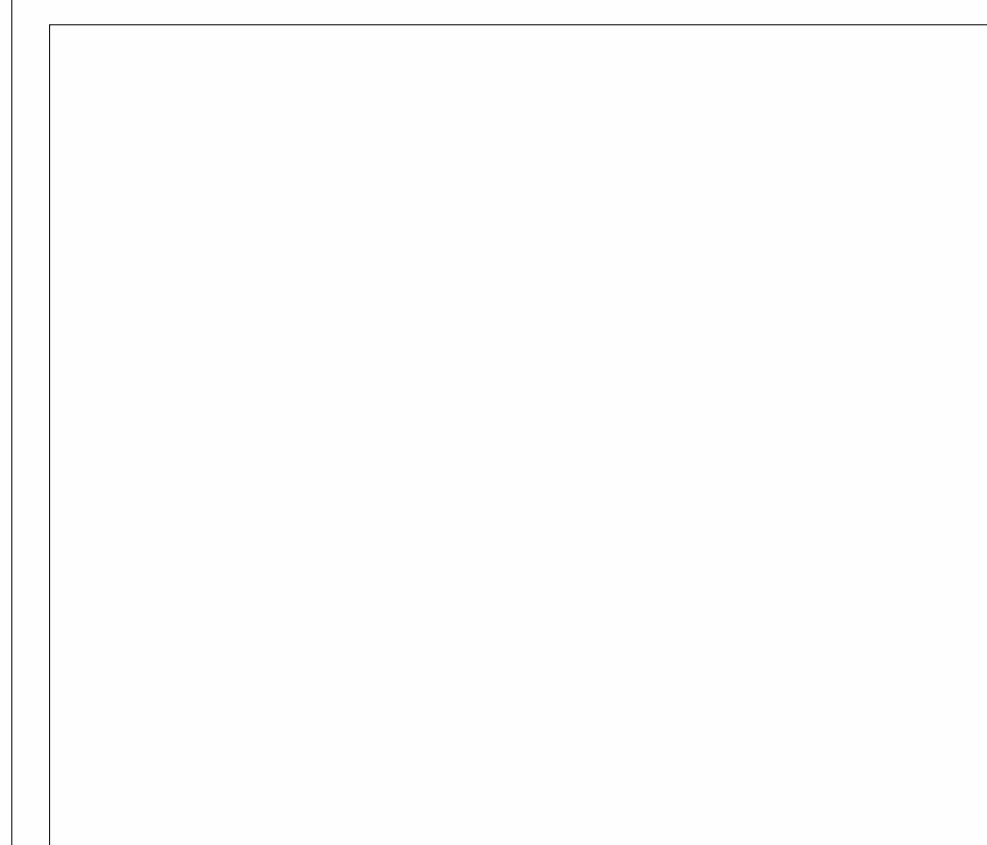
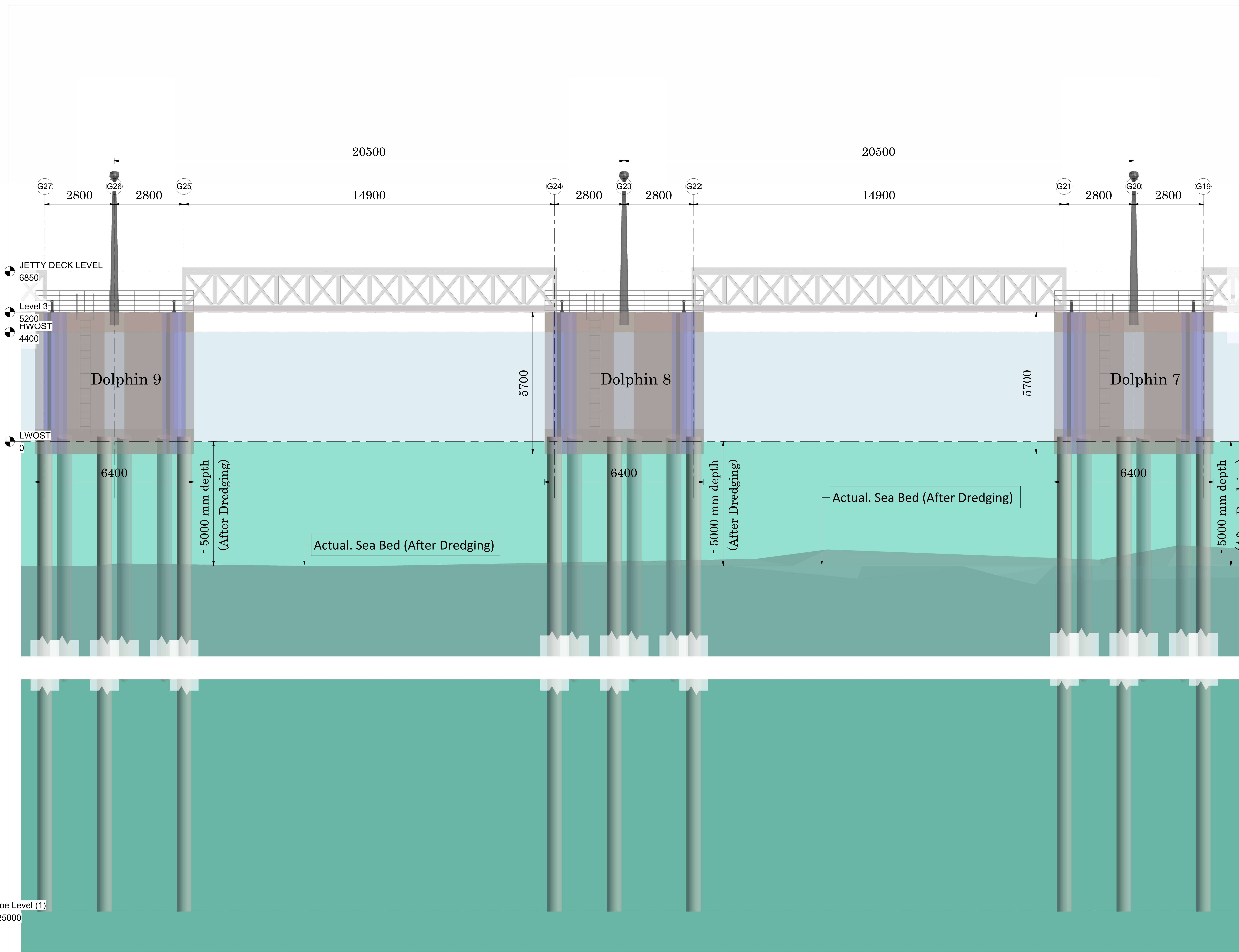
**MAXCAD CONSULTING ENGINEERS LTD**  
**PALM BREEZE, 1st FLOOR, SUITE 8, LINKS ROAD, NYALI**  
**P.O. BOX 40482-80100 MOMBASA**

PRJ. TITLE

DRG TITLE


**Jetty North Elevation**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 13		REV



Rev	Description	Date

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PROJECT

**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

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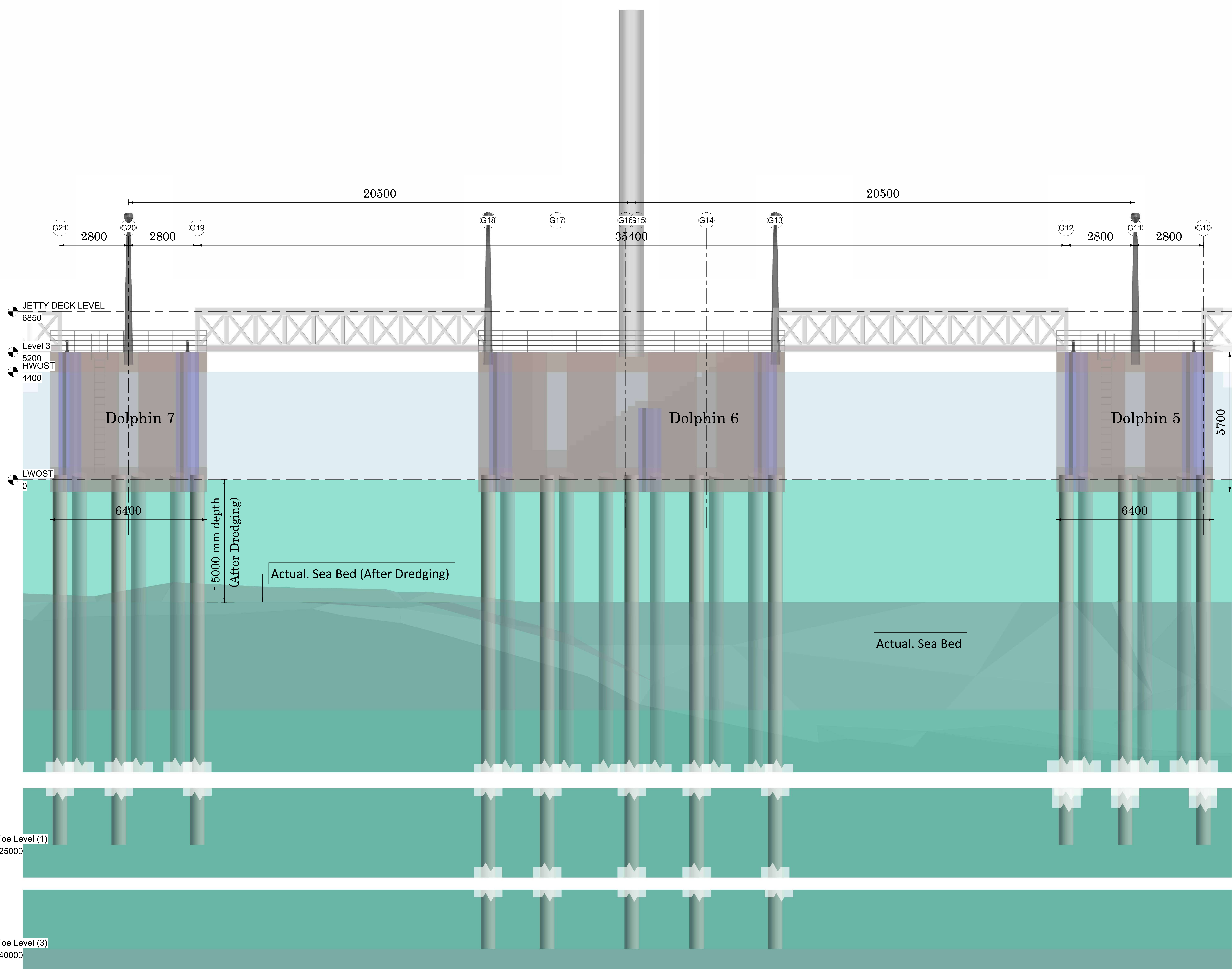
PRJ. TITLE

DRG TITLE


**Jetty North Elevation**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 14		REV

Toe Level (1)  
-25000



Rev	Description	Date

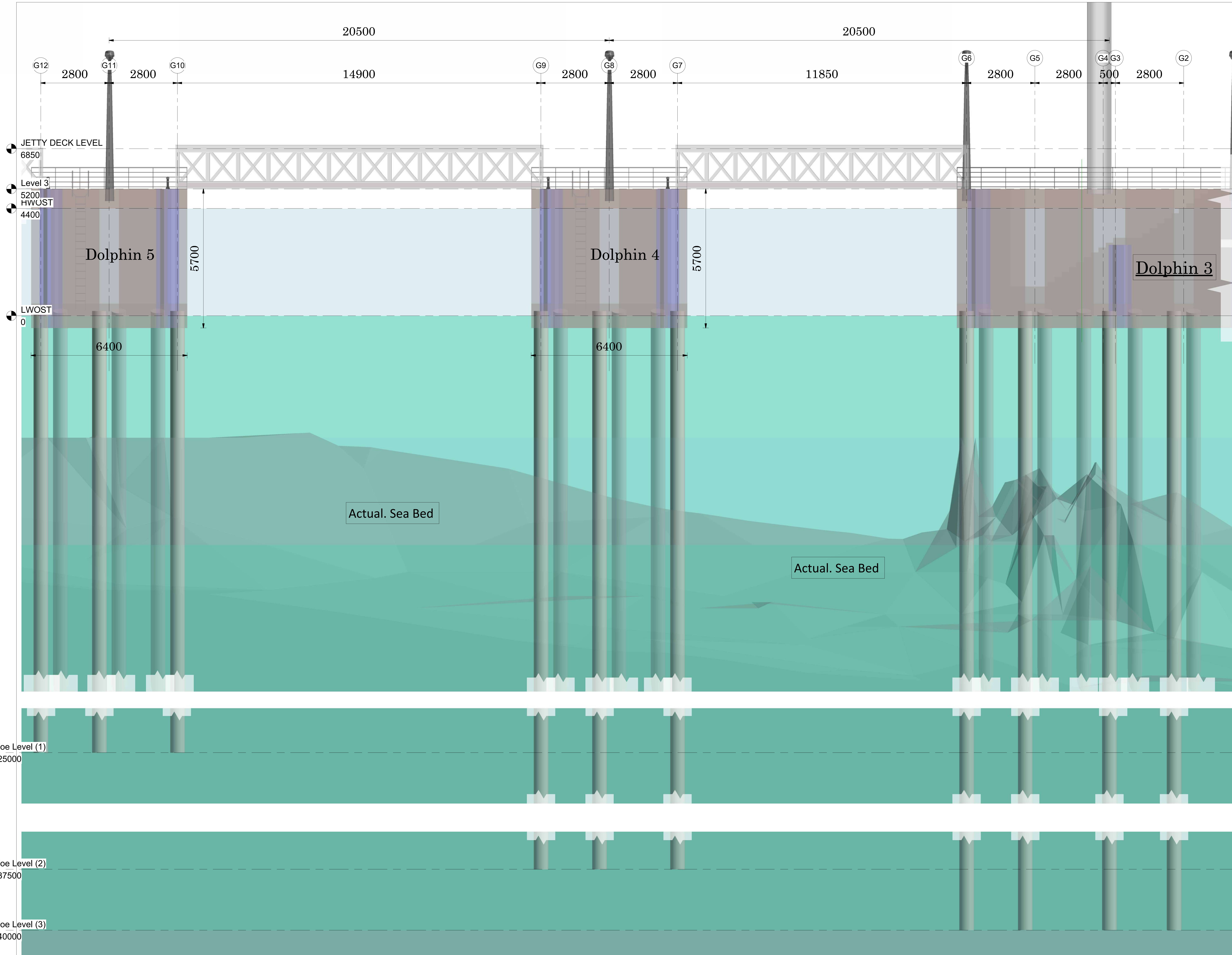
CLIENT  
  
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PROJECT  
**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER  
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PRJ. TITLE  
 DRG TITLE  
**Jetty North Elevation**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 15		REV



Rev	Description	Date

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PROJECT

**PROPOSED REHABILITATION  
 AND EXTENSION OF PELELEZA  
 JETTY**

ENGINEER

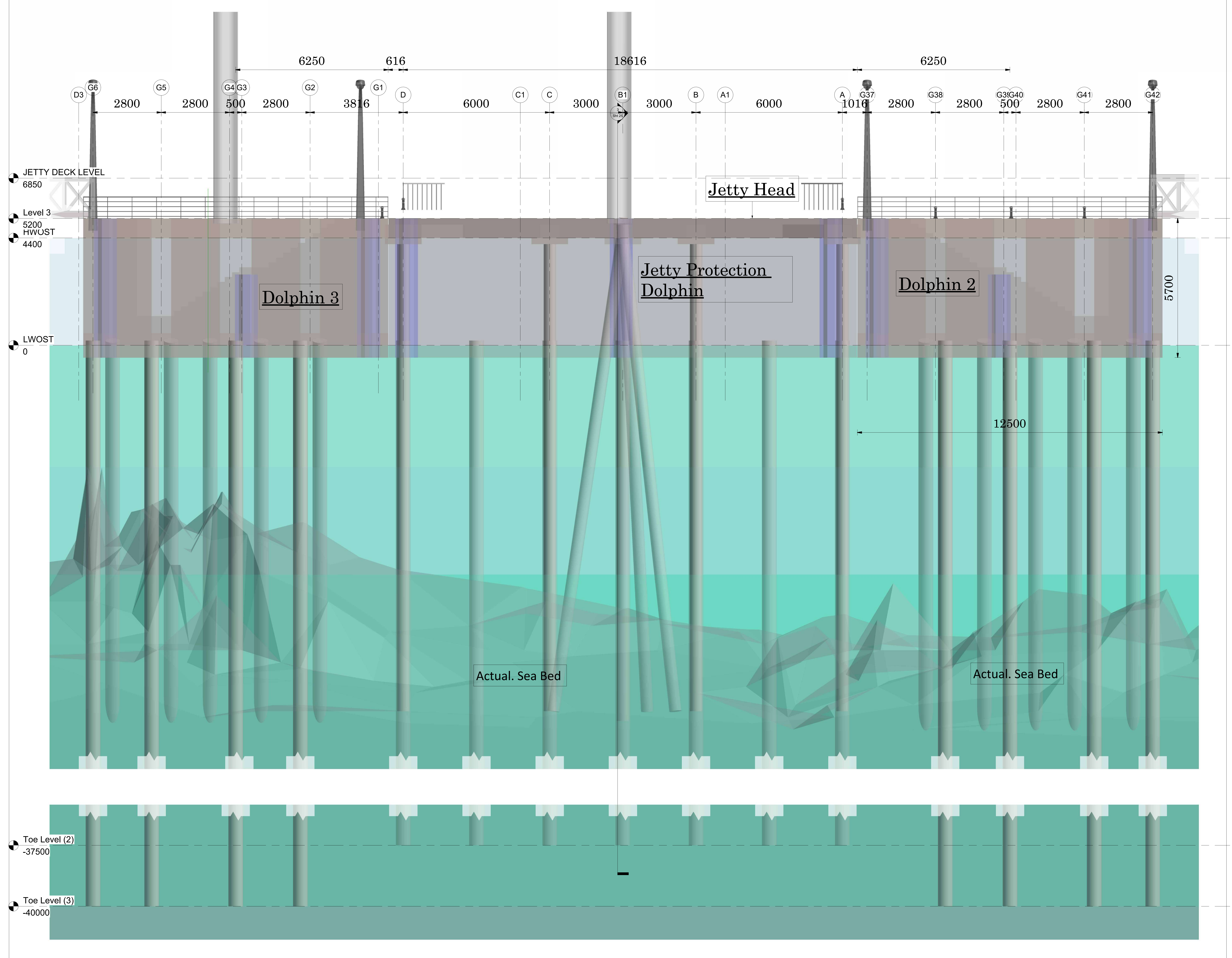
**MAXCAD CONSULTING  
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 8, LINKS ROAD, NYALI  
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PRJ. TITLE


DRG TITLE

**Jetty North Elevation**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50	PROJECT NUMBER KPA/062/2022-23/PDM	14:36:14
DRAWING NUMBER Sht 16	REV	



Rev	Description	Date

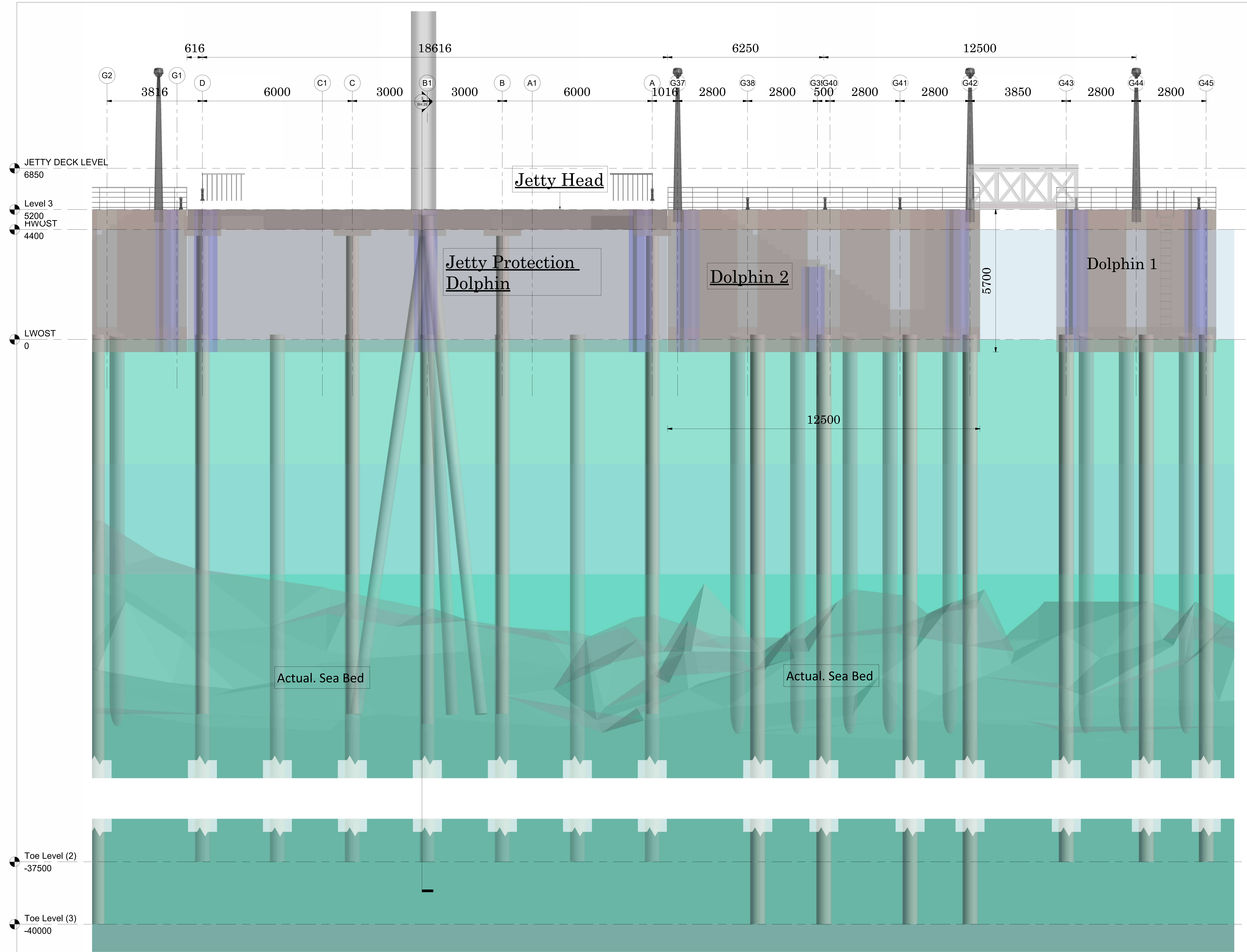
CLIENT  
  
**KENYA PORTS AUTHORITY**  
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PROJECT  
**PROPOSED REHABILITATION  
 AND EXTENSION OF PELELEZA  
 JETTY**

ENGINEER  
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PRJ. TITLE  
 DRG TITLE  
**Jetty North Elevation**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 17	REV	



Rev	Description	Date

CLIENT



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PROJECT

**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

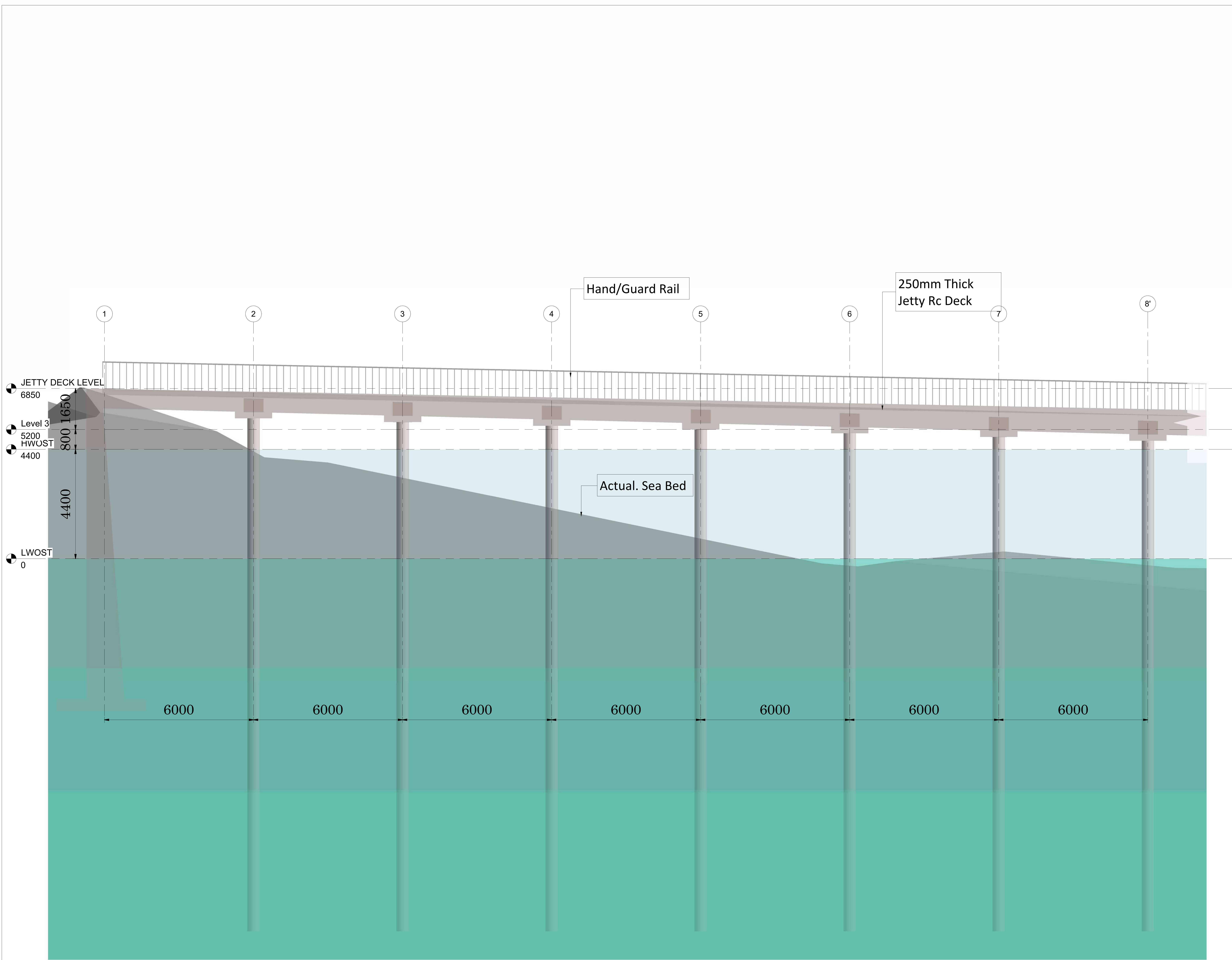
**MAXCAD CONSULTING ENGINEERS LTD**  
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P.O. BOX 40482-80100  
MOMBASA

