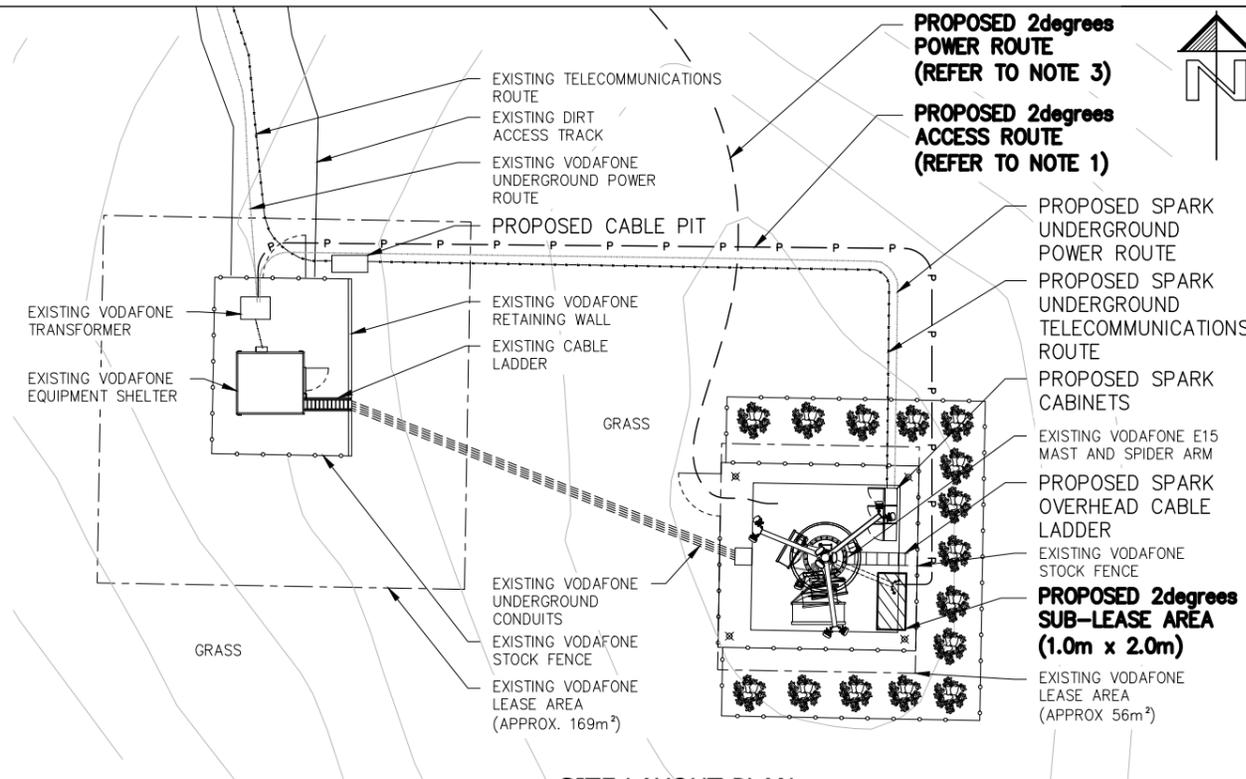


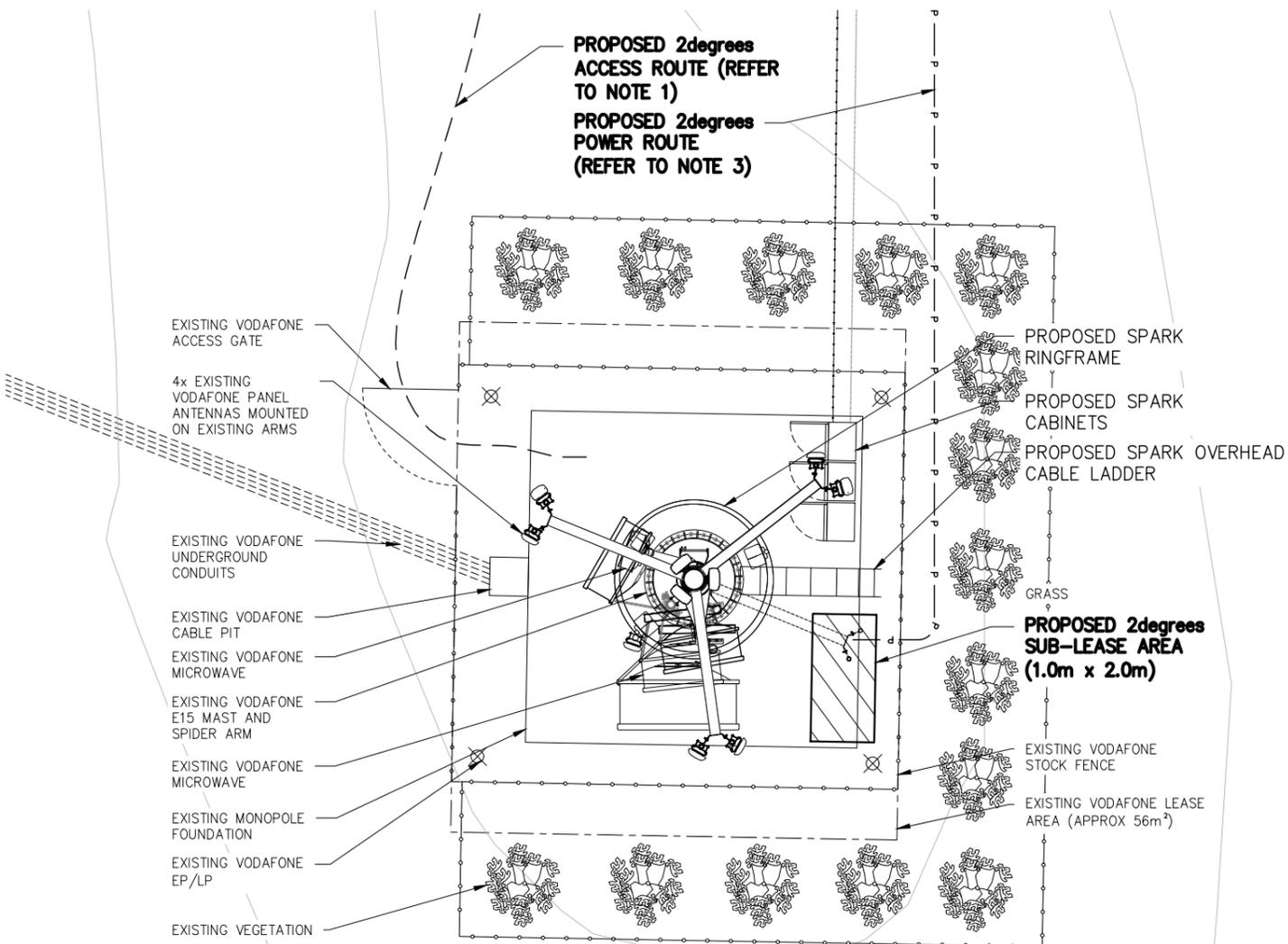
LOCALITY MAP
SCALE 1:10000

PROPOSED 2degrees SITE
SECTIONS 1 & 3 BLK X II
WHAKARARA SURVEY DISTRICT

N: 6683660.17 (NZMG)
E: 2591962.48 (NZMG)
LAT: -35.043969 (WGS84)
LONG: 173.888866 (WGS84)



SITE LAYOUT PLAN
SCALE 1:250



SITE DETAIL LAYOUT PLAN
SCALE 1:100

LEGEND - EXISTING SERVICES

— W — W — W —	WATER MAIN
— P — P — P —	POWER
— G — G — G —	GAS
— TC — TC — TC —	TELSTRA
— — — — —	POWER (OVERHEAD)
— FO — FO — FO —	FIBRE OPTIC
— SW — SW — SW — SW — SW — SW —	STORMWATER
— SS — SS — SS — SS — SS — SS —	SANITARY SEWER
— T — T — T —	TELECOM

- ⊙ STORMWATER MANHOLE
- ⊙ SANITARY SEWER MANHOLE
- ▣ DRAINAGE GRATE

UNDERGROUND SERVICE PLANS PROVIDED HAVE YET TO BE INCORPORATED INTO THE DRAWINGS

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USE DIMENSIONS SHOWN, ONLY SCALE FROM THIS DRAWING FOR APPROXIMATE USE.

NOTES:

- ACCESS TO SITE VIA FARM TRACK OFF WAINUI ROAD. FOUR WHEEL DRIVE ACCESS.
- ANTENNA HEIGHTS ARE ABOVE GROUND LEVEL (APPROX.).
- ROUTE TO BE CONFIRMED ON SITE BETWEEN CONTRACTOR, OWNER, AND/OR AUTHORITY. REFER TO CO-LOCATION E730 SERIES ELECTRICAL STANDARDS DRAWING FOR DETAILS. POWER SUPPLY FROM EXISTING ON-SITE TRANSFORMER IN SEPARATE VODAFONE COMPOUND (APPROX. 37m AWAY). EARTHING/LIGHTNING OPTION 1.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES IN THE VICINITY OF THE SITE (INCLUDING THOSE NOT NECESSARILY SHOWN) PRIOR TO COMMENCEMENT OF ANY WORKS ON SITE. ANY SERVICES SHOWN ARE INDICATIVE ONLY, AND SOME MAY REQUIRE REDIRECTING.
- ALL EXISTING SURFACES AND FEATURES SHALL BE FULLY REINSTATED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER ON COMPLETION OF THE WORKS.
- REFER TO 2degrees STD-D500 SERIES FOR SIGNS (AS REQUIRED).