PRJ. TITLE


DRG TITLE

**Jetty North Elevation**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 18		REV



Rev	Description	Date

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PROJECT  
**PROPOSED REHABILITATION  
 AND EXTENSION OF PELELEZA  
 JETTY**

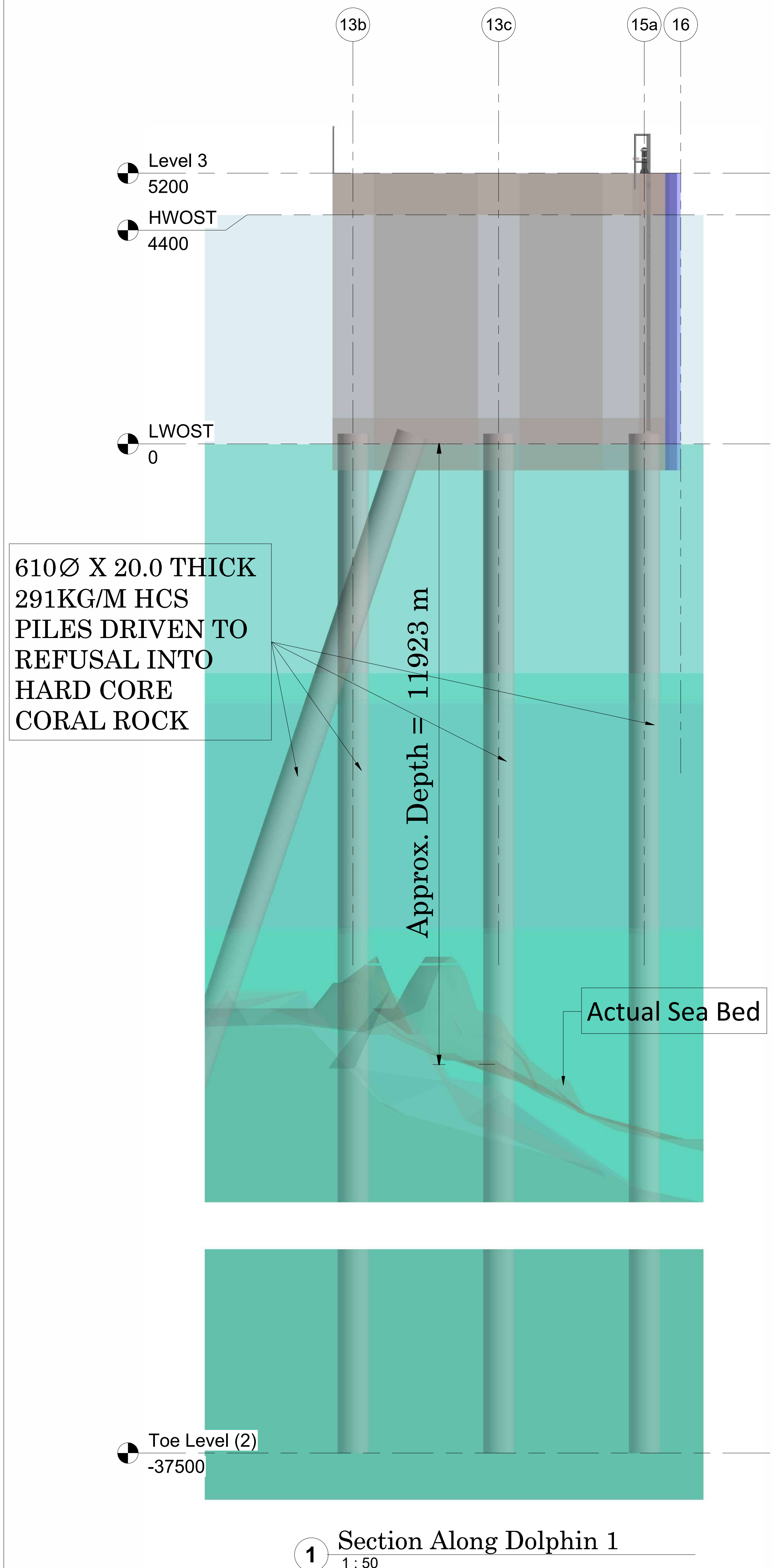
ENGINEER  
**MAXCAD CONSULTING  
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 PALM BREEZE, 1st FLOOR, SUITE  
 8, LINKS ROAD, NYALI  
 P.O. BOX 40482-80100  
 MOMBASA

PRJ. TITLE  
 DRG. TITLE

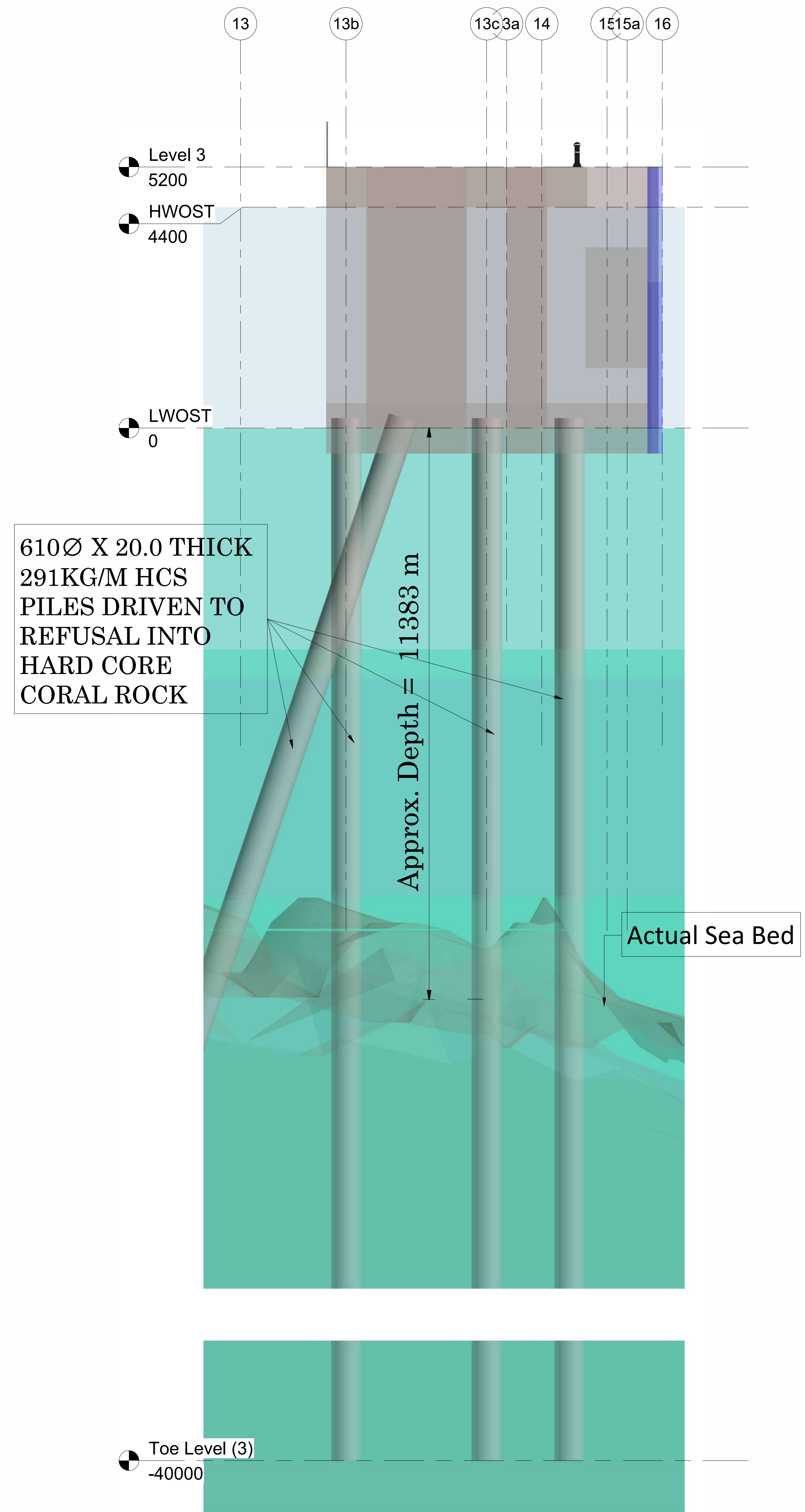
**Section Along The Jetty**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 19		REV

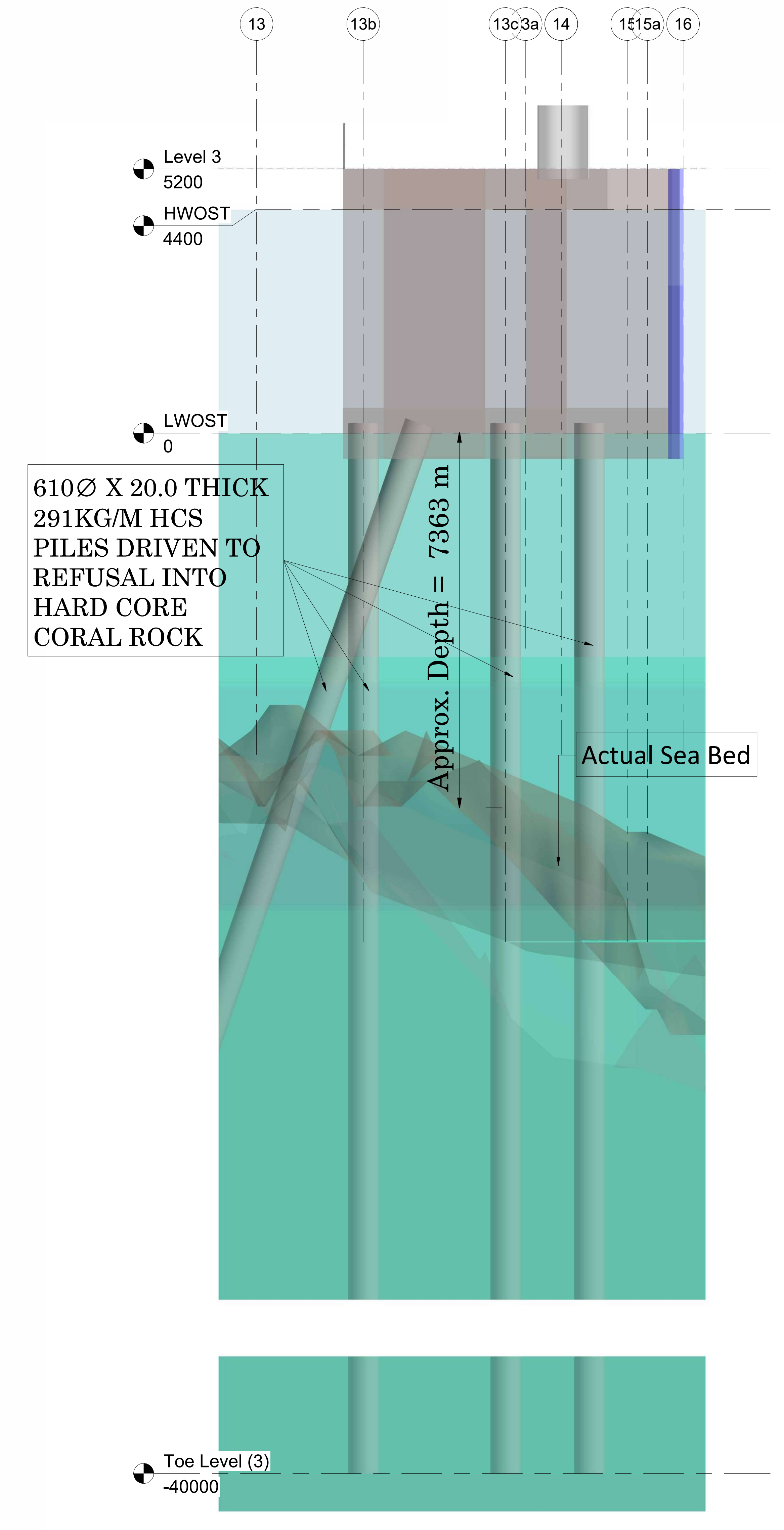




1 Section Along Dolphin 1  
1:50

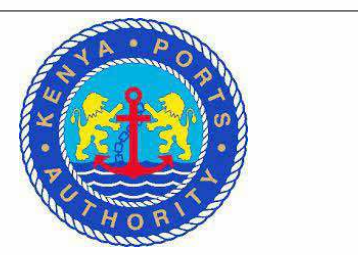


2 Section Along Dolphin 2  
1:50



3 Section Along Dolphin 3  
1:50

Rev	Description	Date

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MOMBASA

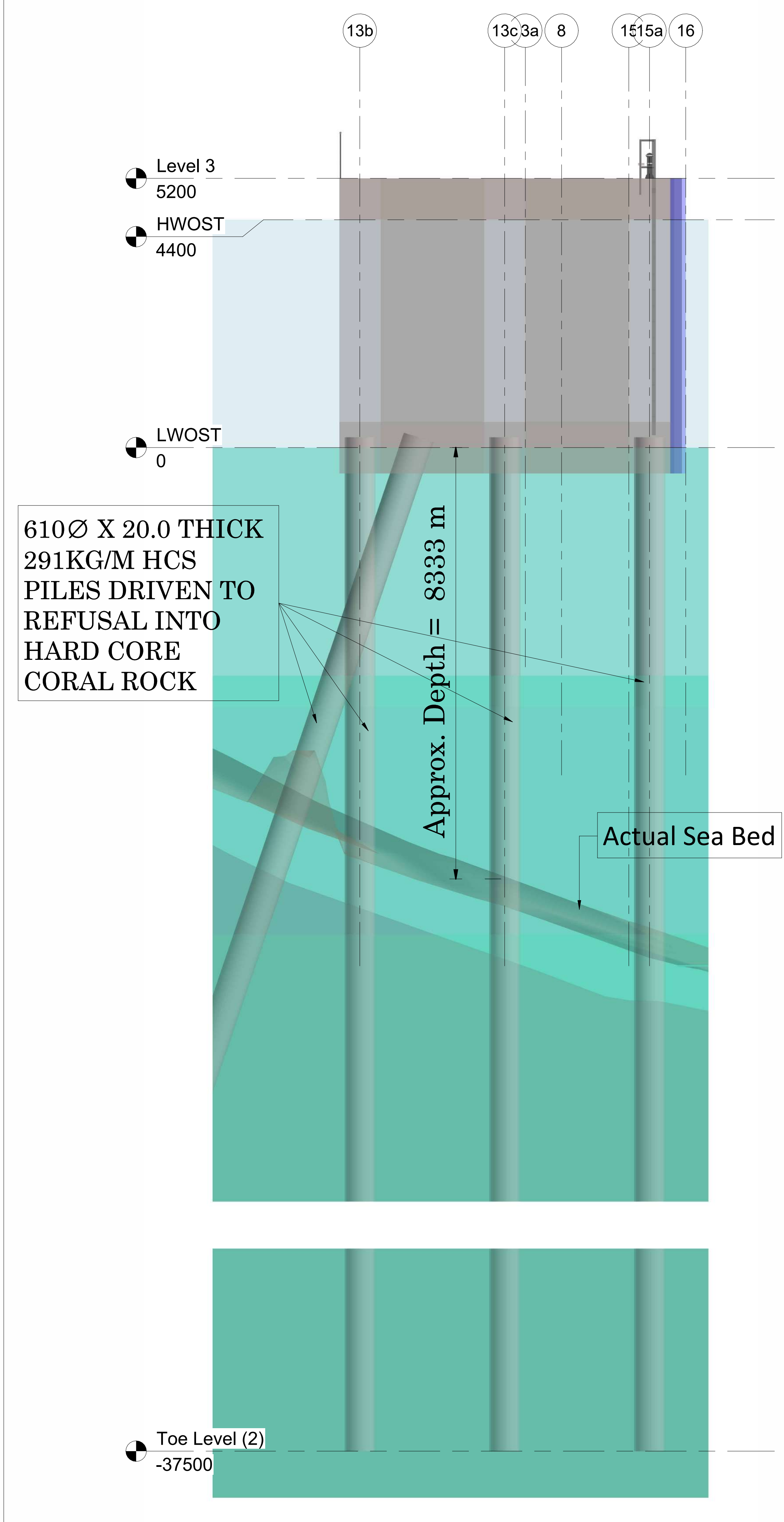
PROJECT  
**PROPOSED REHABILITATION  
AND EXTENSION OF PELELEZA  
JETTY**

ENGINEER  
**MAXCAD CONSULTING  
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PALM BREEZE, 1st FLOOR, SUITE  
8, LINKS ROAD, NYALI  
P.O. BOX 40482-80100  
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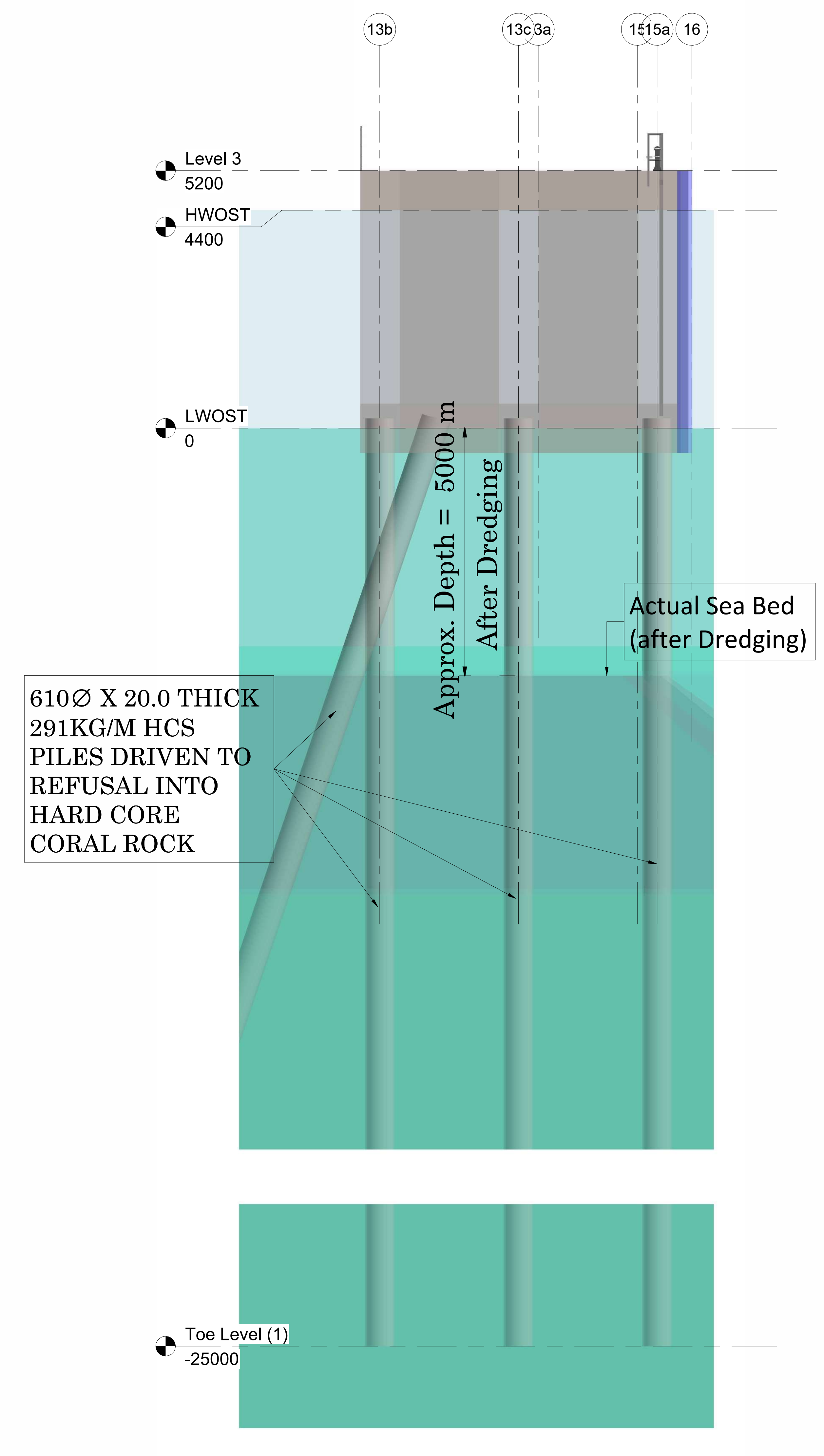
PRJ. TITLE

DRG TITLE  
**Dolphins Sections**

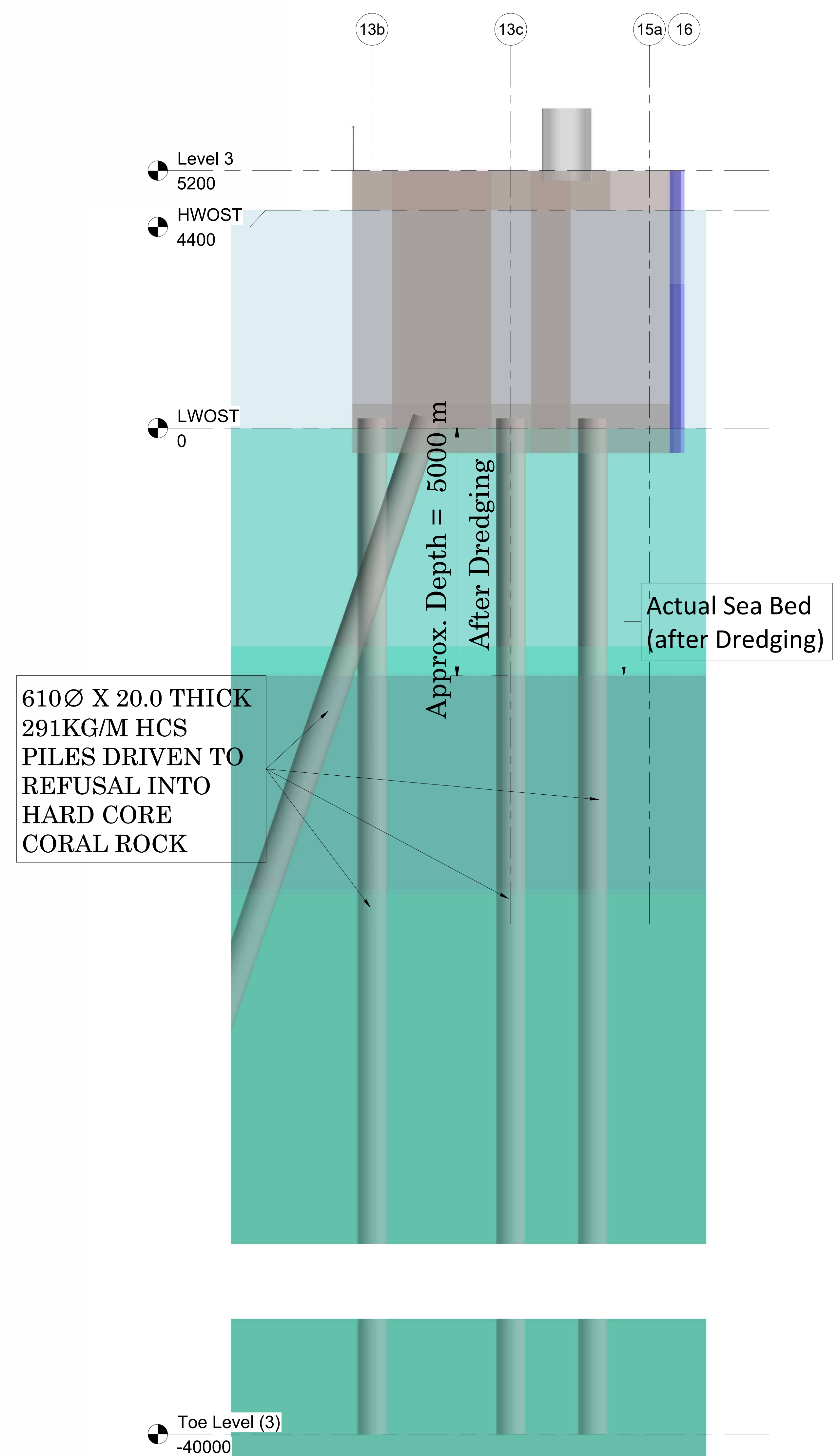
DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50	PROJECT NUMBER KPA/062/2022-23/PDM	14-37-32
DRAWING NUMBER Sht 21	REV	



1 Section Along Dolphin 4  
1:50




2 Section Along Dolphin 5  
1:50



3 Section Along Dolphin 6  
1:50

Rev	Description	Date

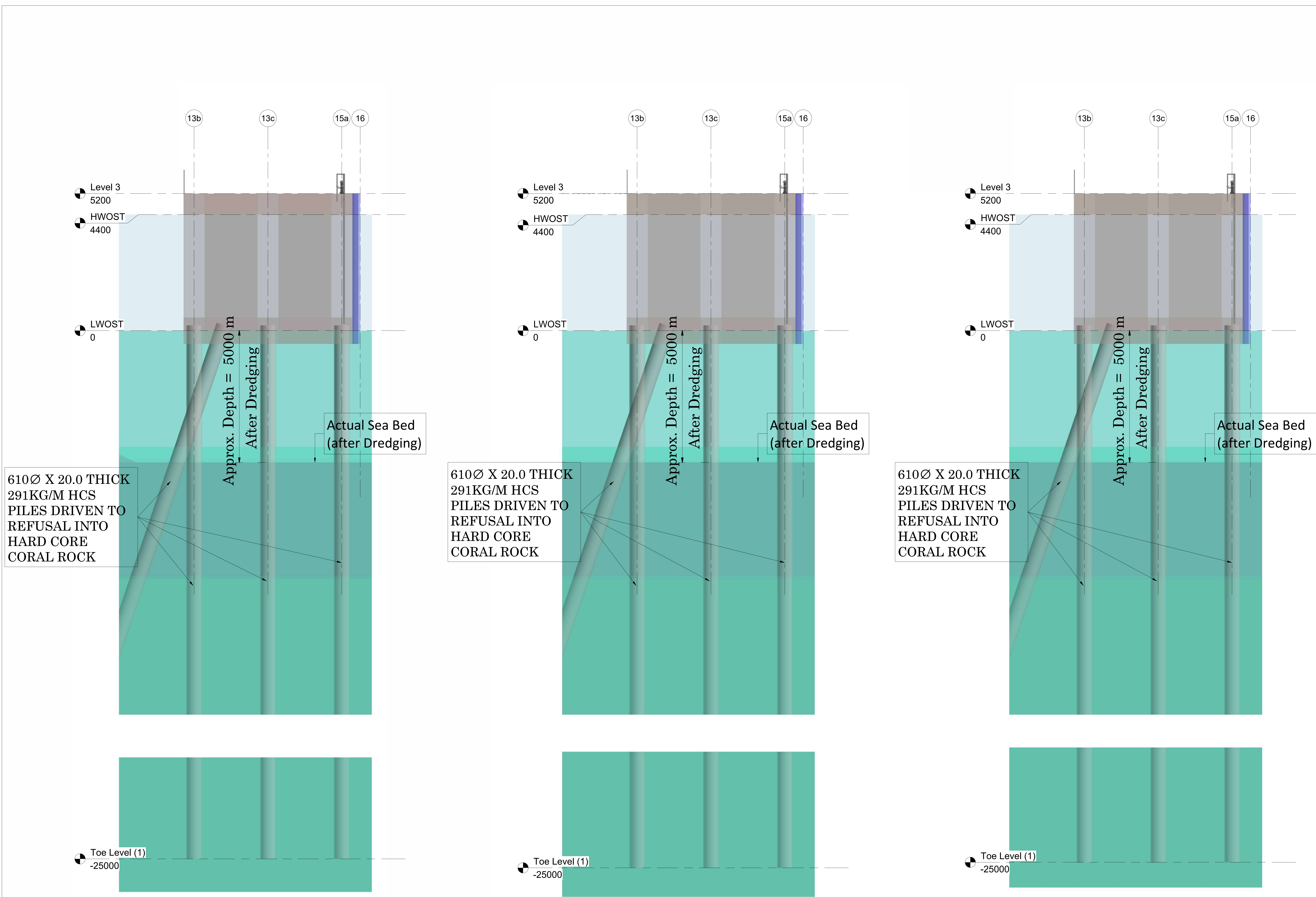
CLIENT  
  
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PROJECT  
**PROPOSED REHABILITATION  
 AND EXTENSION OF PELELEZA  
 JETTY**

ENGINEER  
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 8, LINKS ROAD, NYALI  
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PRJ. TITLE  
 DRG TITLE  
**Dolphins Sections**

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50	PROJECT NUMBER KPA/062/2022-23/PDM	
DRAWING NUMBER Sht 22	REV	




1 Section Along Dolphin 7  
1:50

2 Section Along Dolphin 8  
1:50

3 Section Along Dolphin 9  
1:50

Rev	Description	Date

CLIENT



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P.O BOX 95009 - 80104  
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PROJECT

**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

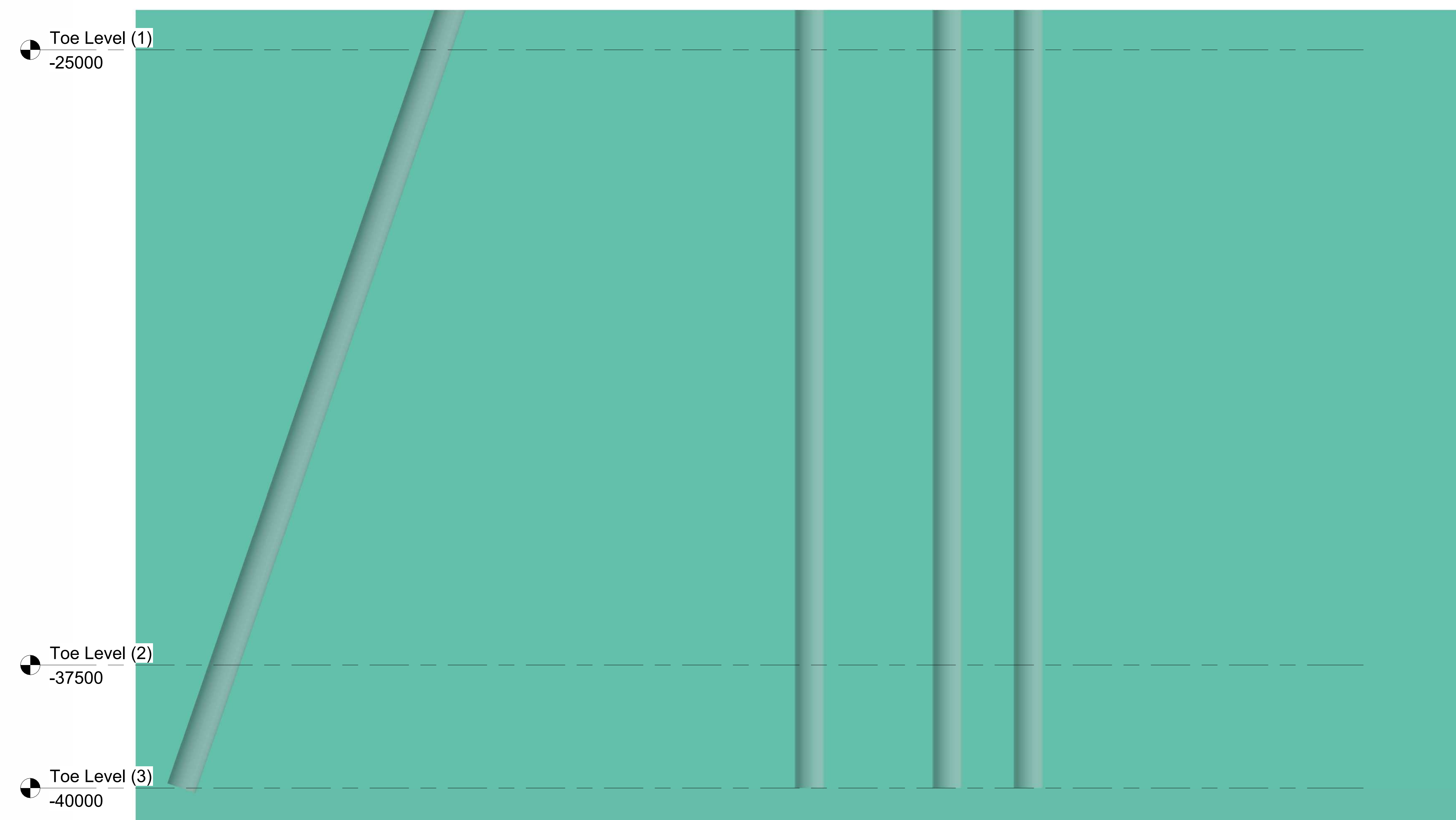
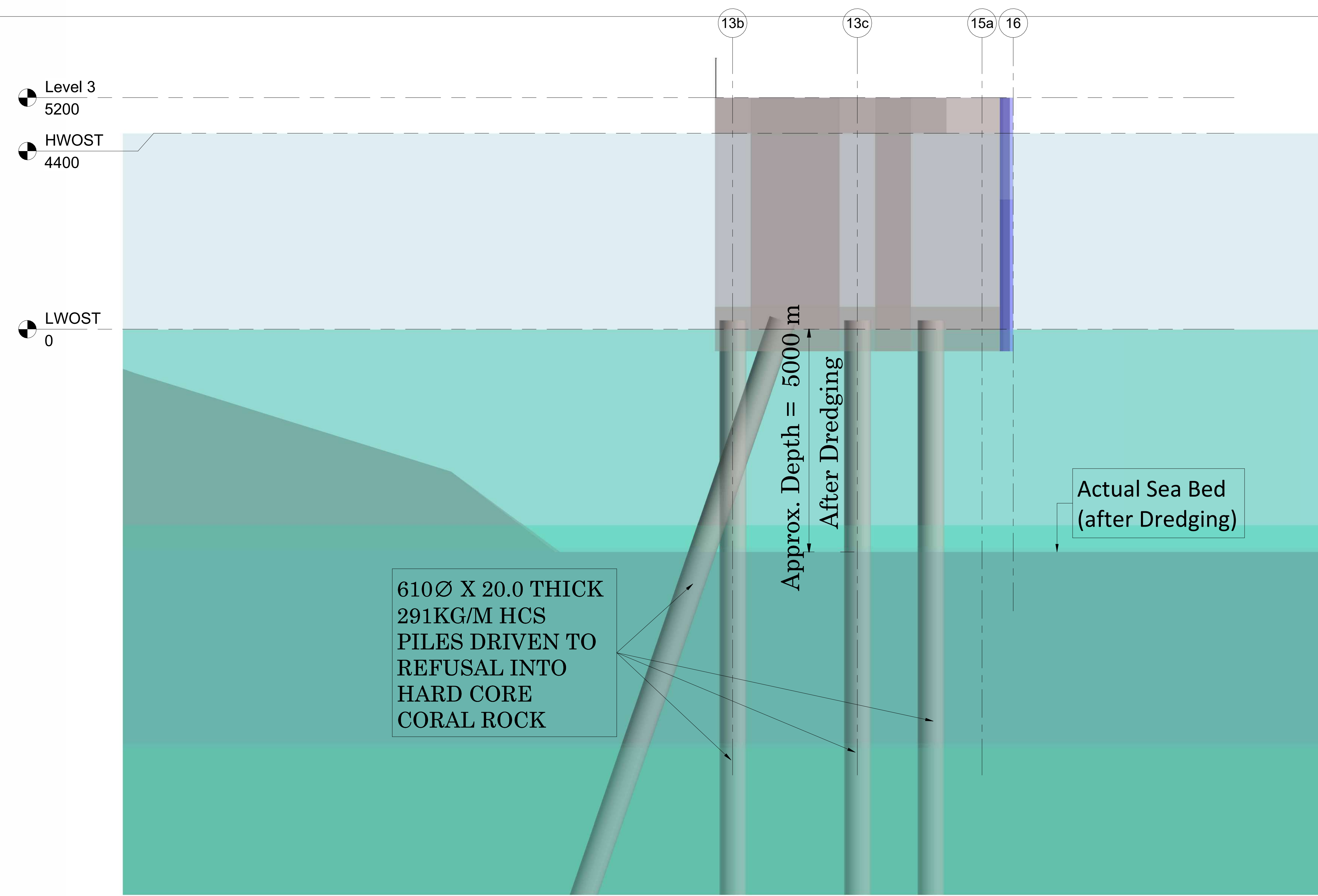
**MAXCAD CONSULTING ENGINEERS LTD**  
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P.O. BOX 40482-80100  
MOMBASA

PRJ. TITLE

DRG TITLE

**Dolphins Sections**


DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 23		REV



1 Section Along Dolphin 10  
1:50

Rev	Description	Date

CLIENT



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PROJECT

**PROPOSED REHABILITATION  
AND EXTENSION OF PELELEZA  
JETTY**

ENGINEER

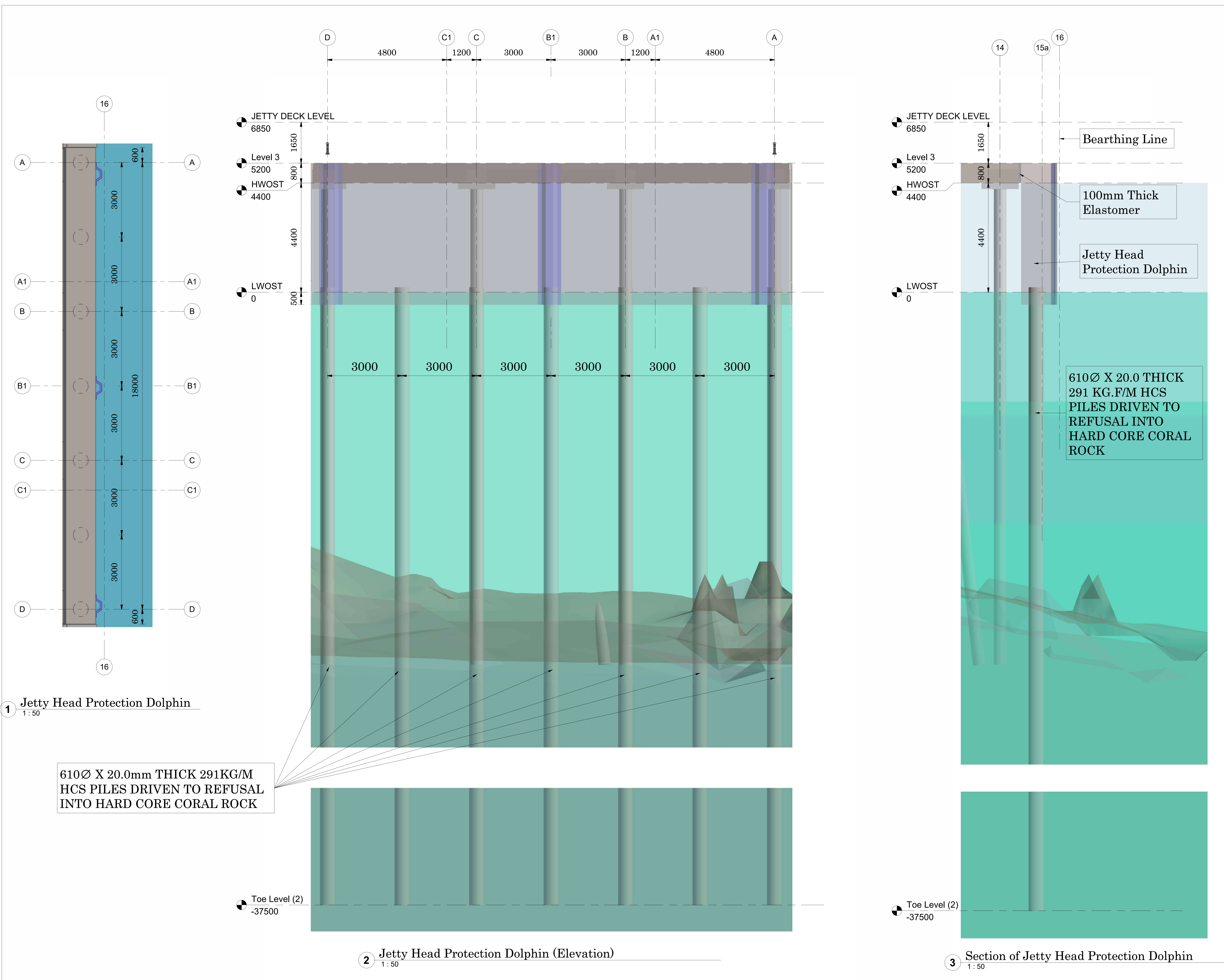
**MAXCAD CONSULTING  
ENGINEERS LTD**  
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8, LINKS ROAD, NYALI  
P.O. BOX 40482-80100  
MOMBASA

PRJ. TITLE

DRG TITLE

**Dolphin Sections**

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50	PROJECT NUMBER KPA/062/2022-23/PDM	
DRAWING NUMBER Sht 24		REV




1 Jetty Head Protection Dolphin  
1:50

610Ø X 20.0mm THICK 291KG/M HCS PILES DRIVEN TO REFUSAL INTO HARD CORE CORAL ROCK

2 Jetty Head Protection Dolphin (Elevation)  
1:50

3 Section of Jetty Head Protection Dolphin  
1:50

Rev	Description	Date

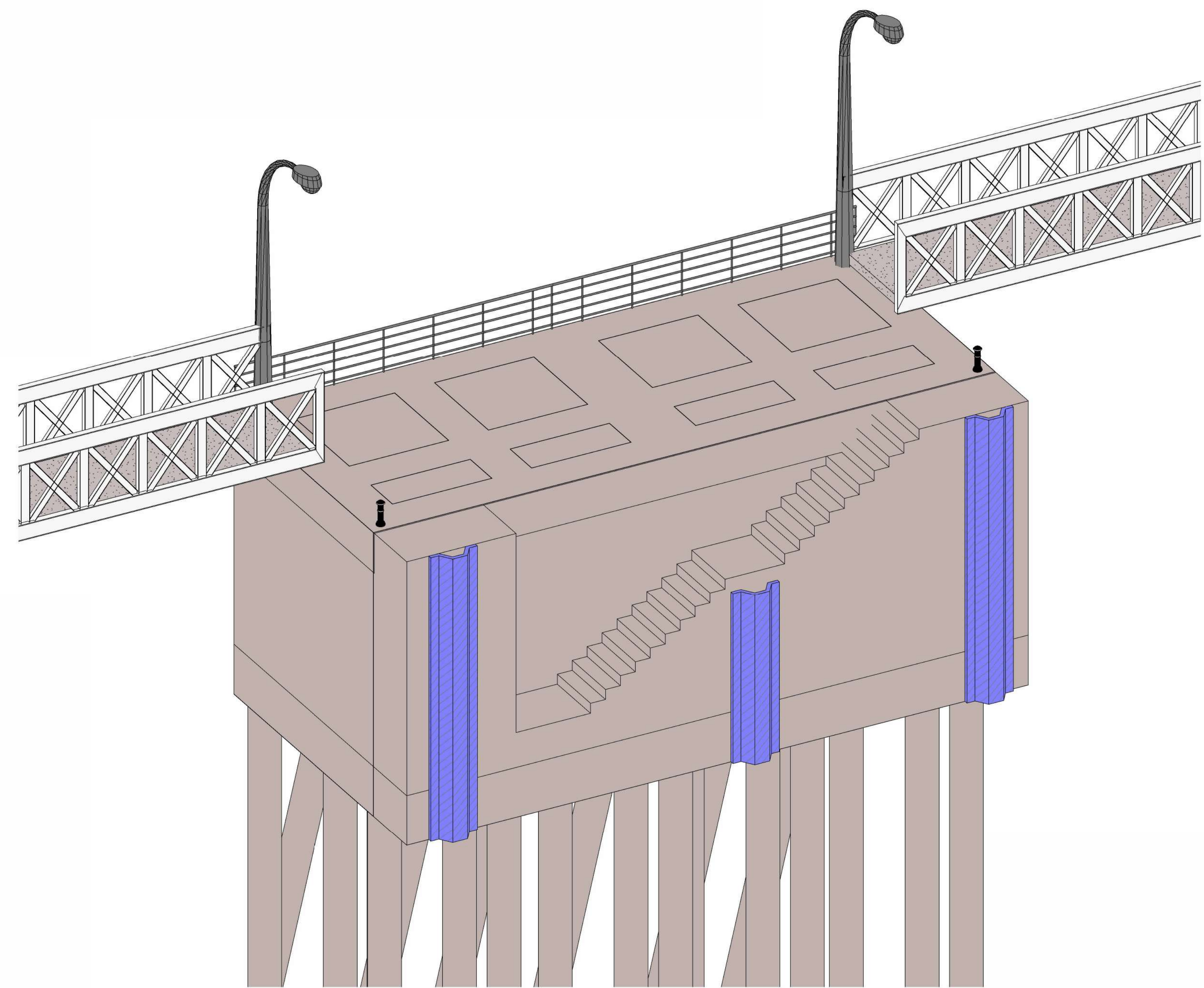
CLIENT  
  
**KENYA PORTS AUTHORITY**  
 P.O BOX 95009 - 80104  
 MOMBASA

PROJECT  
**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

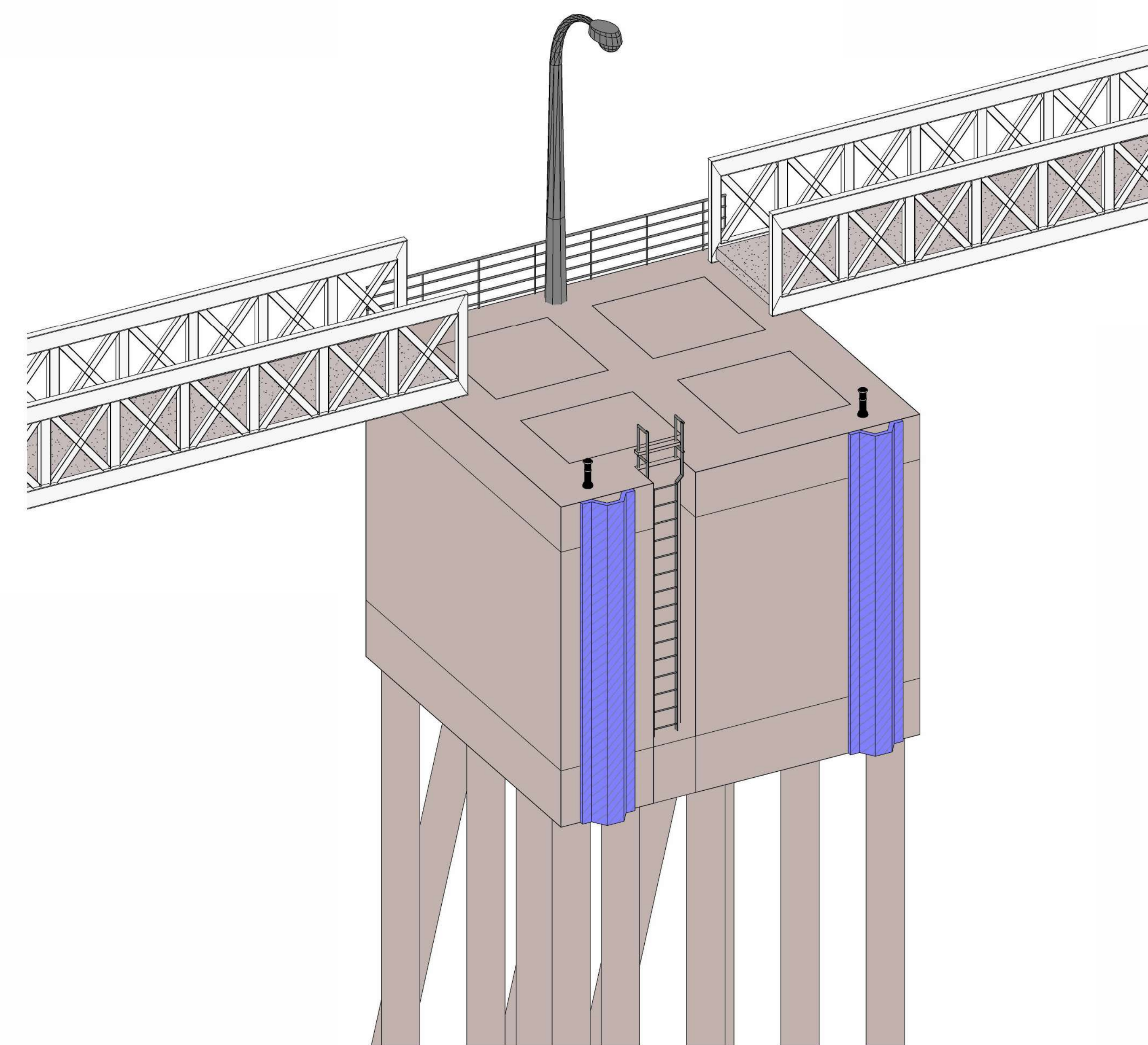
ENGINEER  
**MAXCAD CONSULTING ENGINEERS LTD**  
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 P.O. BOX 40482-80100  
 MOMBASA

PRJ. TITLE  
 DRG TITLE  
**Jetty Head Protection Dolphin**

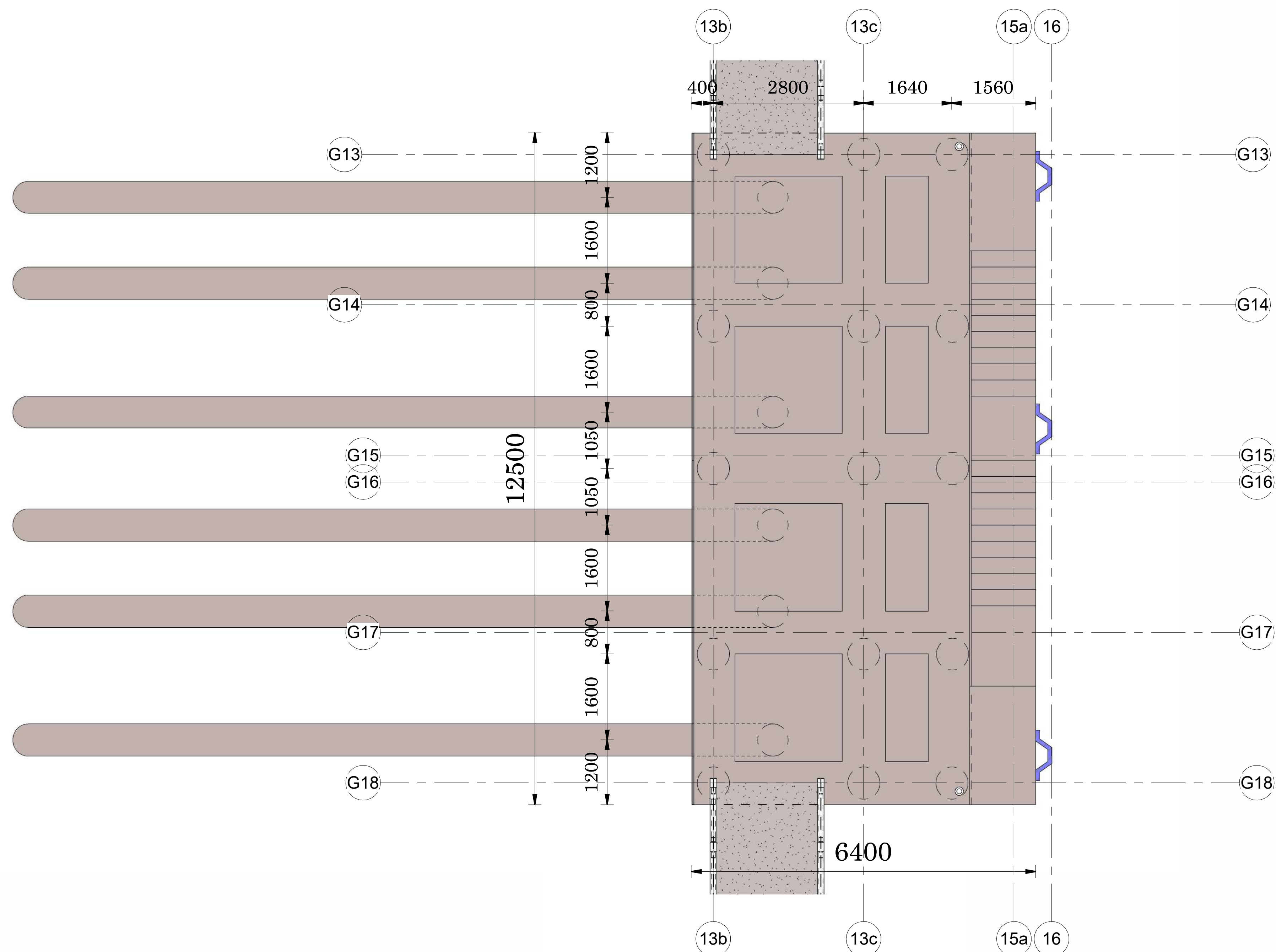
DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1: 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 25		REV