2	NO CHANGE	RF	18.07.18
1	APPROVED	XX	26.10.16
0	FOR APPROVAL	XX	13.10.16
REF	AMENDMENT	BY	DATE

Two Degrees Networks Limited ©

PROJECT ADDRESS:
MATAURI BAY
WAINUI ROAD
MATAURI BAY

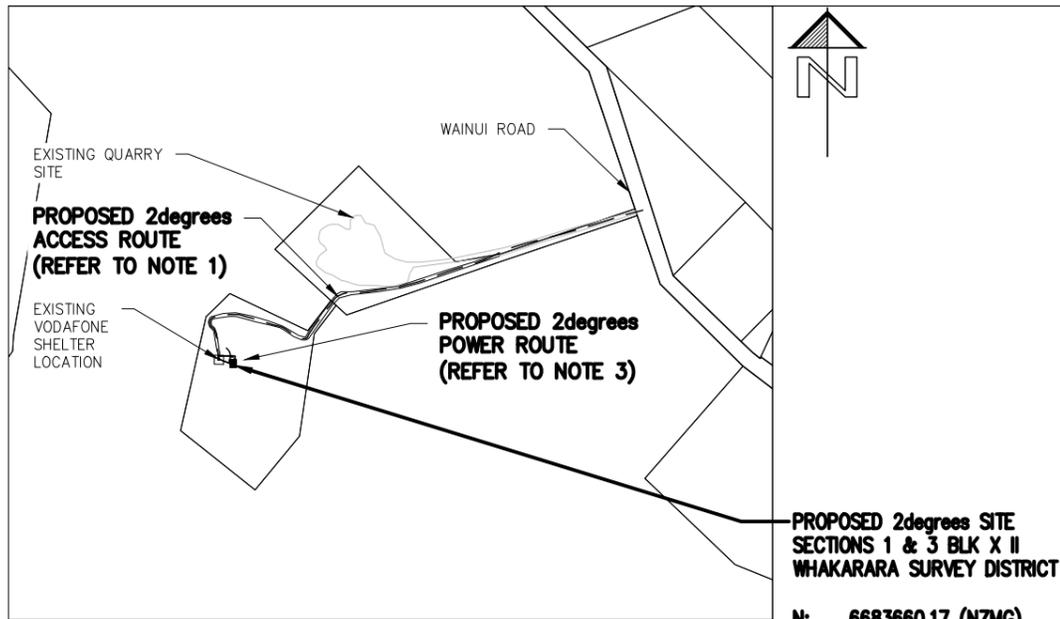
PROJECT TITLE:
LOCALITY & SITE LEASE PLAN
VODAFONE ID:

DESIGNED: JG	DATE: 14.09.16	SITE ACO APPROVAL: BC	CAD FILE: ...051-A-COLO-PD
DRAWN: XX	DATE: 12.10.16	RMA APPROVAL: SP	CAD DIR:
REVIEWED: -	DATE: -	RF APPROVAL: TL / MW	SITE ACO BY: BC
STRUCTURAL: -	DATE: -	TRANS. APPROVAL: GH	SURVEY BY:
APPROVED: JG	DATE: 26.10.16	CONST. APPROVAL: RB	SURVEY DATE:
ASBUILT BY:			