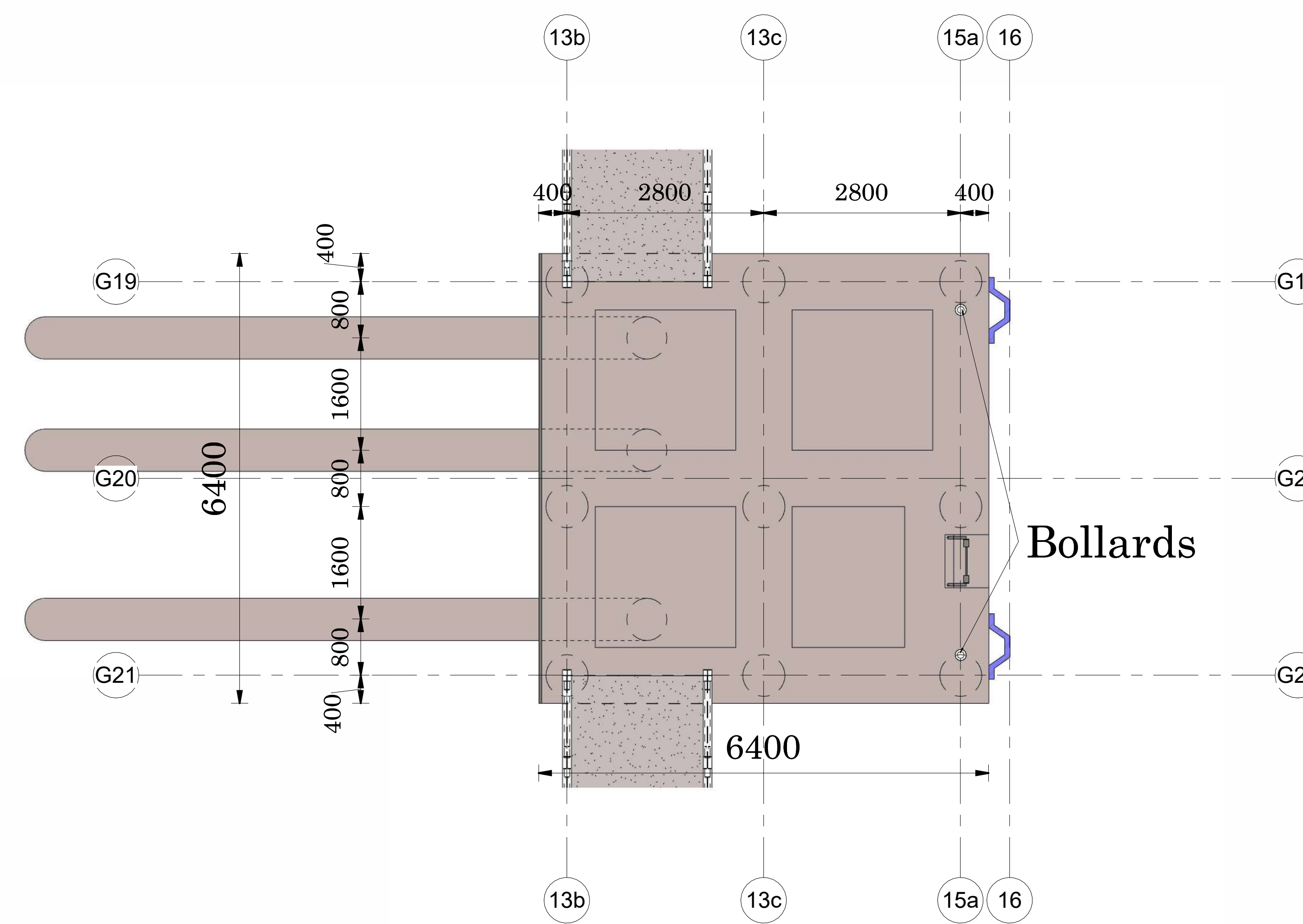
1 Dolphin Type 1



2 Dolphin Type 2




3 Dolphin Type 1  
1:50



4 Dolphin Type 2  
1:50

Rev	Description	Date

CLIENT  
  
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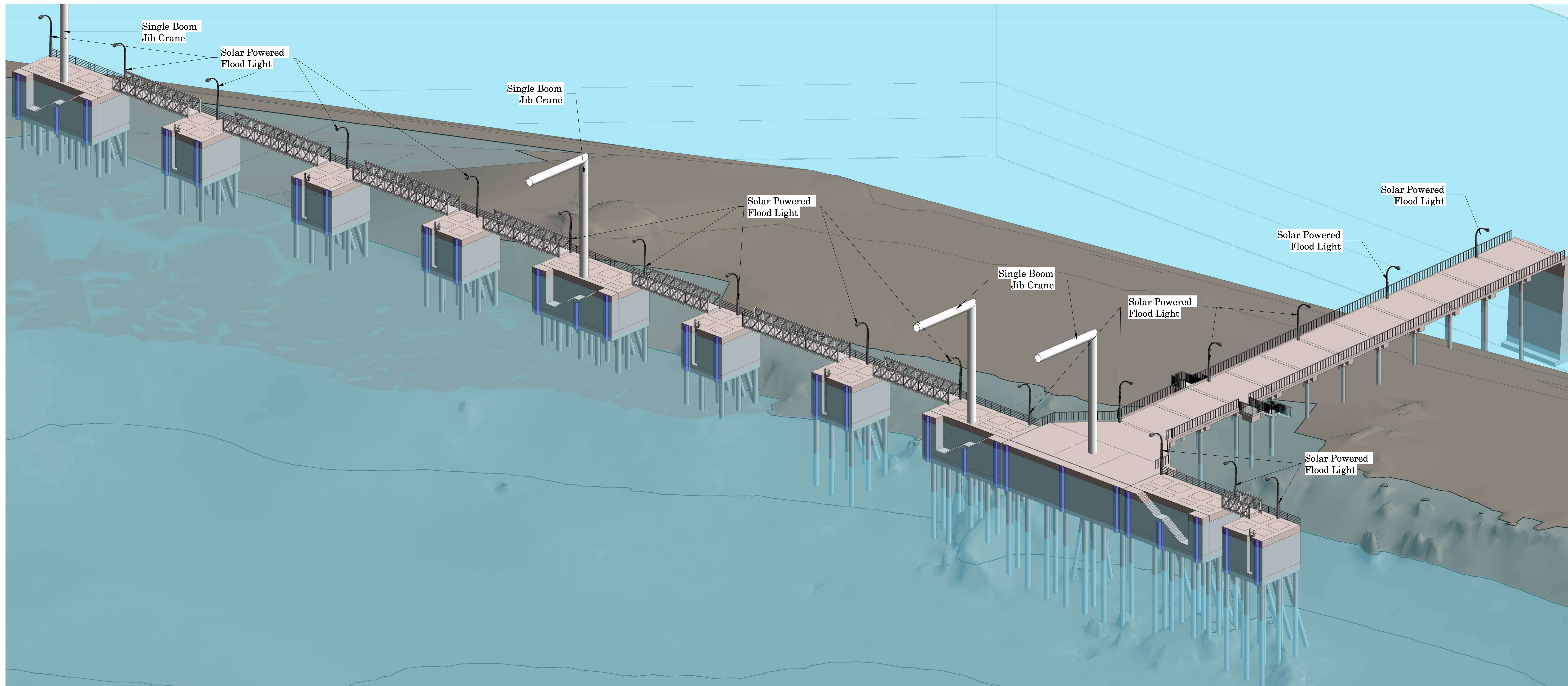
PROJECT  
**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER  
**MAXCAD CONSULTING ENGINEERS LTD**  
 PALM BREEZE, 1st FLOOR, SUITE 8, LINKS ROAD, NYALI  
 P.O. BOX 40482-80100  
 MOMBASA

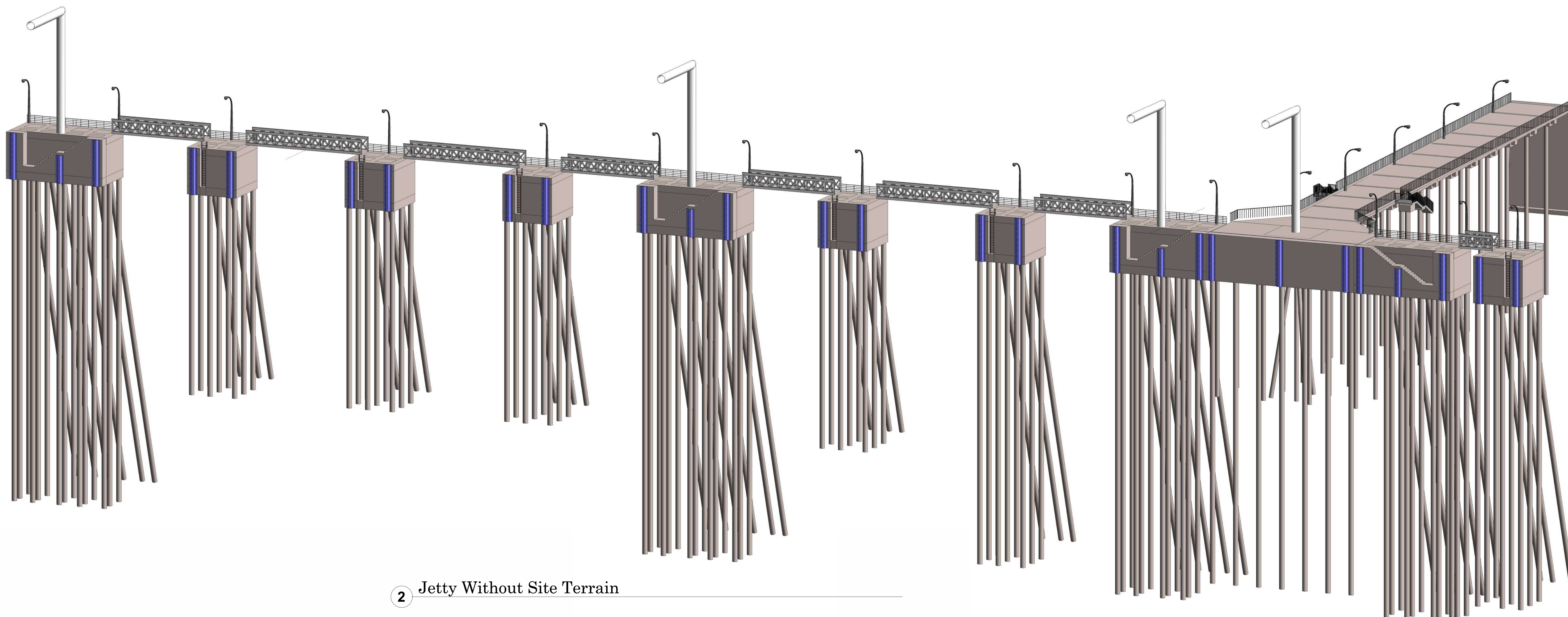
PRJ. TITLE

DRG TITLE  
**Dolphin Types**

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 50		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 26	REV	

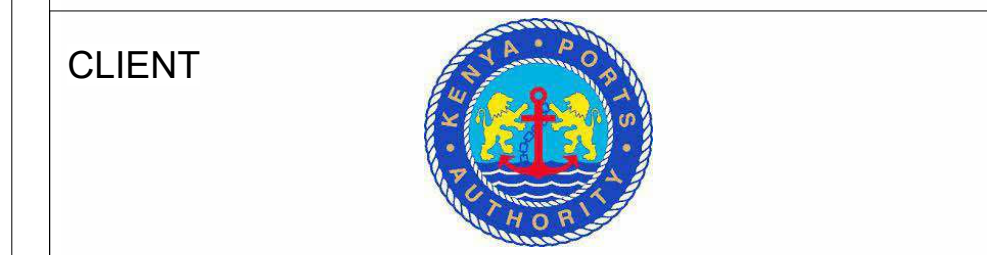


① Jetty With Site Terrain (After Dredging)



② Jetty Without Site Terrain

Rev	Description	Date



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**PROJECT**  
**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

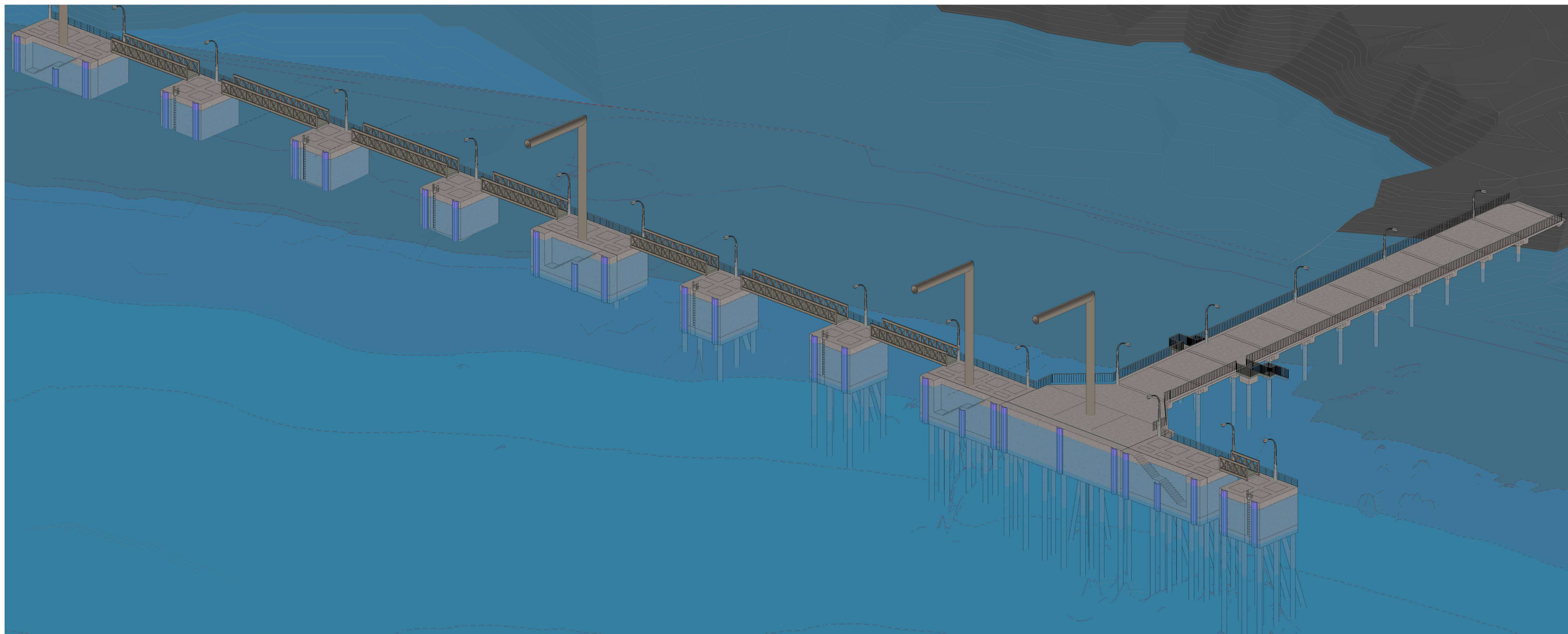
**ENGINEER**  
**MAXCAD CONSULTING ENGINEERS LTD**  
 PALM BREEZE, 1st FLOOR, SUITE 8, LINKS ROAD, NYALI  
 P.O. BOX 40482-80100  
 MOMBASA

**PRJ. TITLE**  
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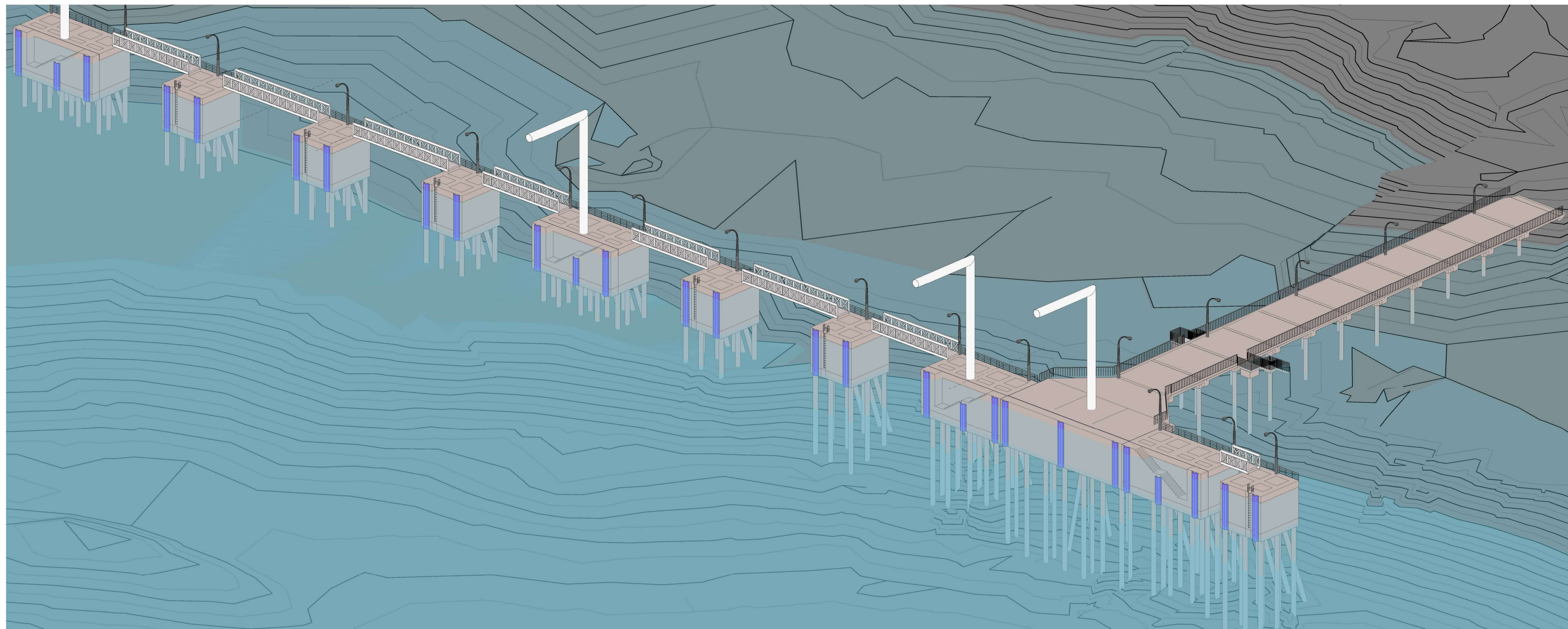
**DRG TITLE**  
**Isometric View**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 )		PROJECT NUMBER KPA/062/2022-23/PDM

DRAWING NUMBER Sht 27	REV
--------------------------	-----




1. Jetty With Site Terrain (Before Dredging)



2. Jetty With Site Terrain (After Dredging)

Rev	Description	Date

CLIENT



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**P.O BOX 95009 - 80104**  
**MOMBASA**

PROJECT

**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

**MAXCAD CONSULTING ENGINEERS LTD**  
**PALM BREEZE, 1st FLOOR, SUITE 8, LINKS ROAD, NYALI**  
**P.O. BOX 40482-80100 MOMBASA**

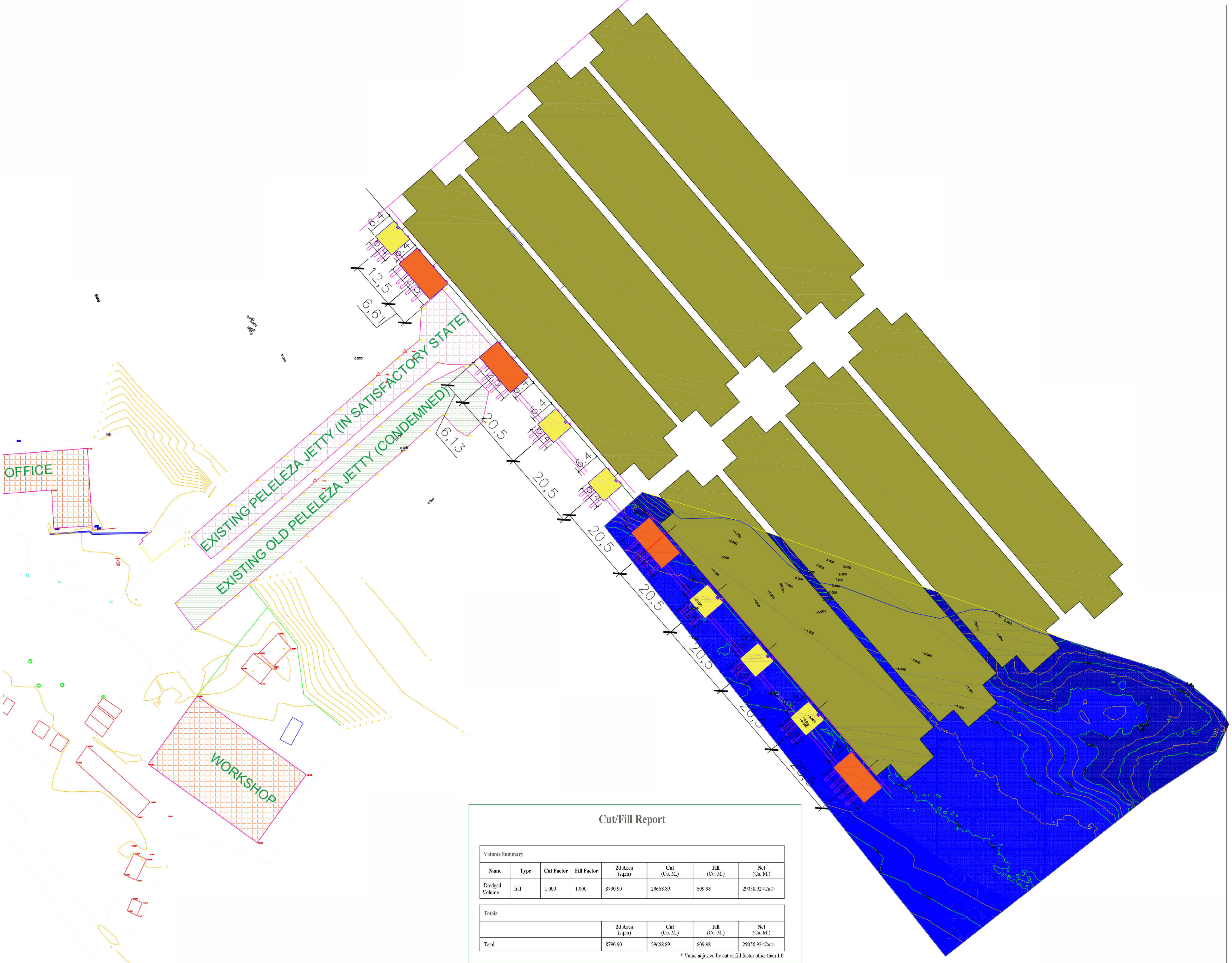
PRJ. TITLE

DRG TITLE

**Isometric View (Before & After Dredging)**

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 )		PROJECT NUMBER KPA/062/2022-23/PDM

DRAWING NUMBER Sht 28	REV
--------------------------	-----




**Cut/Fill Report**

Volume Summary								
Name	Type	Cut Factor	Fill Factor	2d Area (sq.m)	Cut (Cu. M.)	Fill (Cu. M.)	Net (Cu. M.)	
Dredged Volume	fill	1.000	1.000	8790.90	29668.89	609.98	29058.92<Cut>	
Totals								
				2d Area (sq.m)	Cut (Cu. M.)	Fill (Cu. M.)	Net (Cu. M.)	
Total				8790.90	29668.89	609.98	29058.92<Cut>	

\* Value adjusted by cut or fill factor other than 1.0

Rev	Description	Date

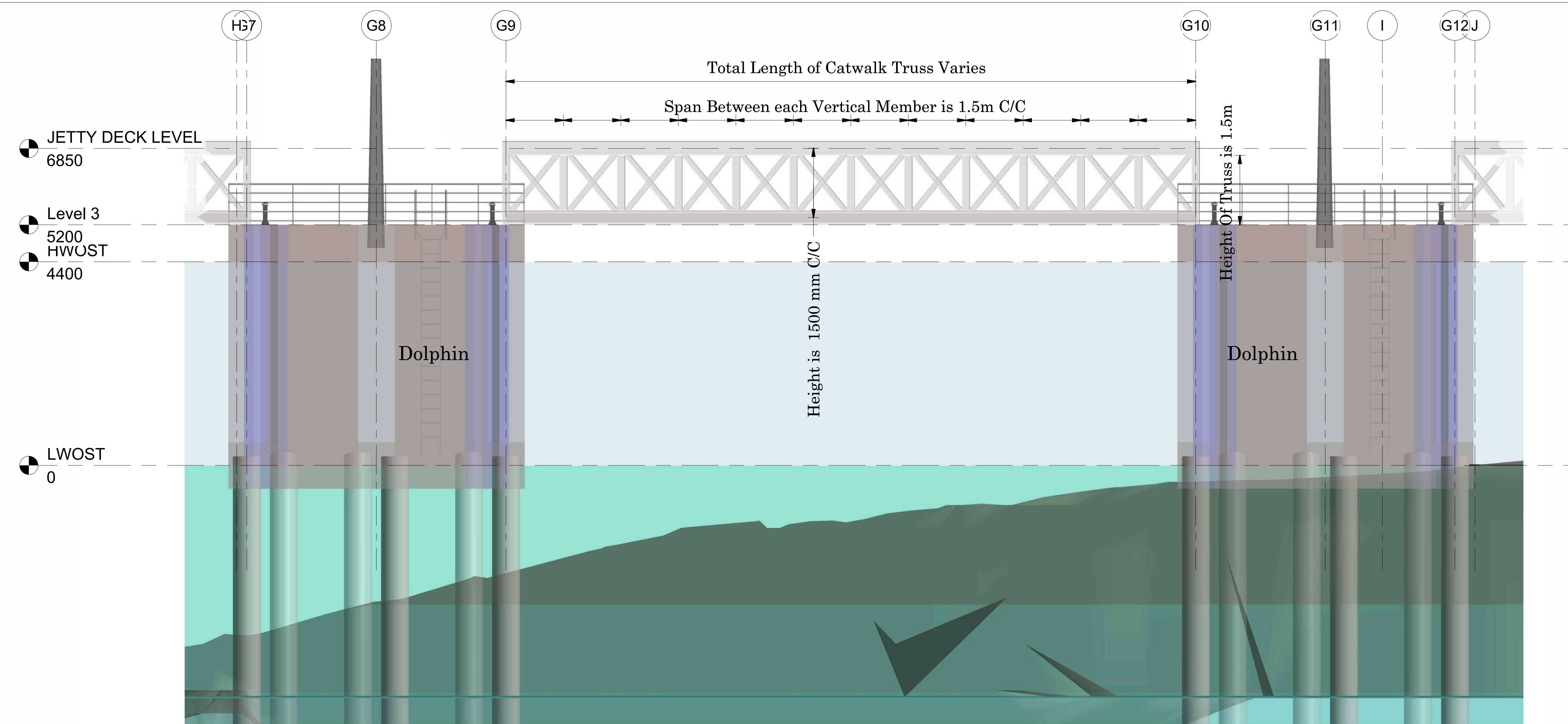
CLIENT  
  
**KENYA PORTS AUTHORITY**  
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 MOMBASA

PROJECT  
**PROPOSED REHABILITATION  
 AND EXTENSION OF PELELEZA  
 JETTY**

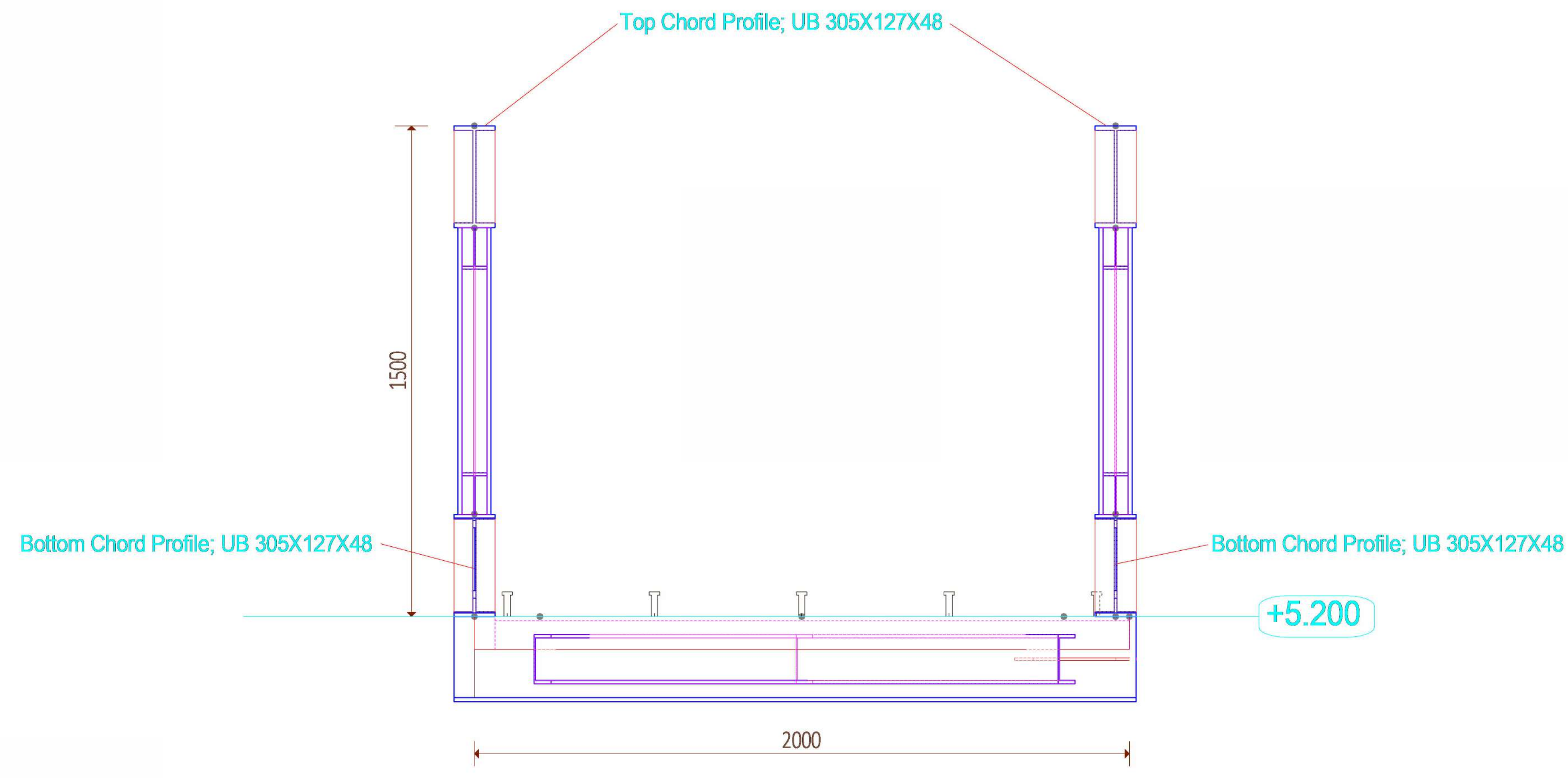
ENGINEER  
**MAXCAD CONSULTING  
 ENGINEERS LTD**  
 PALM BREEZE, 1st FLOOR, SUITE  
 8, LINKS ROAD, NYALI  
 P.O. BOX 40482-80100  
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PRJ. TITLE  
 DRG TITLE  
**Dredging Drawing**

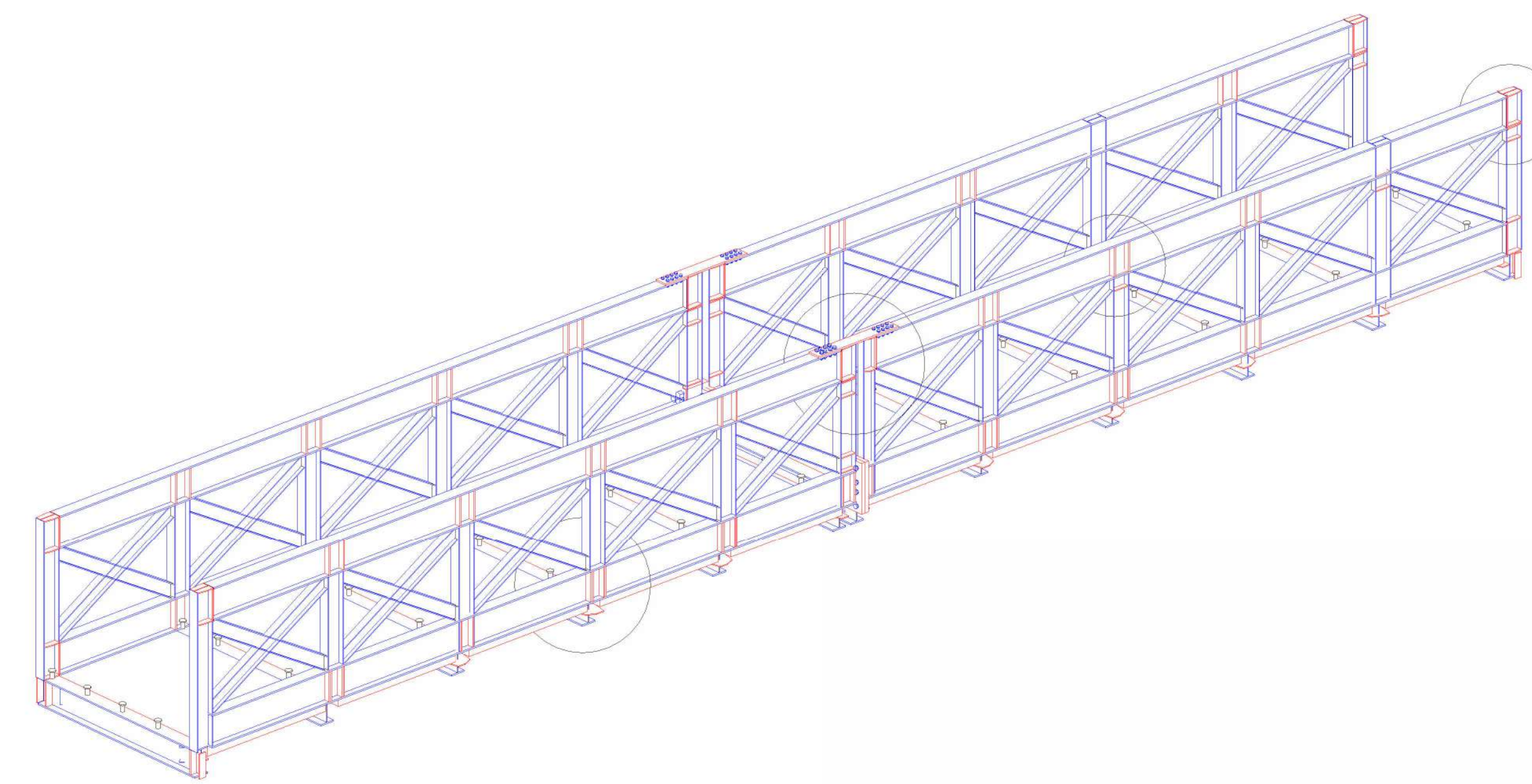
DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 500	PROJECT NUMBER KPA/062/2022-23/PDM	14:40:10
DRAWING NUMBER Sht 29		REV



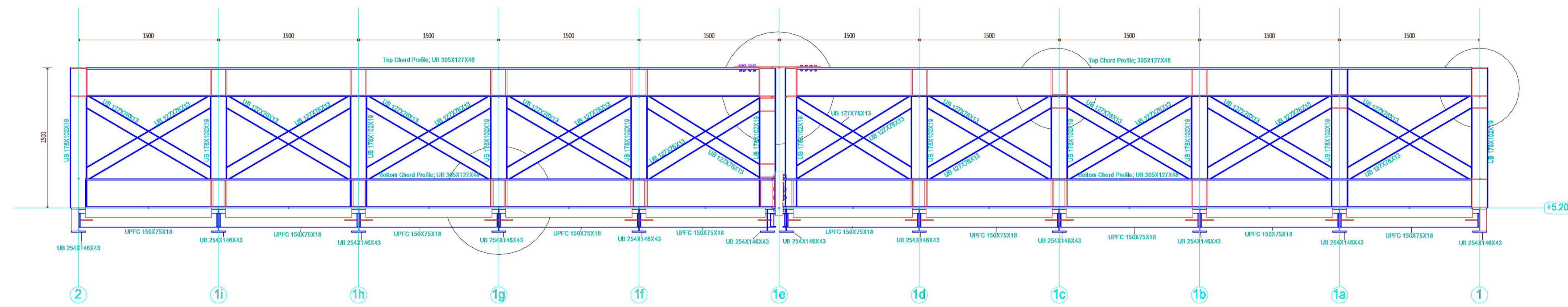
1 Catwalk Elevation Details  
1 : 50



3 Catwalk Section  
1 : 10

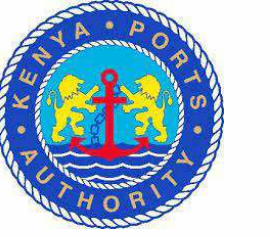


4 Catwalk Isometric View  
1 : 1000



2 Catwalk Elevation  
1 : 25

Rev	Description	Date

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PROJECT  
 PROPOSED REHABILITATION  
 AND EXTENSION OF PELELEZA  
 JETTY

ENGINEER  
 MAXCAD CONSULTING  
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 8, LINKS ROAD, NYALI  
 P.O. BOX 40482-80100  
 MOMBASA

PRJ. TITLE  
  
 DRG TITLE  
**Catwalk Details**

DESIGNED BY  
 G. Eng. Harris

CHECKED BY  
 Eng. Omenda M.K

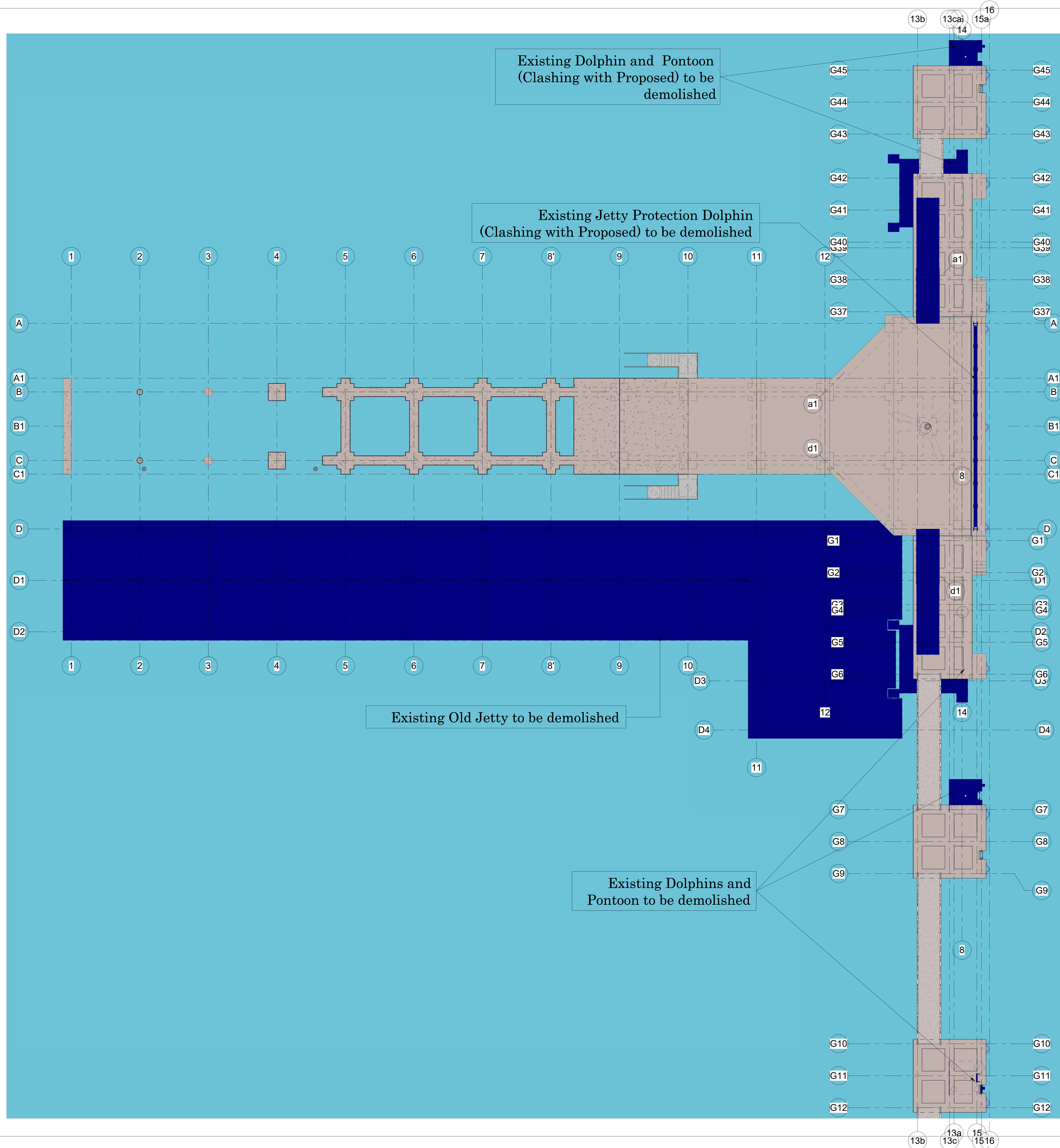
DATE  
 29/02/2024  
 14:40:22

SCALE ( @A0 )  
 As indicated


PROJECT NUMBER  
 KPA/062/2022-23/PDM

DRAWING NUMBER  
 Sht 30

REV  
 1



Rev	Description	Date

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 P.O BOX 95009 - 80104  
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PROJECT  
**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

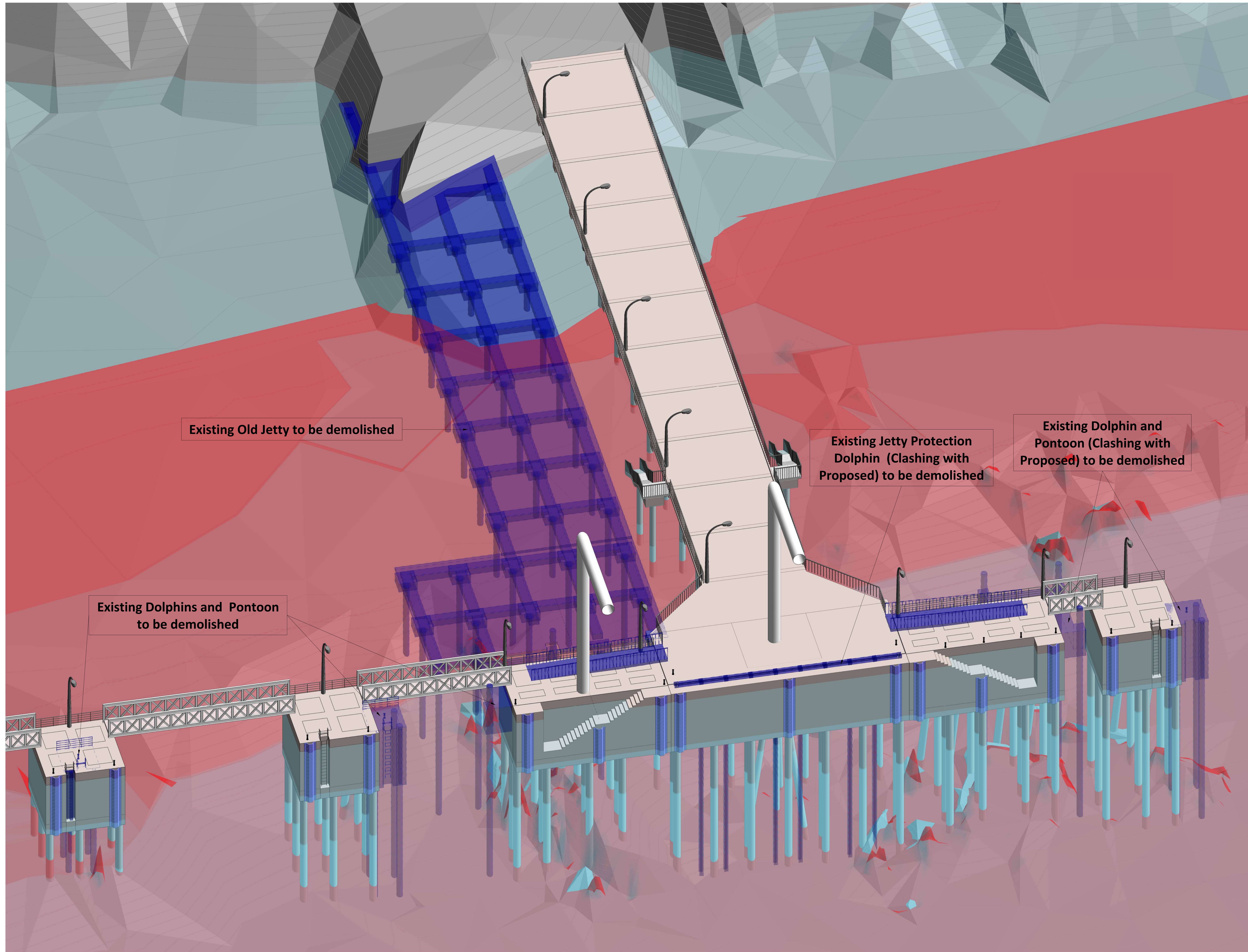
ENGINEER  
**MAXCAD CONSULTING ENGINEERS LTD**  
 PALM BREEZE, 1st FLOOR, SUITE 8, LINKS ROAD, NYALI  
 P.O. BOX 40482-80100  
 MOMBASA

PRJ. TITLE

---

DRG TITLE  
**Demolition Plan**

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 125		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 31	REV	



Existing Old Jetty to be demolished


Existing Jetty Protection  
Dolphin (Clashing with  
Proposed) to be demolished

Existing Dolphin and  
Pontoon (Clashing with  
Proposed) to be demolished

Existing Dolphins and Pontoon  
to be demolished

Rev	Description	Date

CLIENT



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PROJECT

**PROPOSED REHABILITATION  
AND EXTENSION OF PELELEZA  
JETTY**

ENGINEER

**MAXCAD CONSULTING  
ENGINEERS LTD**  
PALM BREEZE, 1st FLOOR, SUITE  
8, LINKS ROAD, NYALI  
P.O. BOX 40482-80100  
MOMBASA

PRJ. TITLE

DRG TITLE

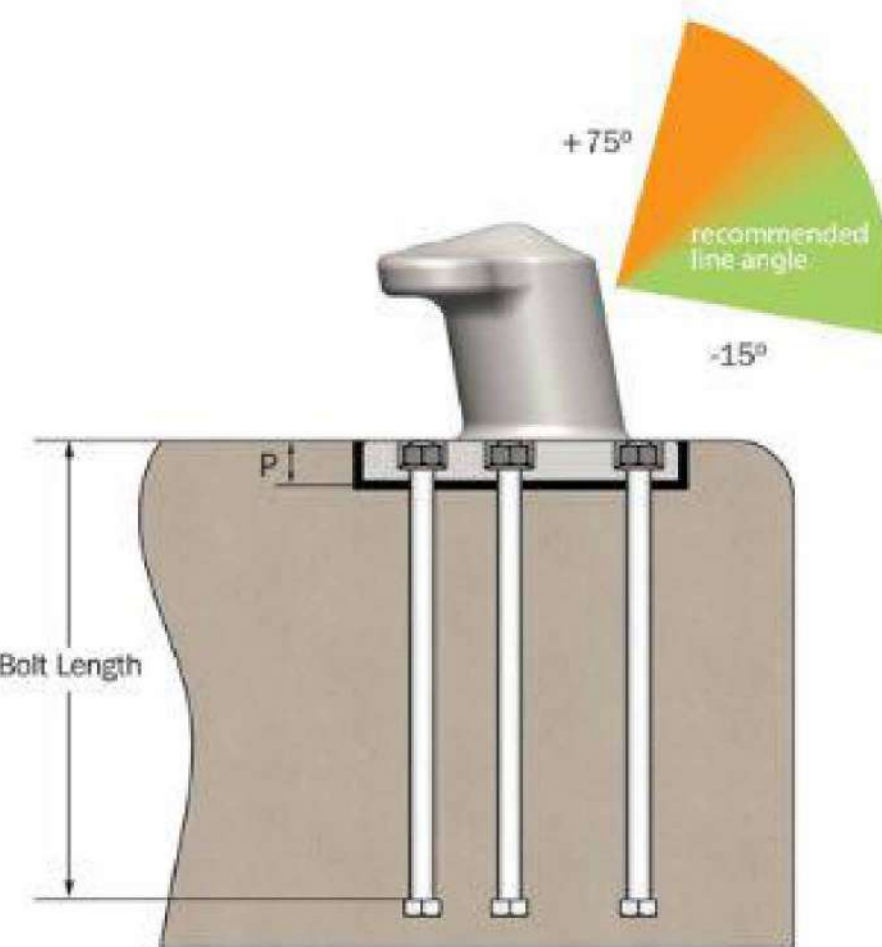
**Demolition (Isometric View)**

DESIGNED BY G. Eng. Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 )		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 32		REV