VODAFONE CO-LOCATION - PLANNING

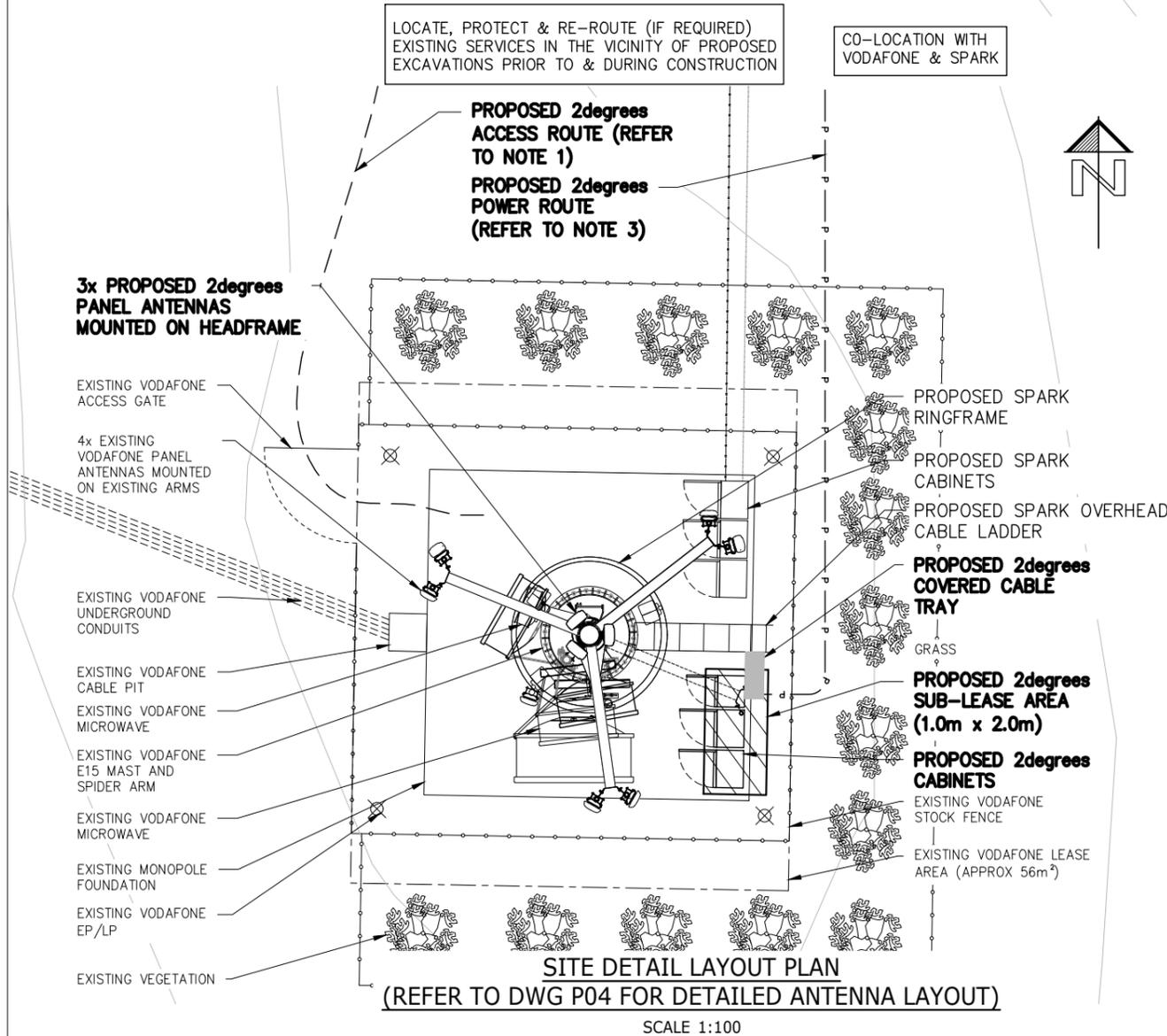
JOB No: NTH-001-051	CANDIDATE ID: A	SCALE: AS SHOWN A3 ORIGINAL	A3
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DRAWING No: NTH-001-051-P01
REV: 2