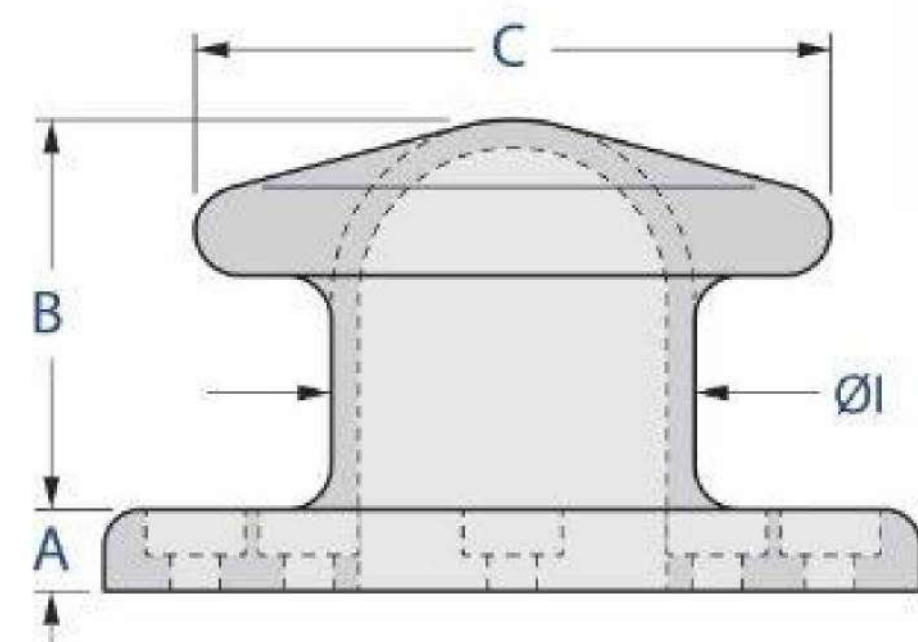
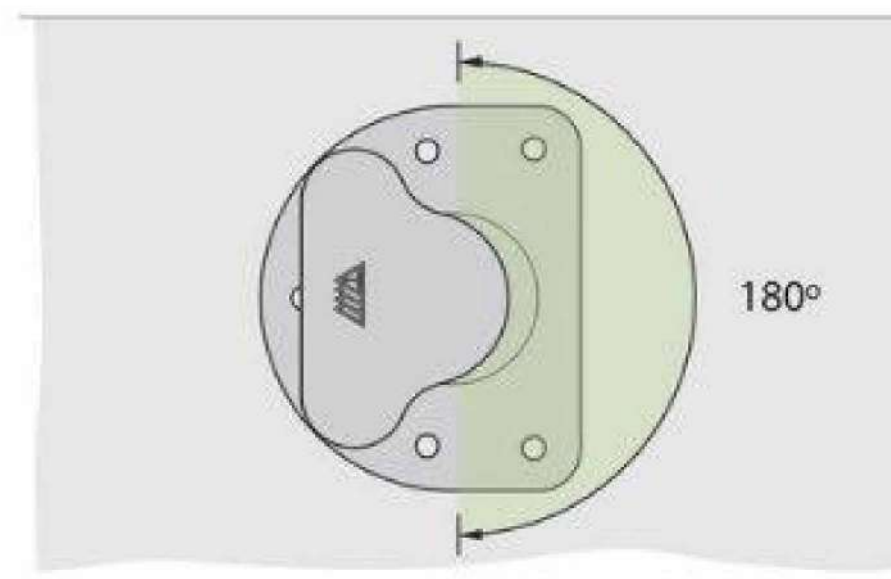
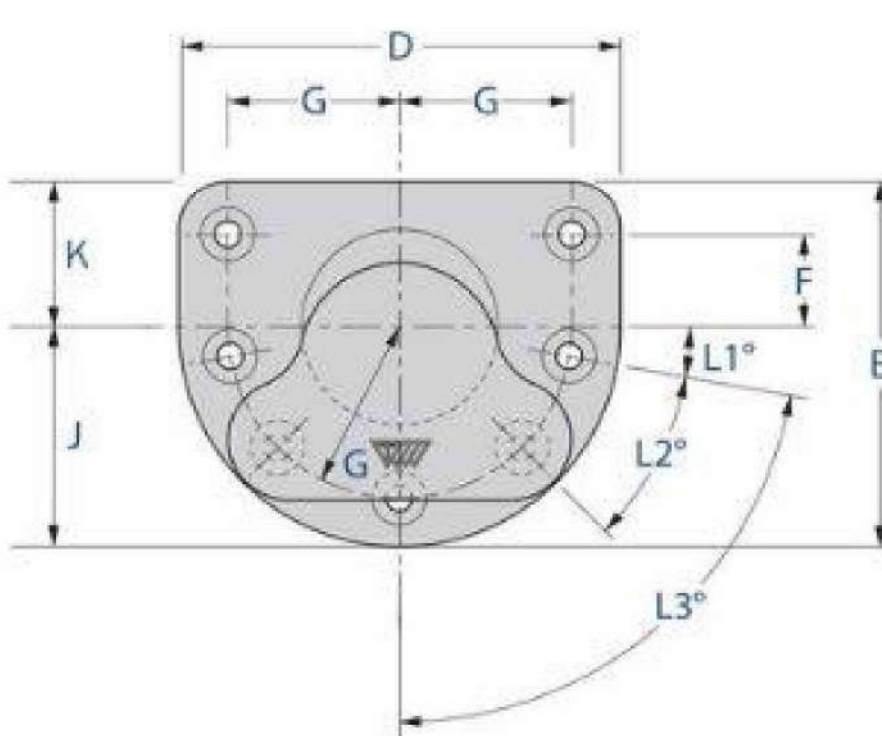
### Tee Bollard

#### Features

- General purpose applications up to 300 tons
- Suitable for steeper rope angles



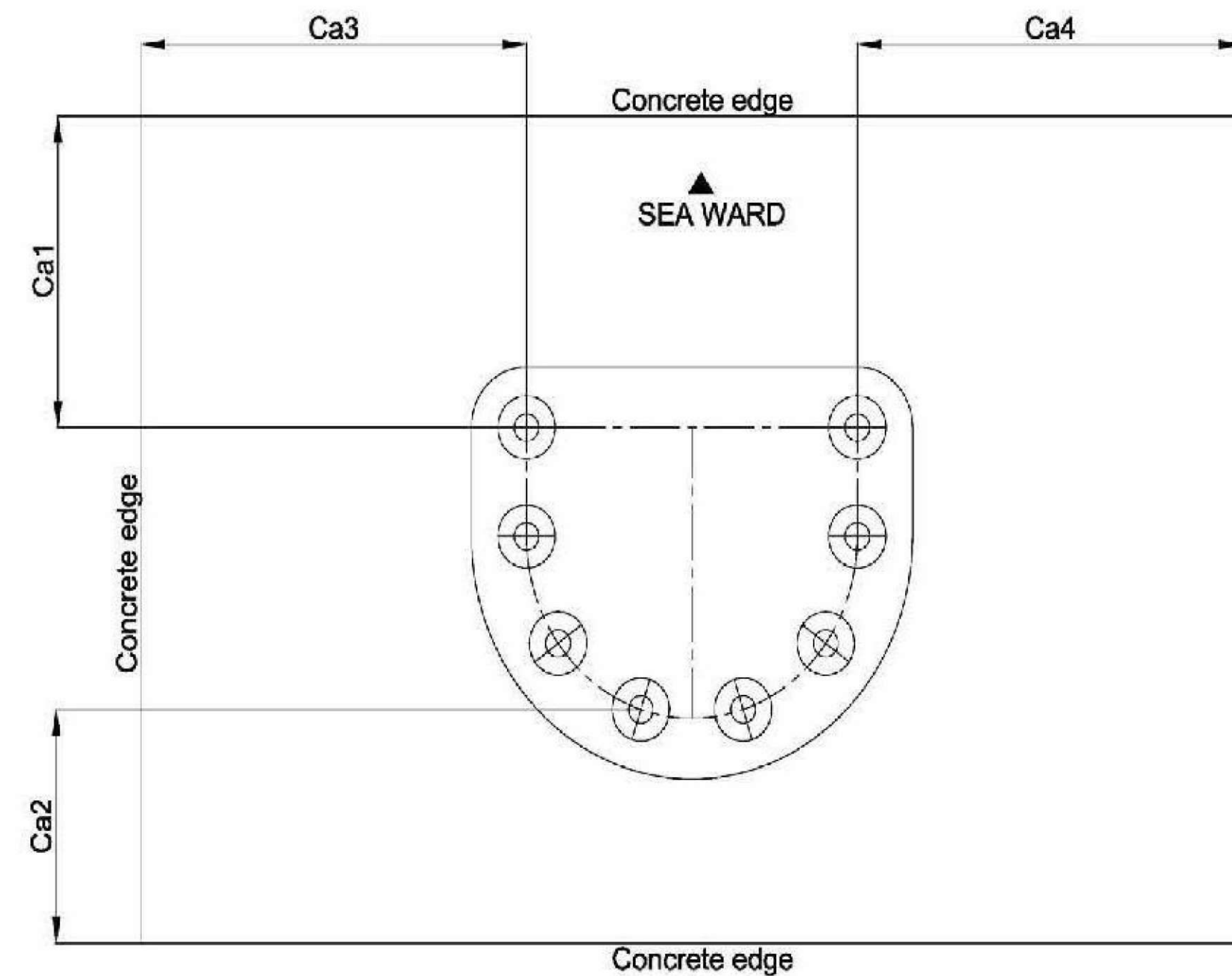
↑ seaward side



A	B	C	D	E	F	G	ØI	J	K	L1°	L2°	L3°	Bolts	Bolt length	P	Qty
80	410	600	790	640	175	325	350	395	245	10°	40°	80°	M42	800	95	7

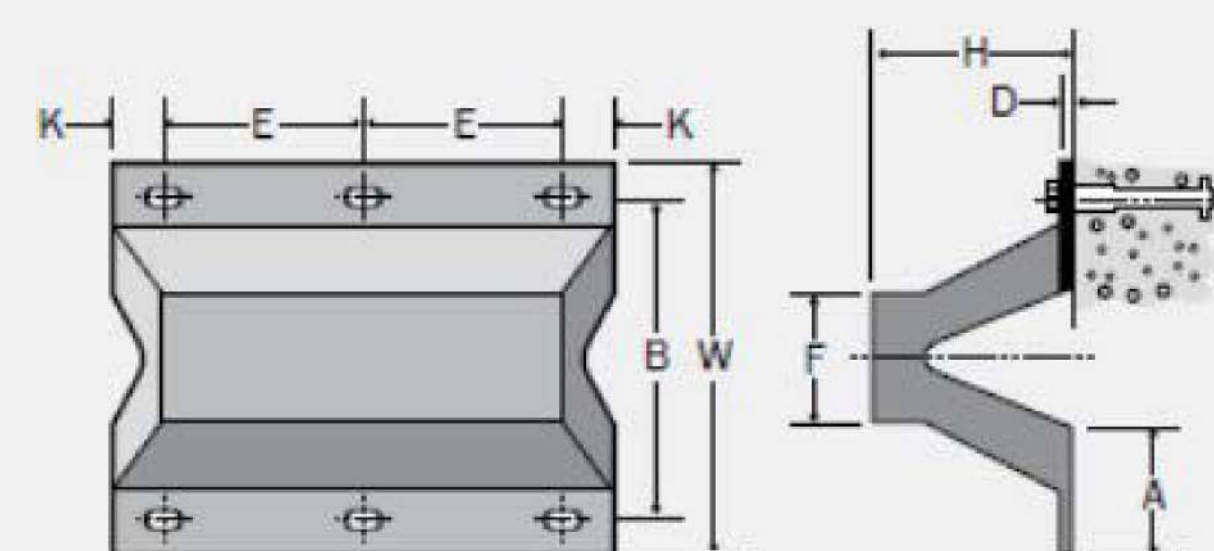
### 1 Proposed Tee Bollard Details 1 : 10

Ca1 (mm)	Ca2 (mm)	Ca3 (mm)	Ca4 (mm)
2093.0	2093.0	2093.0	2093.0

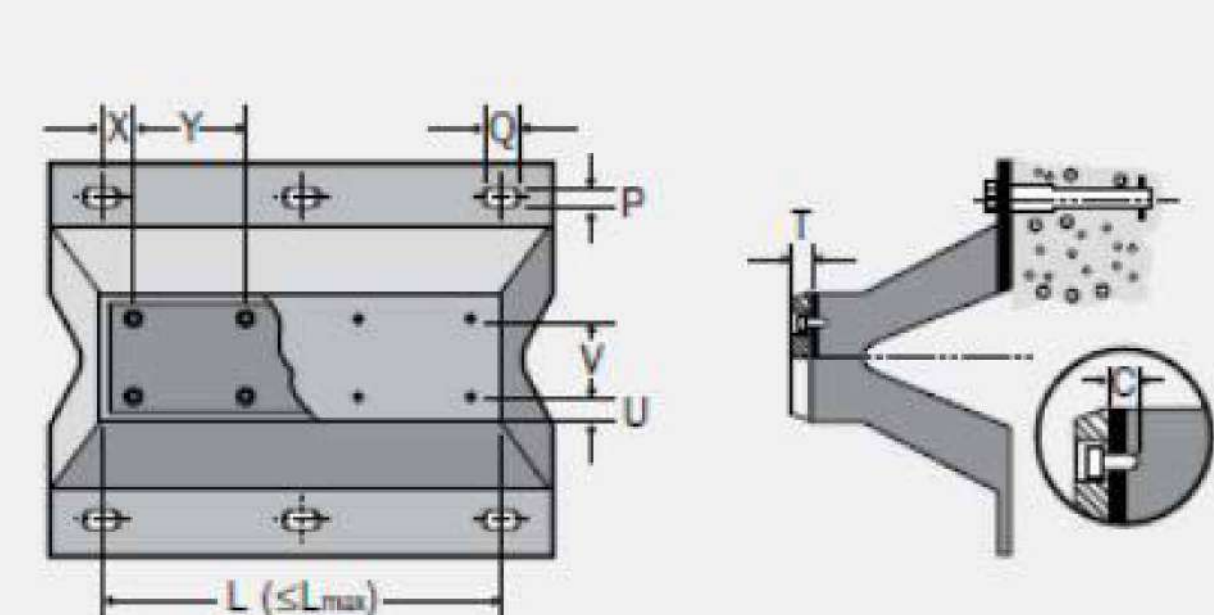


**Note :**  
 - Dimensions Ca1, Ca2, Ca3 and Ca4 are distances from edge of the concrete to the first anchor location on bollard.  
 - Shown anchor layout is for advisory purpose only. The layout of the anchor may differ.

#### AN ARCH FENDER



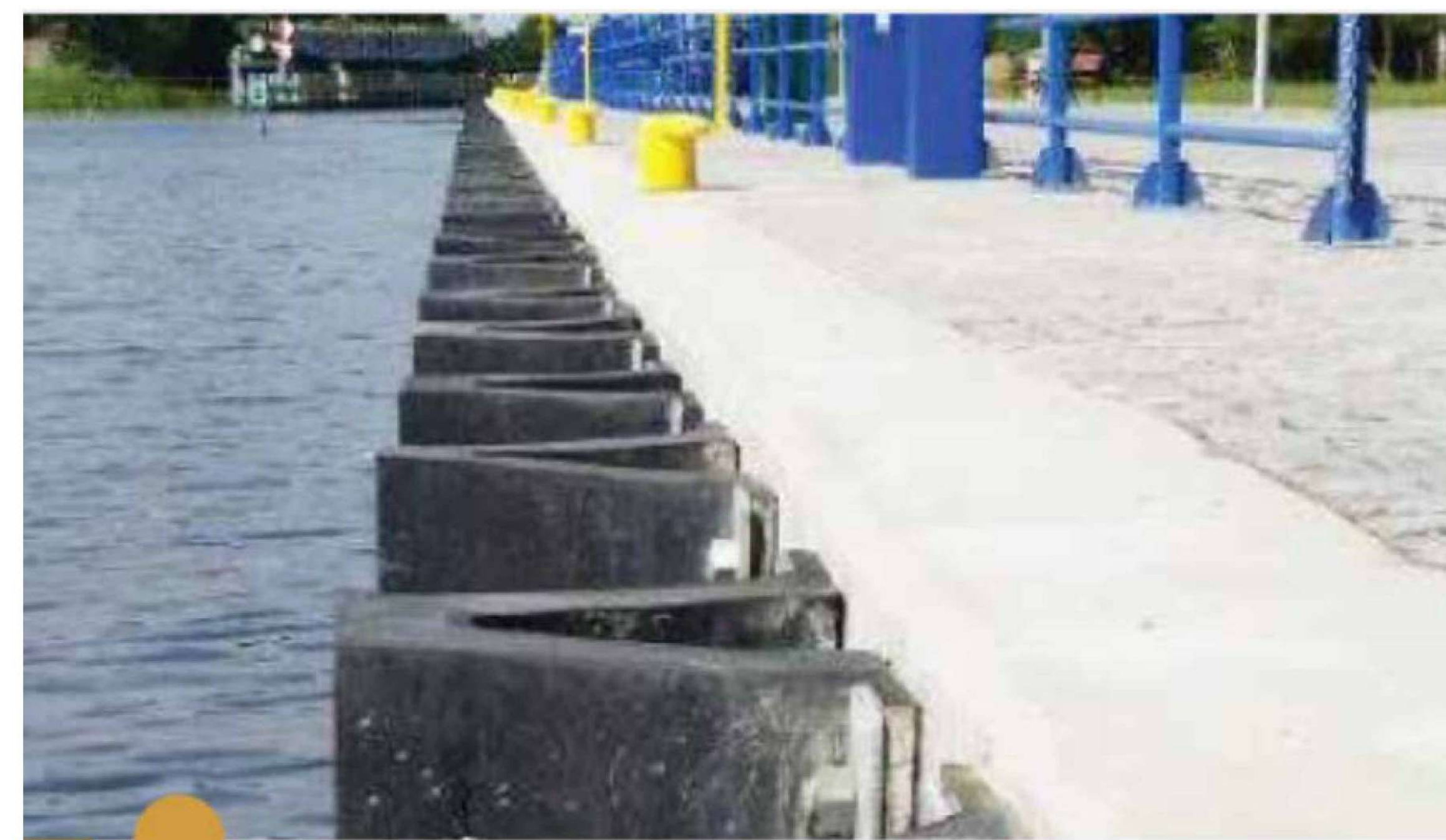
#### ANP ARCH FENDER




#### AN / ANP Arch Fenders

	L <sub>max</sub>	H	A	B	W	F	D	K	E	PxQ	ANCHORS / HEAD BOLTS ^	WEIGHT	
												AN	ANP
AN / ANP 150	3000	150	108	240	326	98	16-20	50	500	20x40	M16	28	35
AN / ANP 200	3000	200	142	320	422	130	18-25	50	500	25x50	M20	48	62
AN / ANP 250	3500	250	164	400	500	163	20-30	62.5	500	28x56	M24	69	90
AN / ANP 300	3500	300	194	480	595	195	25-32	75	500	28x56	M24	107	128
AN / ANP 400	3500	400	266	640	808	260	25-32	100	500	35x70	M30	185	217
AN / ANP 500	3500	500	318	800	981	325	25-32	125	500	42x84	M36	278	352
AN / ANP 600	3000	600	373	960	1160	390	28-40	150	500	48x96	M42	411	488
AN / ANP 800	3000	800	499	1300	1550	520	41-50	200	500	54x108	M48	770	871
AN / ANP 1000	3000	1000	580	1550	1850	650	50-62	250	500	54x108	M48	1289	1390

### 2 Proposed Fender Details 1 : 10



Rev	Description	Date

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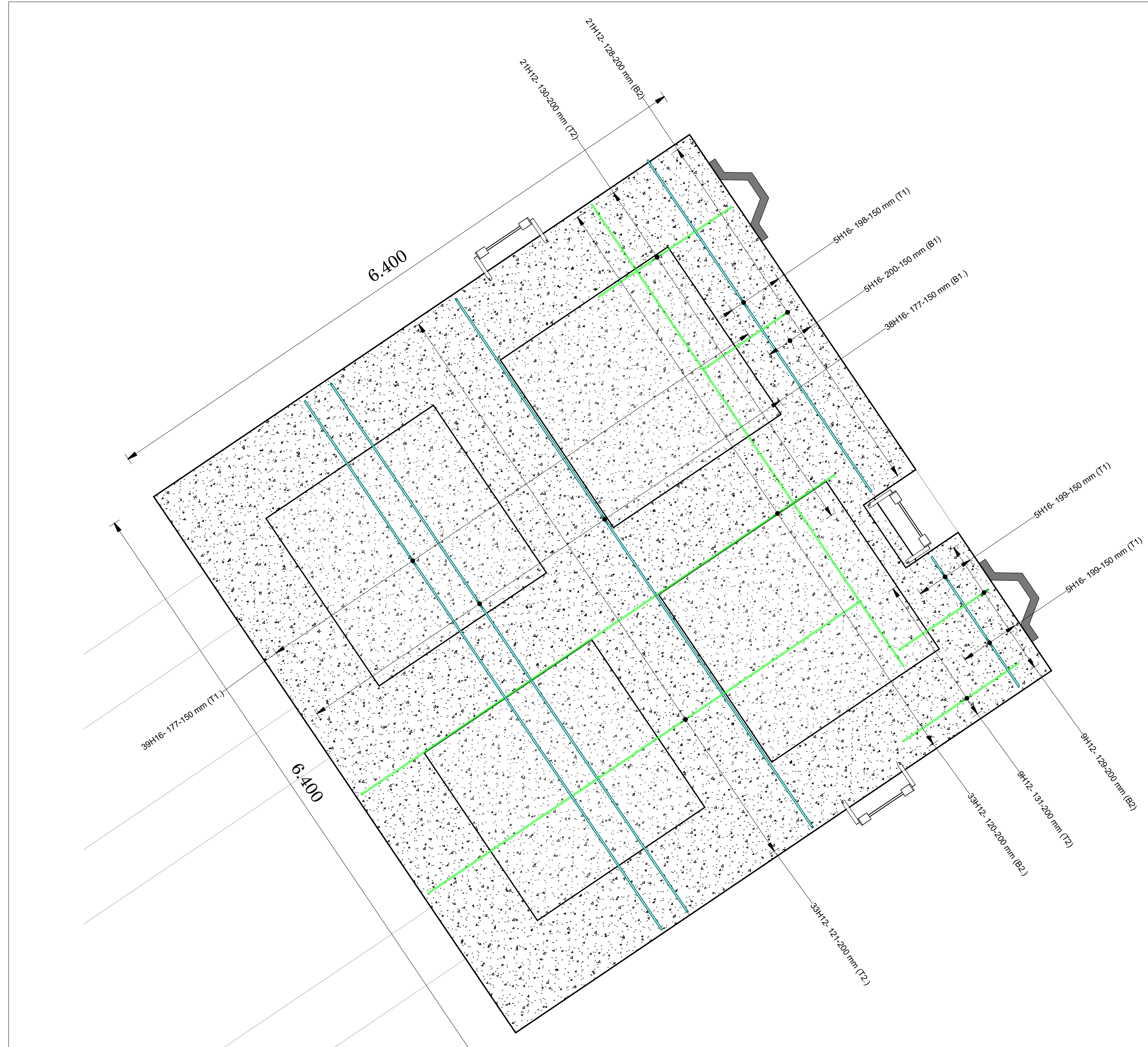
PROJECT  
**PROPOSED REHABILITATION  
 AND EXTENSION OF PELELEZA  
 JETTY**

ENGINEER  
**MAXCAD CONSULTING  
 ENGINEERS LTD**  
 PALM BREEZE, 1st FLOOR, SUITE  
 8, LINKS ROAD, NYALI  
 P.O. BOX 40482-80100  
 MOMBASA

PRJ. TITLE  
**Bollard and Fender Details**

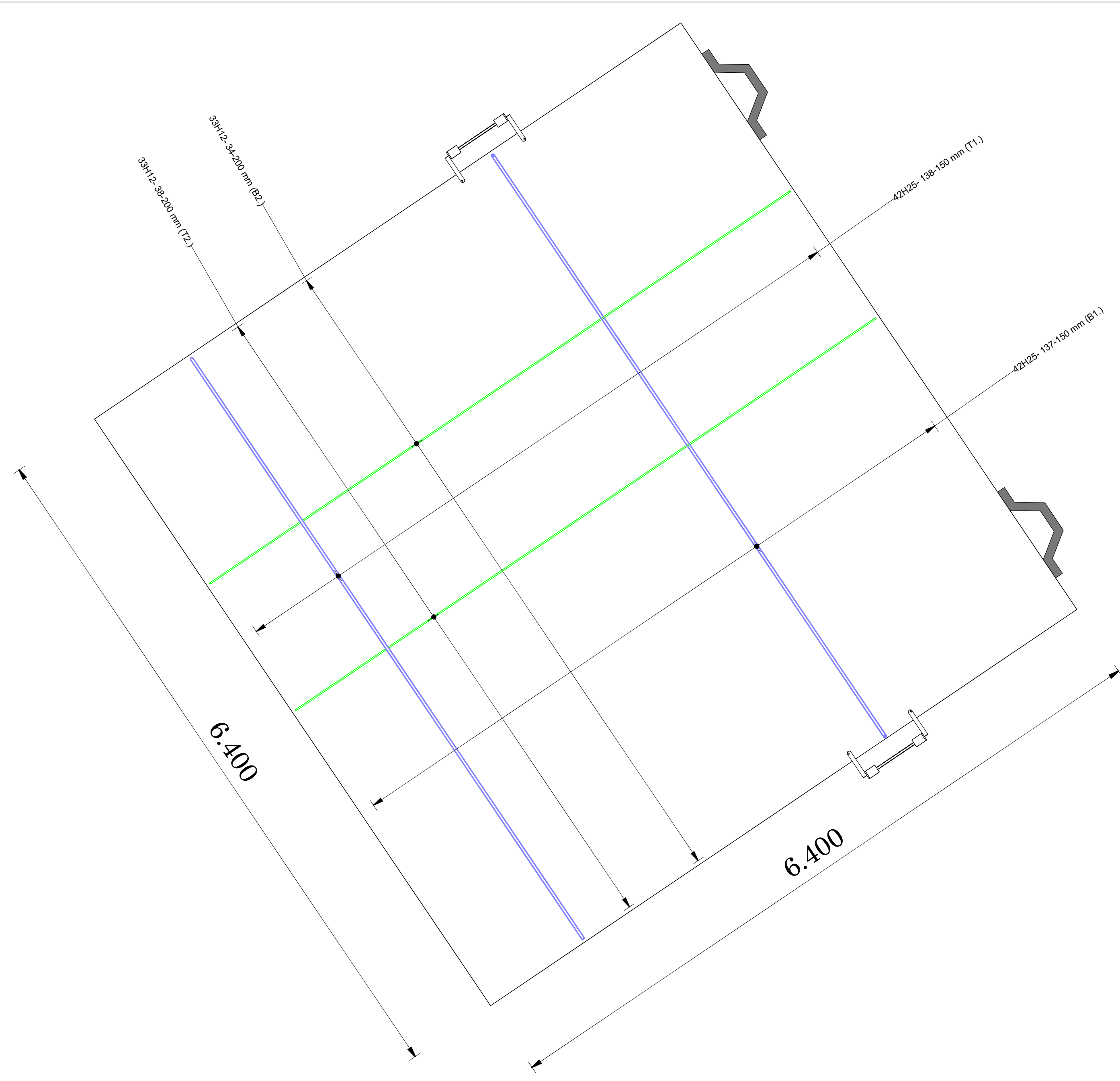
DRG TITLE

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 29/02/2024
SCALE ( @A0 ) 1 : 10	PROJECT NUMBER KPA/062/2022-23/PDM	
DRAWING NUMBER Sht 33		REV