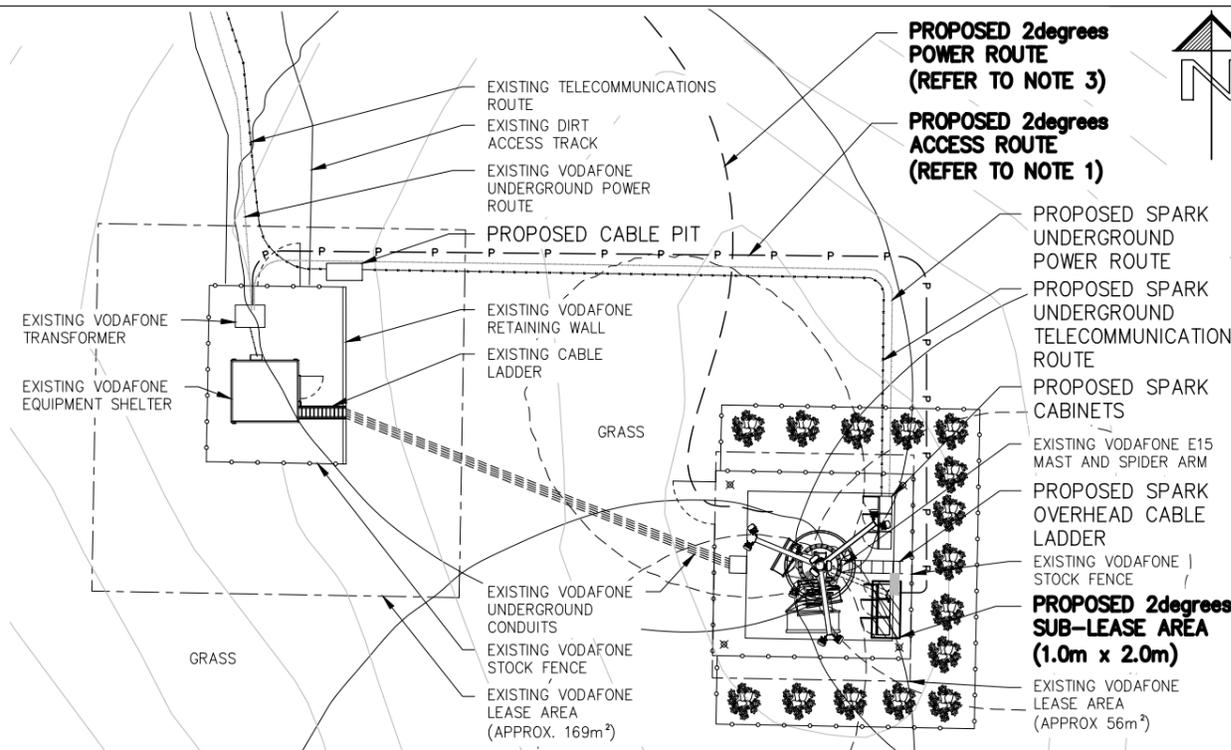
LOCALITY MAP
SCALE 1:10000

N: 6683660.17 (NZMG)
E: 2591962.48 (NZMG)
LAT: -35.043969 (WGS84)
LONG: 173.888866 (WGS84)



SITE DETAIL LAYOUT PLAN
(REFER TO DWG P04 FOR DETAILED ANTENNA LAYOUT)

SCALE 1:100



SITE LAYOUT PLAN

SCALE 1:250

ALL ABOVE GROUND CABLING RUN IN STEEL CONDUIT OR CABLE TRAY

EXISTING VODAFONE BURIED POWER LINE TO BE LOCATED BY HAND PRIOR TO CONSTRUCTION

VODAFONE RF ANTENNA INFORMATION

SECTOR	AZIMUTH (Deg)
1a & 1b	0
2a & 2b	120
3a & 3b	210

NOTE: ANTENNA AZIMUTH AND TYPE TO BE CONFIRMED BY RF ENGINEER.

VODAFONE MW ANTENNA INFORMATION

DISH	AZIMUTH (Deg)	TYPE	STATUS
A	TBC	600	INSTALLED
B	TBC	1200	INSTALLED

MICROWAVE ANTENNA INFORMATION

DISH TYPE	AZIMUTH (Deg)	ANTENNA MID HEIGHT AGL (m)	ANTENNA TYPE (mm)	FAR END SITE
A	170	7.9	1200ø	NTH-001-020
B	300	9.7	1200ø	NTH-001-053

RF ANTENNA INFORMATION

SECTOR	AZIMUTH (Deg)	ANTENNA MID HEIGHT (AGL) (m)	ANTENNA TYPE	FEEDER LENGTH (m)	FEEDER SIZE	RRU (PER SECTOR)
SECTOR 1a	90	18.5	A704517R0	<6	FSJ4-50	2
SECTOR 2a	220	18.5	A704517R0	<6	FSJ4-50	2
SECTOR 3a	320	18.5	A704517R0	<6	FSJ4-50	2

NOTE: ANTENNA AZIMUTH AND TYPE TO BE CONFIRMED BY 2degrees RF ENGINEER.
SITE TYPE 'DF' STACKED. CABINET DIMENSIONS(mm): 1 x UTILITY (1200W x 480D x 900H), 3 x RADIO (600W x 480D x 900H) = TOTAL FOOTPRINT (1.15m²)
ANTENNA DIMENSIONS(mm): HUAWEI A704517R0 = 2535H x 298W x 149D;
RRU DIMENSIONS(mm) = 400H x 300W x 120D;
NO MTB's REQUIRED

LEGEND - EXISTING SERVICES

— W — W — W —	WATER MAIN
— P — P — P —	POWER
— G — G — G —	GAS
— TC — TC — TC —	TELSTRA
— — — — —	POWER (OVERHEAD)
— FO — FO — FO —	FIBRE OPTIC
— SW — SW — SW — SW — SW — SW —	STORMWATER
— SS — SS — SS — SS — SS — SS —	SANITARY SEWER
— T — T — T —	TELECOM

⊙ STORMWATER MANHOLE ▣ DRAINAGE GRATE
● SANITARY SEWER MANHOLE

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USE DIMENSIONS SHOWN, ONLY SCALE FROM THIS DRAWING FOR APPROXIMATE USE.