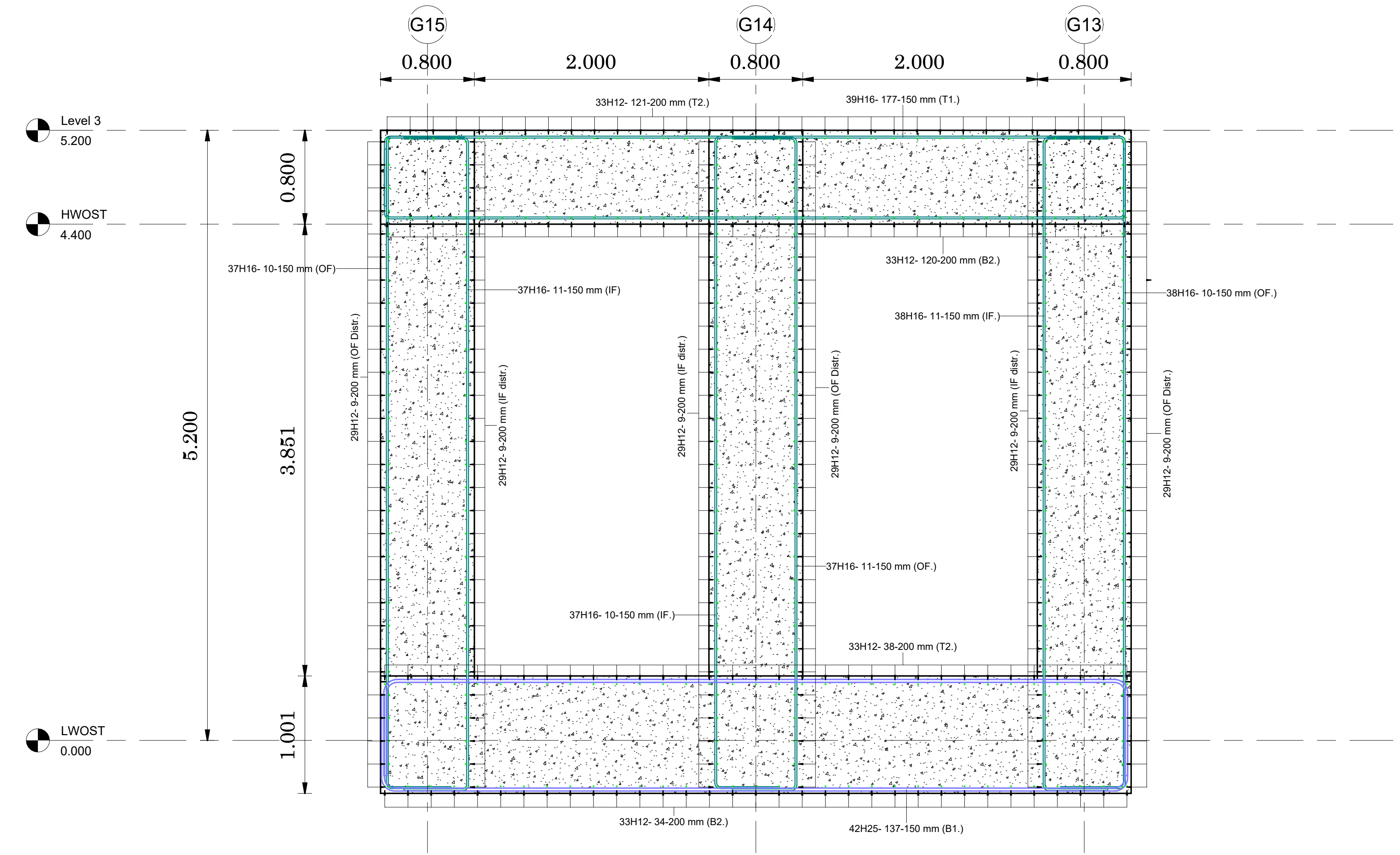
**DOLPHIN 6.4x6.4m PLAN TOP REINFORCEMENT**

Scale 1:25



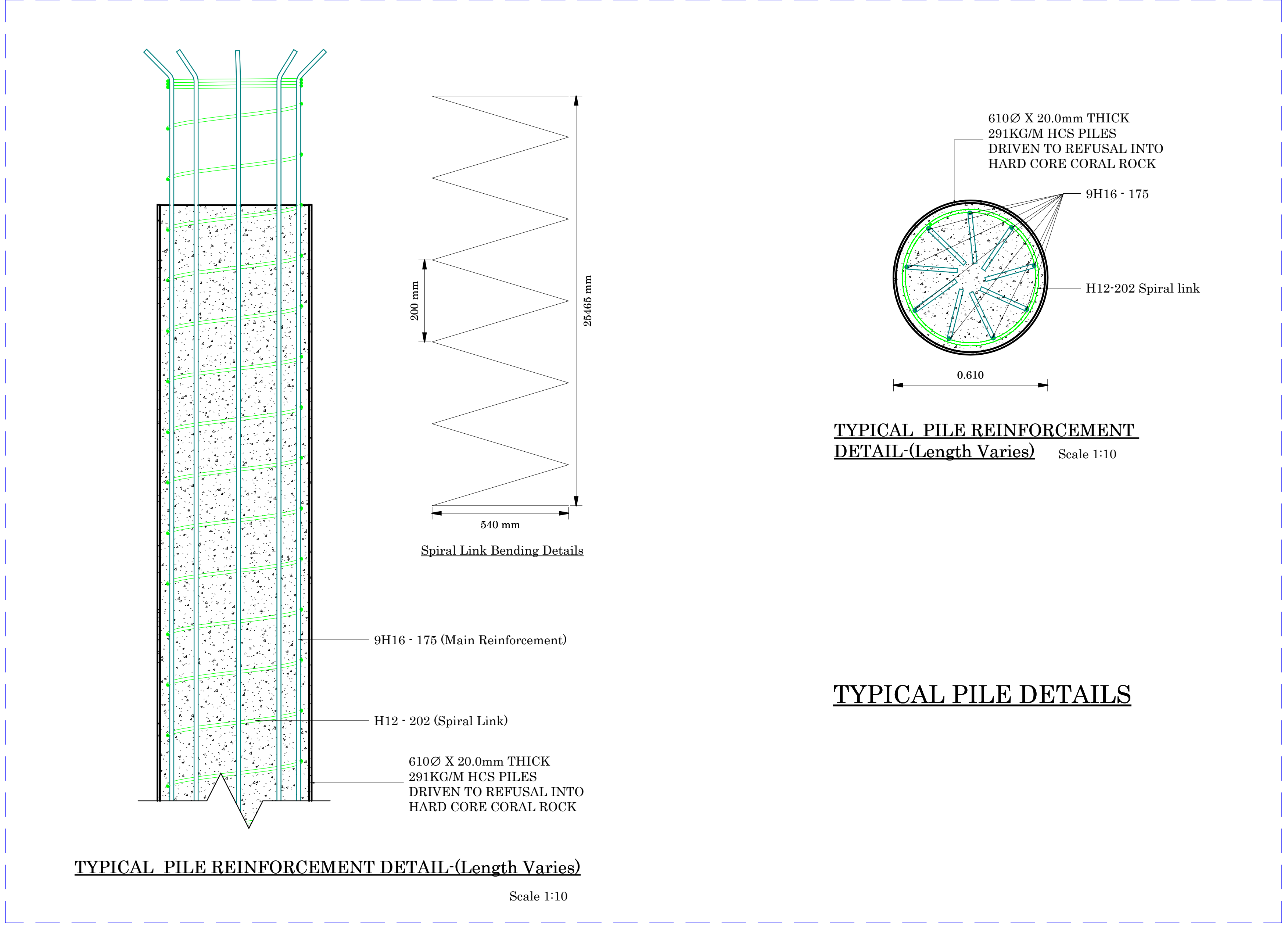
**DOLPHIN 6.4 x6.4 BOTTOM SLAB REINFORCEMENT**

Scale 1:100



**DOLPHIN 6.4x6.4m SECTION**

Scale 1:25



**TYPICAL PILE REINFORCEMENT DETAIL-(Length Varies)**

Scale 1:10


**TYPICAL PILE REINFORCEMENT DETAIL-(Length Varies)**

Scale 1:10

**TYPICAL PILE DETAILS**

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PROJECT

**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

**MAXCAD CONSULTING ENGINEERS LTD**  
PALM BREEZE, 1st FLOOR, SUITE 8, LINKS ROAD, NYALI  
P.O. BOX 40482-80100  
MOMBASA

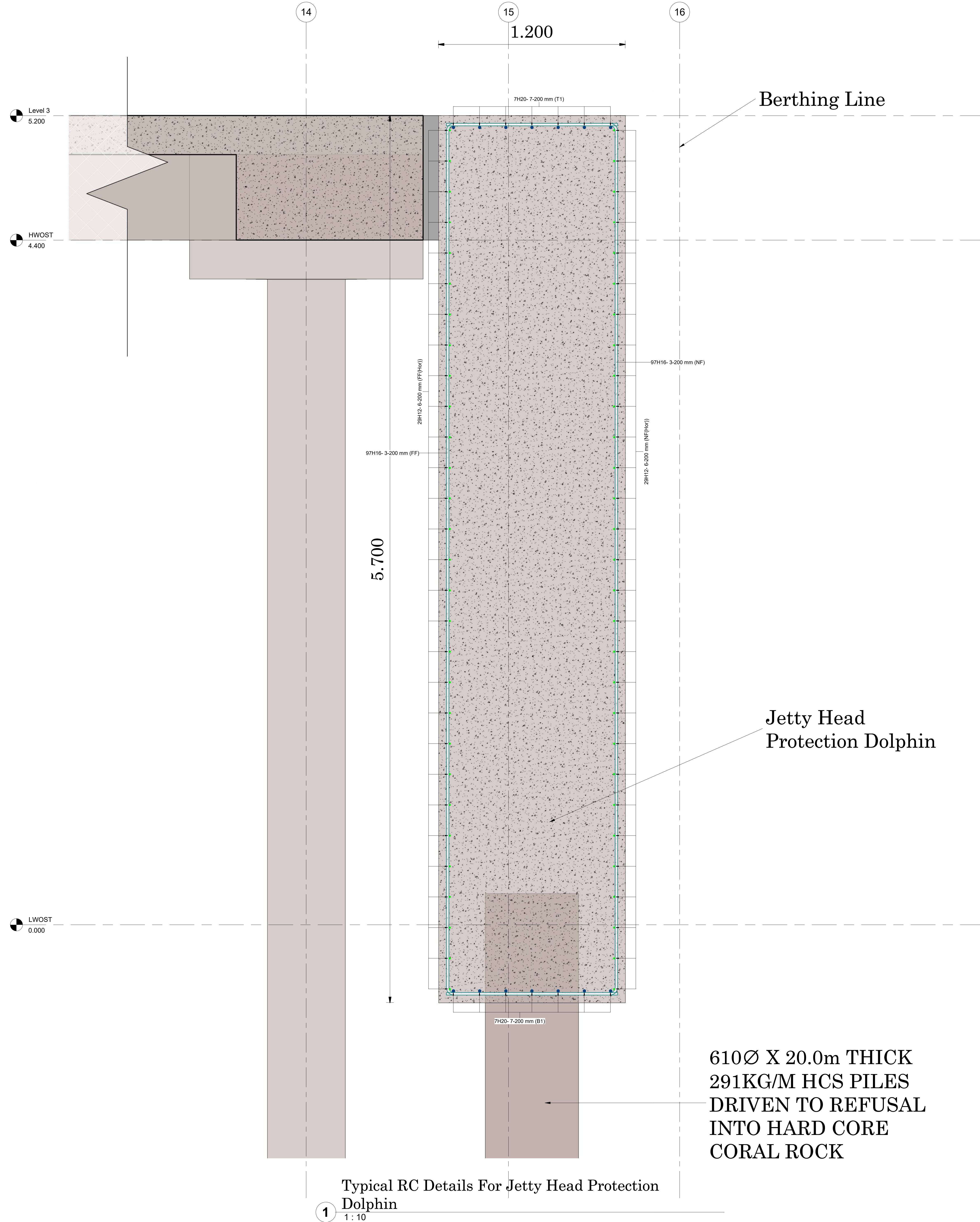
PRJ. TITLE

DRG TITLE

**Dolphin 6.4x6.4m RC Details**

DRAWN BY Author	CHECKED BY Checker	DATE 02/11/2023
SCALE ( @A0 ) As indicated	PROJECT NUMBER KPA/062/2022-23/PDM	09:57:29
DRAWING NUMBER Sht 34	REV	





Berthing Line


Jetty Head Protection Dolphin

610Ø X 20.0m THICK  
291KG/M HCS PILES  
DRIVEN TO REFUSAL  
INTO HARD CORE  
CORAL ROCK

Typical RC Details For Jetty Head Protection Dolphin  
1  
1 : 10

Rev	Description	Date

CLIENT



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PROJECT

**PROPOSED REHABILITATION  
AND EXTENSION OF PELELEZA  
JETTY**

ENGINEER

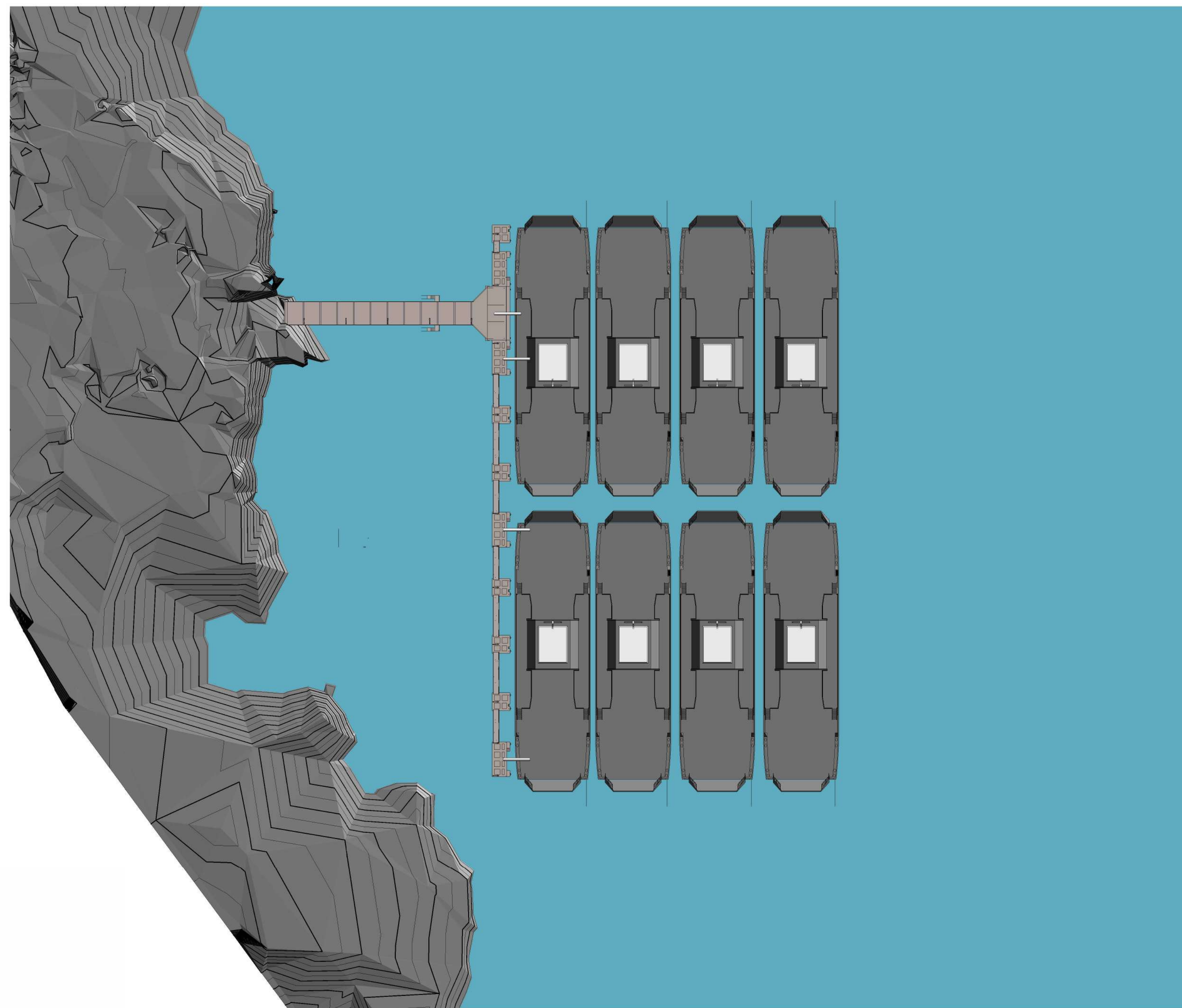
**MAXCAD CONSULTING  
ENGINEERS LTD**  
PALM BREEZE, 1st FLOOR, SUITE  
8, LINKS ROAD, NYALI  
P.O. BOX 40482-80100  
MOMBASA

PRJ. TITLE

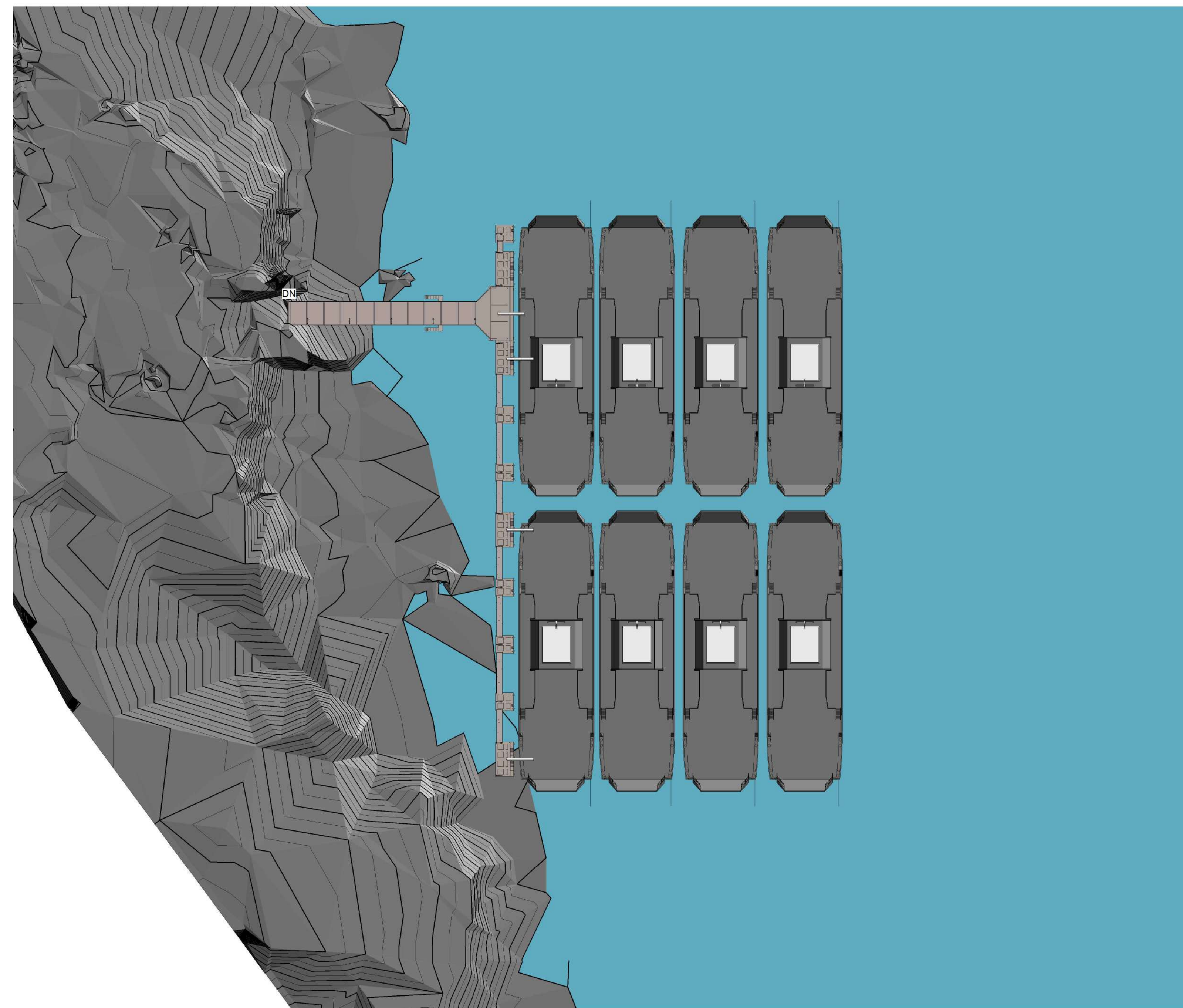
DRG TITLE

**RC Details For Jetty Head  
Protection Dolphin**

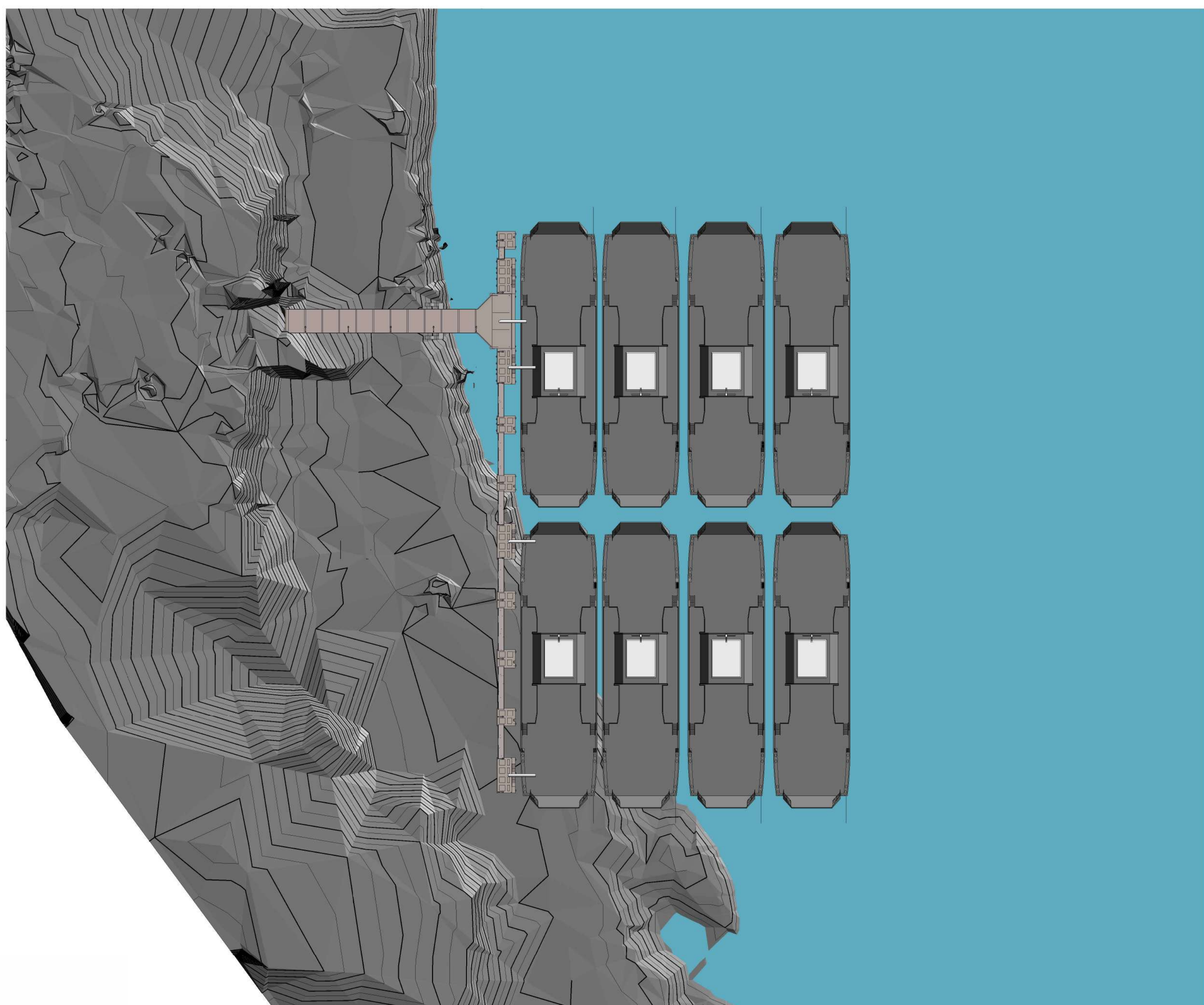
DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 28/02/2024
SCALE ( @A0 ) 1 : 10		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 36	REV	



**1** Sea Water Level At +4.4m ACD  
1 : 1000



**2** Sea Water Level At 0.0m ACD  
1 : 1000




**3** Sea Water Level At -5.0m ACD (Before Dredging)  
1 : 1000



**4** Sea Water Level At -5.0m ACD (After Dredging)  
1 : 1000

Rev	Description	Date

CLIENT



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**MOMBASA**

PROJECT

**PROPOSED REHABILITATION  
AND EXTENSION OF PELELEZA  
JETTY**

ENGINEER

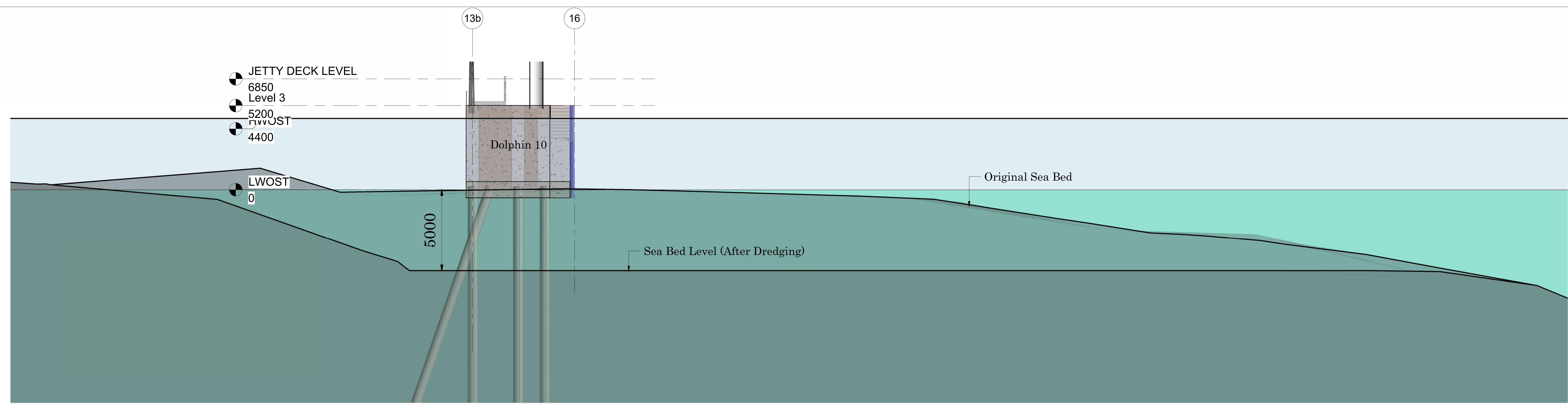
**MAXCAD CONSULTING  
ENGINEERS LTD**  
PALM BREEZE, 1st FLOOR, SUITE  
8, LINKS ROAD, NYALI  
P.O. BOX 40482-80100  
**MOMBASA**

PRJ. TITLE

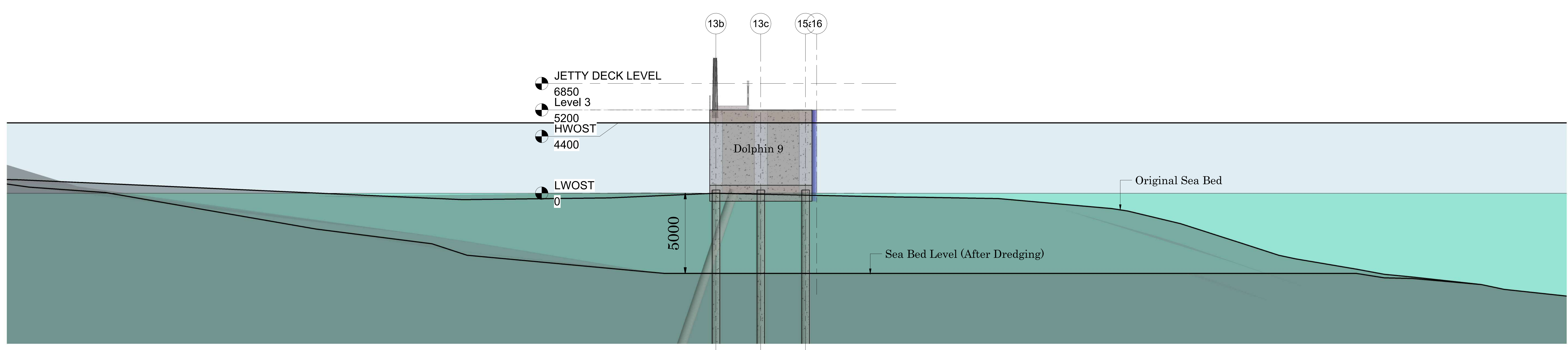
DRG TITLE

**Sea water Height At +4.4m, 0.0m  
& -5.0m ACD**

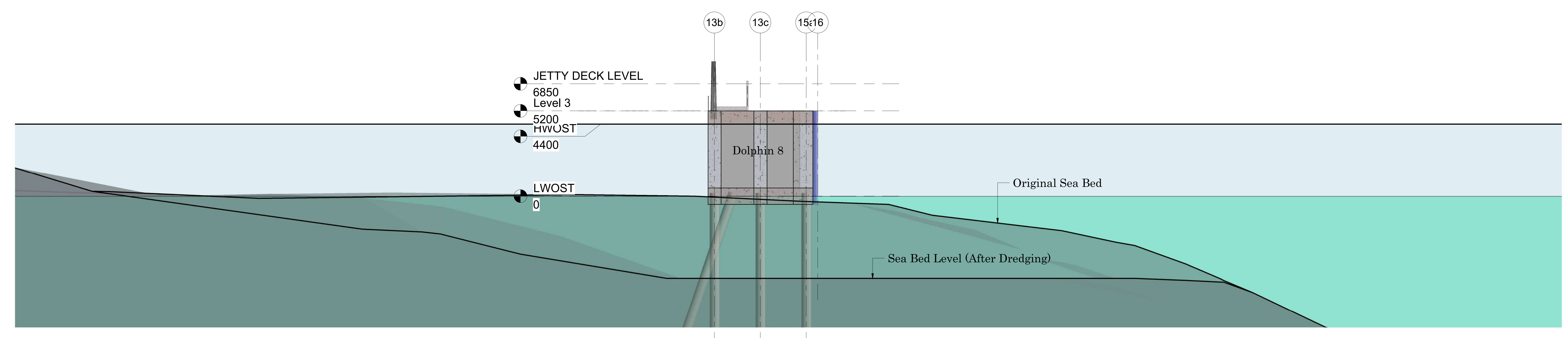
DESIGNED BY Designer	CHECKED BY Checker	DATE 29/02/2024 19:37:49
SCALE ( @A0 ) 1 : 1000	PROJECT NUMBER KPA/062/2022-23/PDM	
DRAWING NUMBER Sht 37		REV



1 Dredged Section 1  
1:100




2 Dredged Section 2  
1:100



3 Dredged Section 3  
1:100

Rev	Description	Date

CLIENT



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P.O BOX 95009 - 80104  
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PROJECT

**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

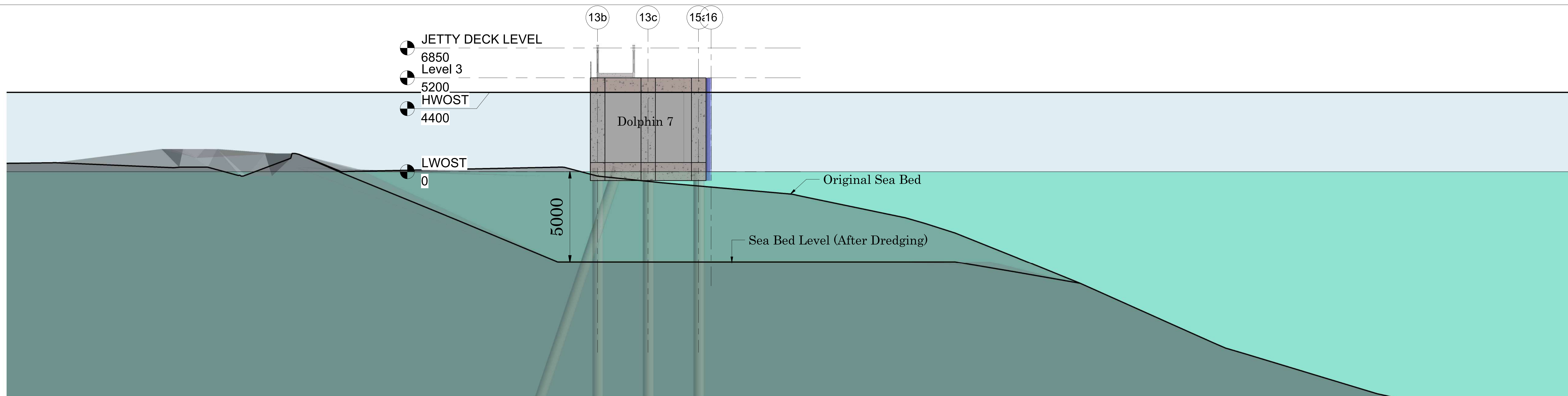
**MAXCAD CONSULTING ENGINEERS LTD**  
PALM BREEZE, 1st FLOOR, SUITE 8, LINKS ROAD, NYALI  
P.O. BOX 40482-80100  
MOMBASA

PRJ. TITLE

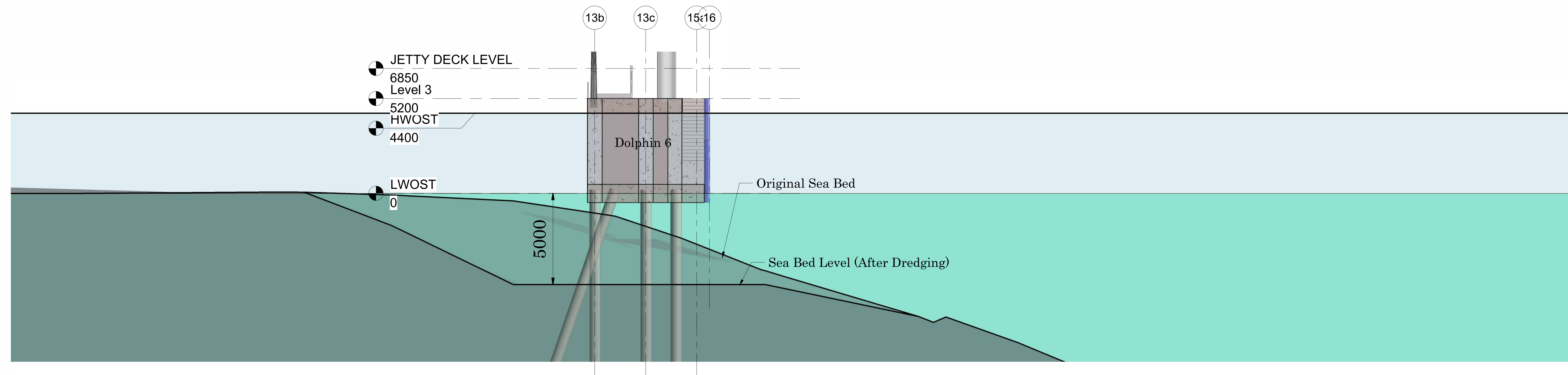
DRG TITLE

**Sections Along Dredged Ground**

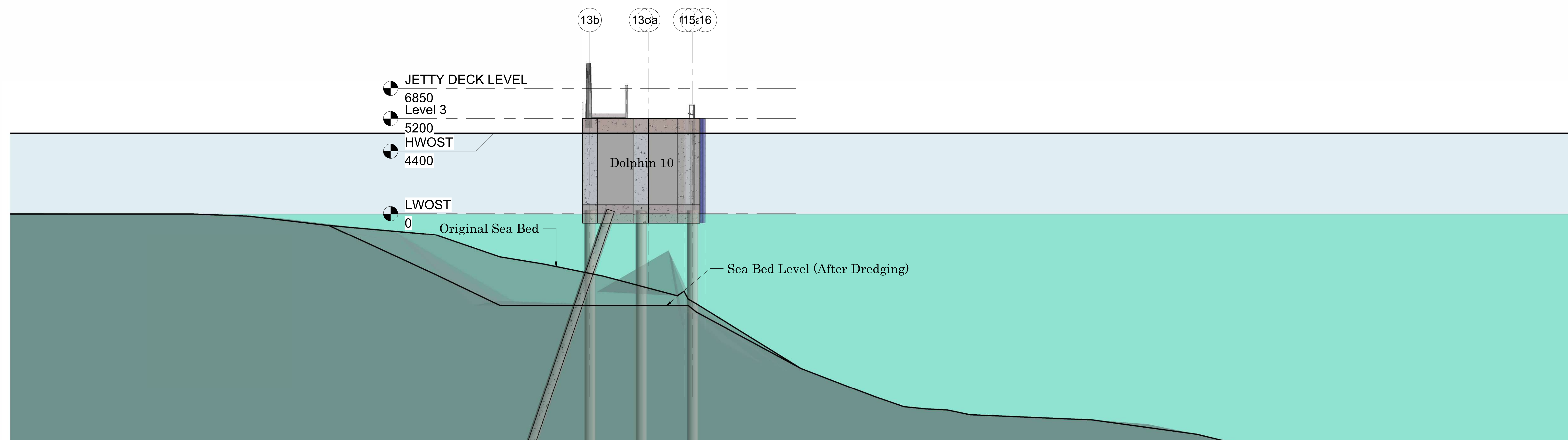
DESIGNED BY Designer	CHECKED BY Checker	DATE 29/02/2024
SCALE ( @A0 ) 1:100		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 38	REV	



1 Dredged Section 4  
1:100




2 Dredged Section 5  
1:100



3 Dredged Section 6  
1:100

Rev	Description	Date

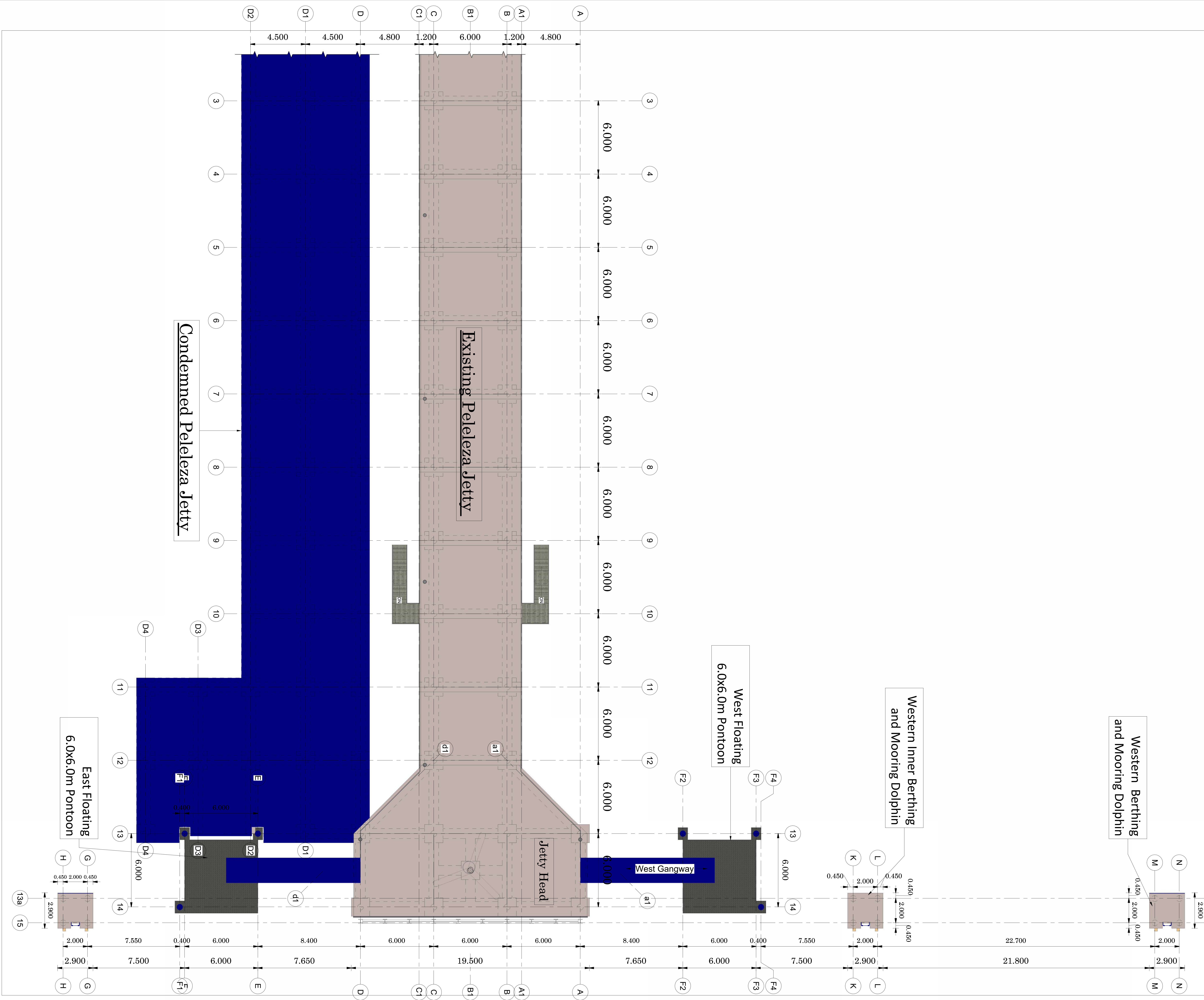
CLIENT  
  
**KENYA PORTS AUTHORITY**  
 P.O BOX 95009 - 80104  
 MOMBASA

PROJECT  
**PROPOSED REHABILITATION  
 AND EXTENSION OF PELELEZA  
 JETTY**

ENGINEER  
**MAXCAD CONSULTING  
 ENGINEERS LTD**  
 PALM BREEZE, 1st FLOOR, SUITE  
 8, LINKS ROAD, NYALI  
 P.O. BOX 40482-80100  
 MOMBASA


PRJ. TITLE  
  
 DRG TITLE  
**Sections Along Dredged Ground**

DESIGNED BY Designer	CHECKED BY Checker	DATE 29/02/2024
SCALE ( @A0 ) 1 : 100	PROJECT NUMBER KPA/062/2022-23/PDM	18:50:58
DRAWING NUMBER Sht 39	REV	



Rev	Description	Date

CLIENT



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 P.O BOX 95009 - 80104  
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PROJECT

**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

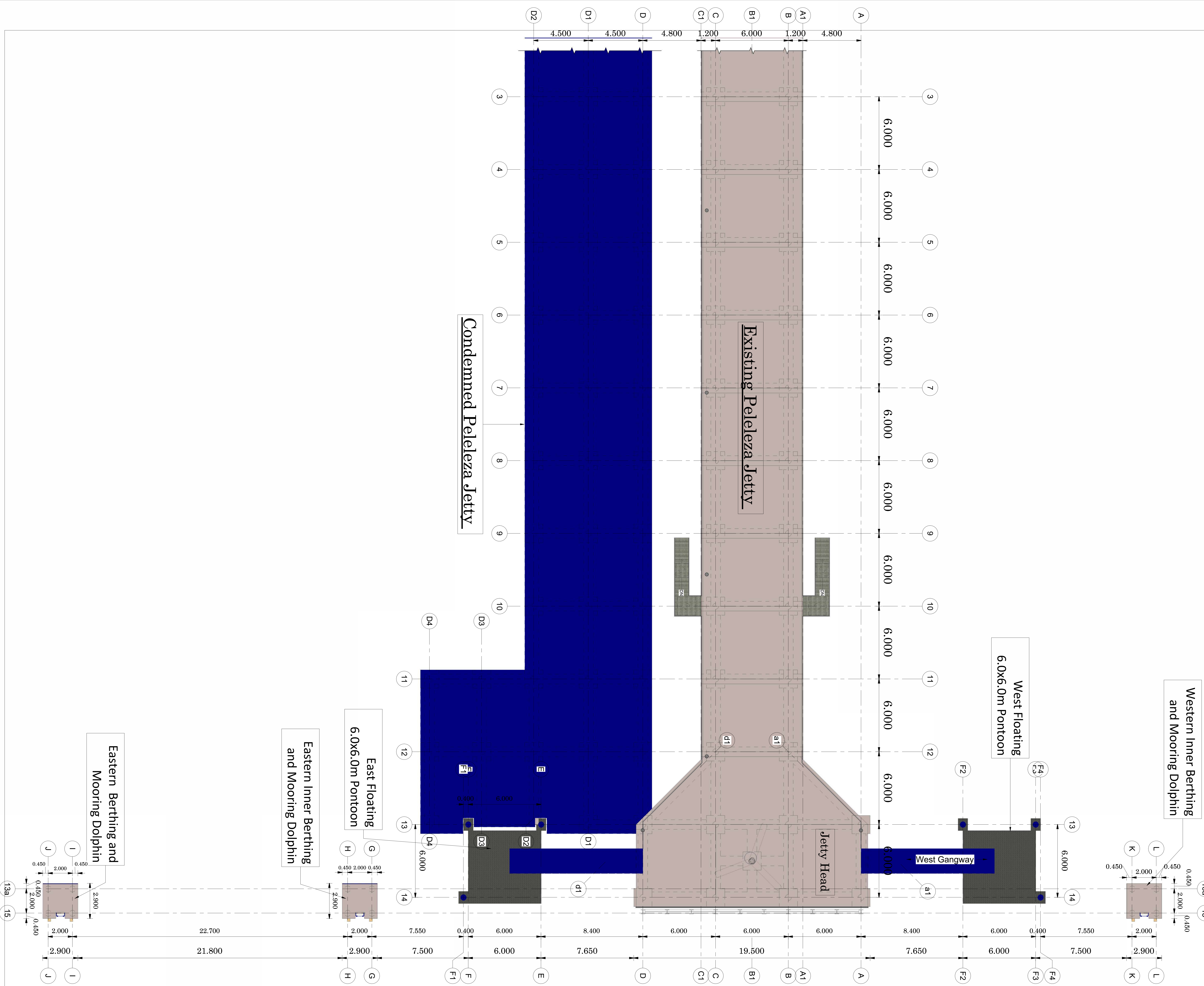
**MAXCAD CONSULTING ENGINEERS LTD**  
 PALM BREEZE, 1st FLOOR, SUITE 8, LINKS ROAD, NYALI  
 P.O. BOX 40482-80100  
 MOMBASA

PRJ. TITLE

DRG TITLE


**Existing Jetty - General Arrangement 01**

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 09/04/2024
SCALE (@A0) 1: 100		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 40	REV	



Rev	Description	Date

**CLIENT**



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P.O BOX 95009 - 80104  
**MOMBASA**

**PROJECT**

**PROPOSED REHABILITATION  
AND EXTENSION OF PELELEZA  
JETTY**

**ENGINEER**

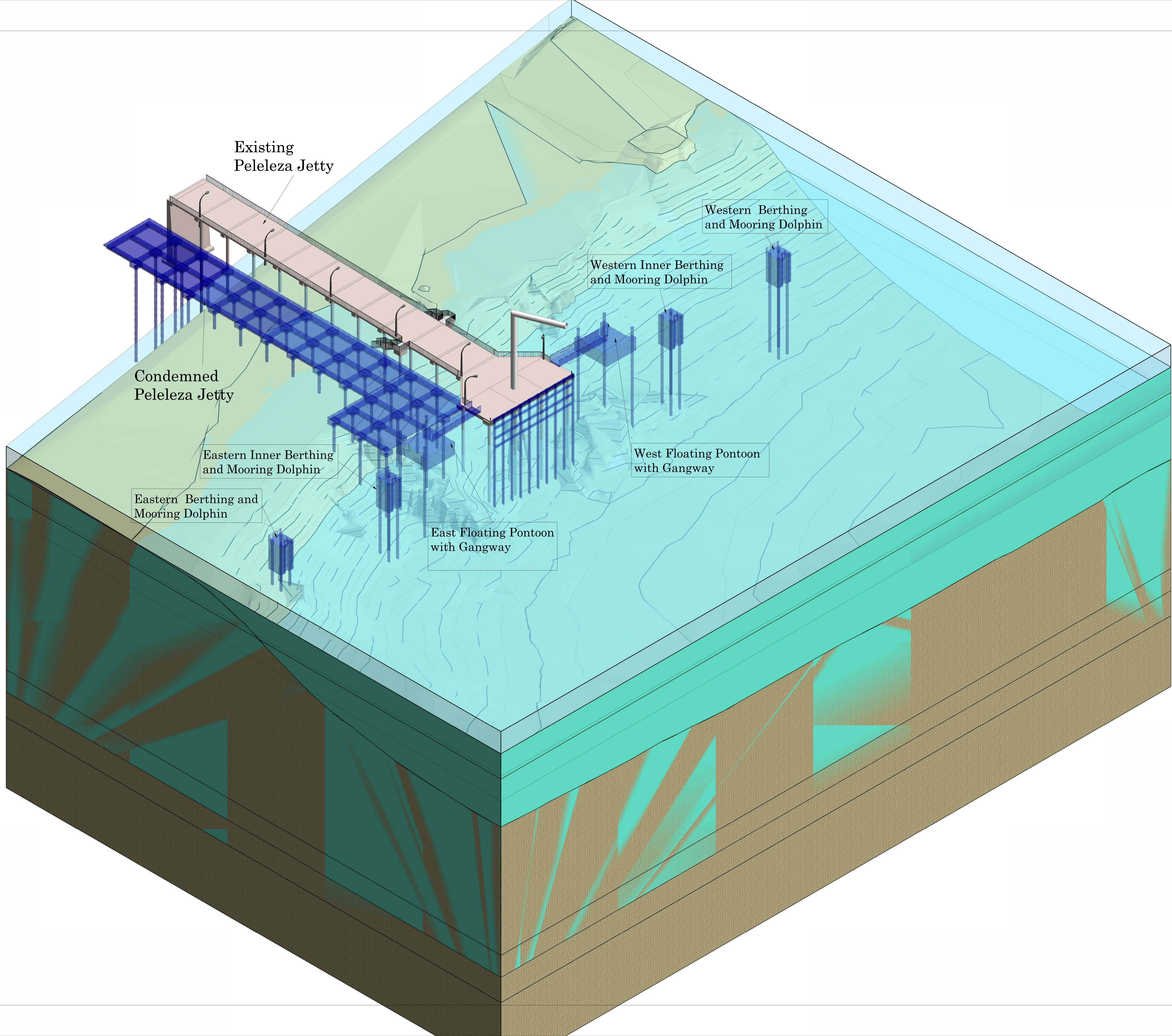
**MAXCAD CONSULTING  
ENGINEERS LTD**  
**PALM BREEZE, 1st FLOOR, SUITE  
8, LINKS ROAD, NYALI  
P.O. BOX 40482-80100  
MOMBASA**

**PRJ. TITLE**

**DRG TITLE**


**Existing Jetty - General  
Arrangement 02**

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 09/04/2024
SCALE ( @A0 ) 1 : 100		PROJECT NUMBER KPA/062/2022-23/PDM
DRAWING NUMBER Sht 41		REV



Rev	Description	Date

CLIENT



**KENYA PORTS AUTHORITY**  
 P.O BOX 95009 - 80104  
 MOMBASA

PROJECT

**PROPOSED REHABILITATION AND EXTENSION OF PELELEZA JETTY**

ENGINEER

**MAXCAD CONSULTING ENGINEERS LTD**  
 PALM BREEZE, 1st FLOOR, SUITE 8, LINKS ROAD, NYALI  
 P.O. BOX 40482-80100  
 MOMBASA

PRJ. TITLE

DRG TITLE

**Existing Jetty - Isometric View**

DESIGNED BY G.Eng Harris	CHECKED BY Eng. Omenda M.K	DATE 09/04/2024 12:55:22
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