- NOTES:**
- ACCESS TO SITE VIA FARM TRACK OFF WAINUI ROAD. FOUR WHEEL DRIVE ACCESS.
 - ANTENNA HEIGHTS ARE ABOVE GROUND LEVEL (APPROX.).
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 - ALL EXISTING SURFACES AND FEATURES SHALL BE FULLY REINSTATED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER ON COMPLETION OF THE WORKS.
 - REFER TO 2degrees STD-D500 SERIES FOR SIGNS (AS REQUIRED).
 - LEGAL BOUNDARY SURVEY NOT REQUIRED.
 - PROPOSED 2degrees CABLE LADDER TO BE COVERED & PAINTED TO MATCH EXISTING POLE. HAZARD TAPE TO BE INSTALLED ON HORIZONTAL CABLE TRAY.
 - ALL TYPE 'D' CABINETS TO HAVE 45mm GAP BETWEEN ADJACENT CABINETS.

NO	DESCRIPTION	DATE	BY
2	NO CHANGE	RF	18.07.18
1	APPROVED	XX	26.10.15
0	FOR APPROVAL	XX	13.10.15
REF	AMENDMENT		BY DATE

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PROJECT ADDRESS:
MATAURI BAY
WAINUI ROAD
MATAURI BAY

PROJECT TITLE:
LOCALITY & SITE LAYOUT PLAN
VODAFONE ID:

DESIGNED:	DATE:	SITE ACO APPROVAL:	CAD FILE:
JG	14.09.16	BC	...051-A-COLO-PD
DRAWN:	DATE:	RMA APPROVAL:	CAD DIR:
XX	11.10.16	SP	
REVIEWED:	DATE:	RF APPROVAL:	SITE ACO BY:
		TL / MW	BC
STRUCTURAL:	DATE:	TRANS. APPROVAL:	SURVEY BY:
		GH	
APPROVED:	DATE:	CONST. APPROVAL:	ASBUILT BY:
JG	26.10.16	RB	

2degrees DRAWING TITLE:
VODAFONE CO-LOCATION - PLANNING

JOB No:	CANDIDATE ID:	SCALES:	AS SHOWN	A3
NTH-001-051	A	AS SHOWN	A3 ORIGINAL	

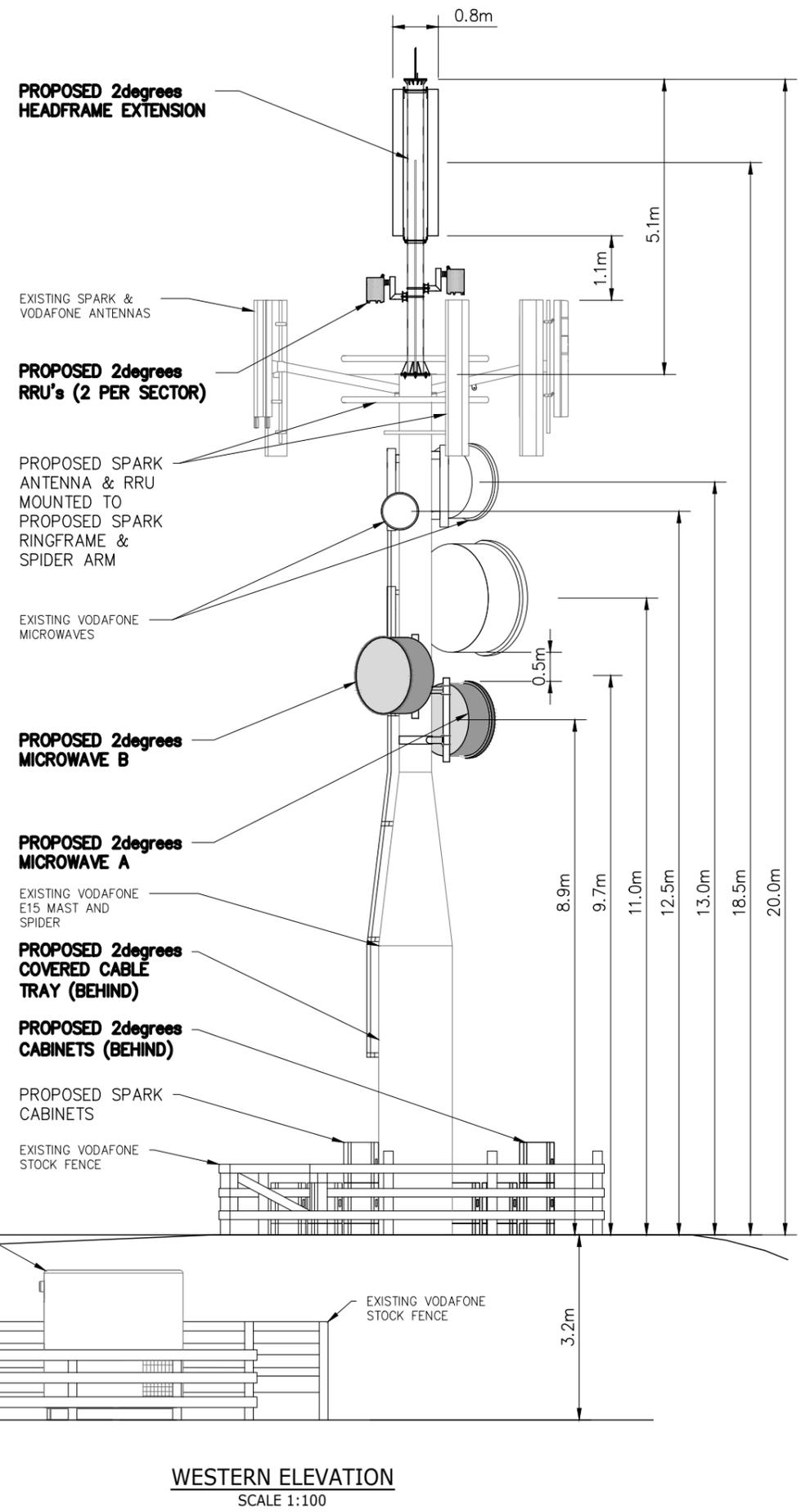
DRAWING No:
NTH-001-051-P02

REV
2

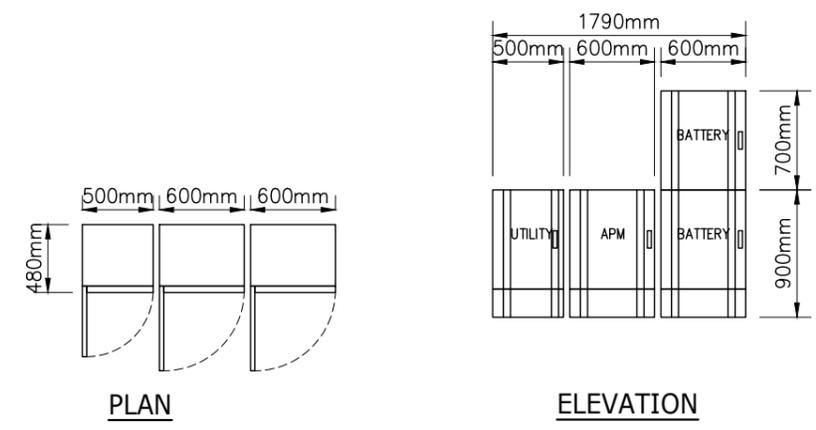
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USE DIMENSIONS SHOWN, ONLY SCALE FROM THIS DRAWING FOR APPROXIMATE USE.

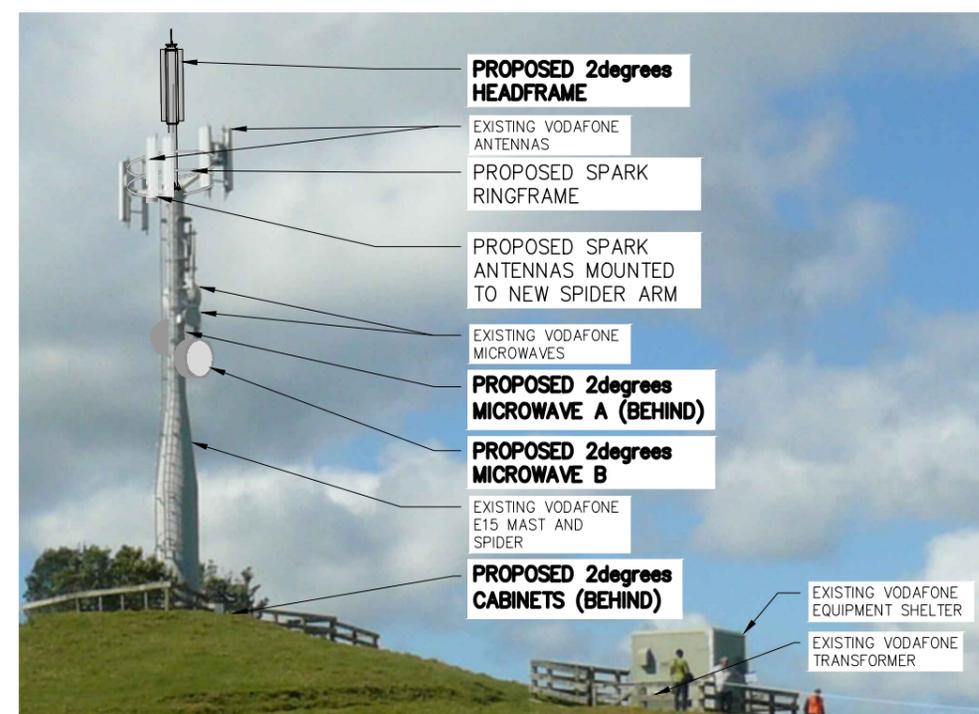
- NOTES:**
- REFER TO SHEET P01 & P02 FOR NOTES.
 - SITE ACCESSIBLE VIA EXISTING CLIMBING LADDER.
 - MAINTAIN 0.5m TIP-TO-TIP VERTICAL/HORIZONTAL SEPARATION OF MICROWAVE DISHES.
 - MAINTAIN 1.0m EDGE-TO-EDGE VERTICAL/HORIZONTAL SEPARATION OF PANEL ANTENNAS.
 - CABINETS TO BE GREY.



WESTERN ELEVATION
SCALE 1:100



CABINET DETAILS
1:50



NORTHERN PHOTOMONTAGE
NOT TO SCALE

2	NO CHANGE	RF	18.07.18
1	APPROVED	XX	26.10.16
0	FOR APPROVAL	XX	13.10.16
REF	AMENDMENT	BY	DATE

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PROJECT ADDRESS:
MATAURI BAY
WAINUI ROAD
MATAURI BAY

PROJECT TITLE:
SITE ELEVATIONS - 1
VODAFONE ID:

DESIGNED: JG	DATE: 14.09.16	SITE ACO APPROVAL: BC	CAD FILE: ...051-A-COLO-PD
DRAWN: XX	DATE: 11.10.16	RMA APPROVAL: SP	CAD DIR:
REVIEWED: -	DATE: -	RF APPROVAL: TL / MW	SITE ACO BY: BC
STRUCTURAL: -	DATE: -	TRANS. APPROVAL: GH	SURVEY BY:
APPROVED: JG	DATE: 26.10.16	CONST. APPROVAL: RB	SURVEY DATE:
			ASBUILT BY:

VODAFONE CO-LOCATION - PLANNING

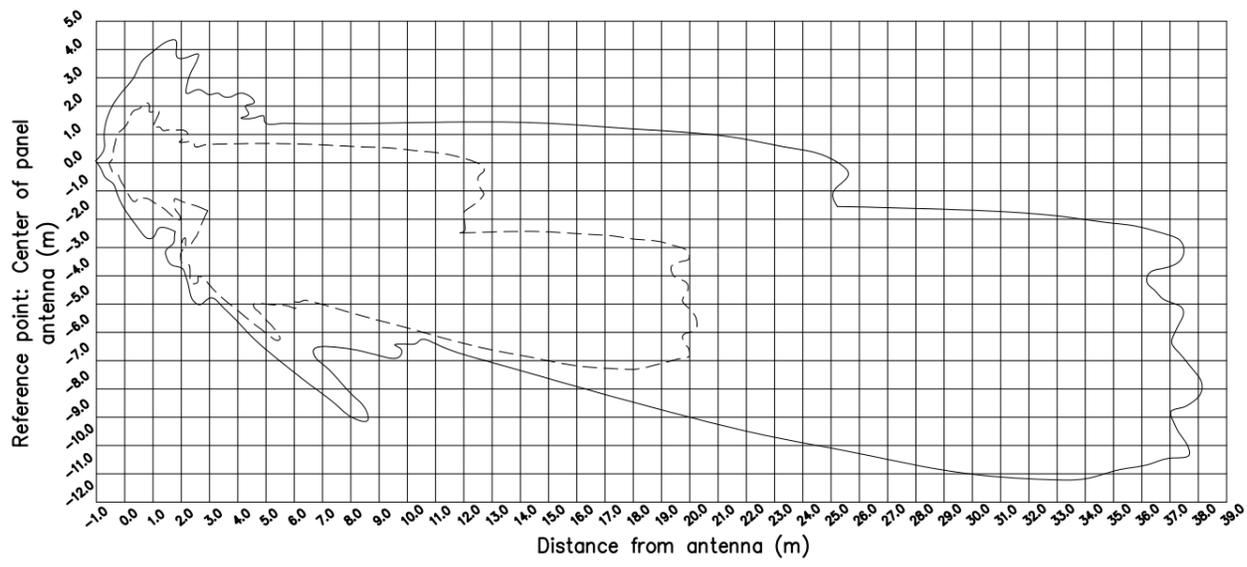
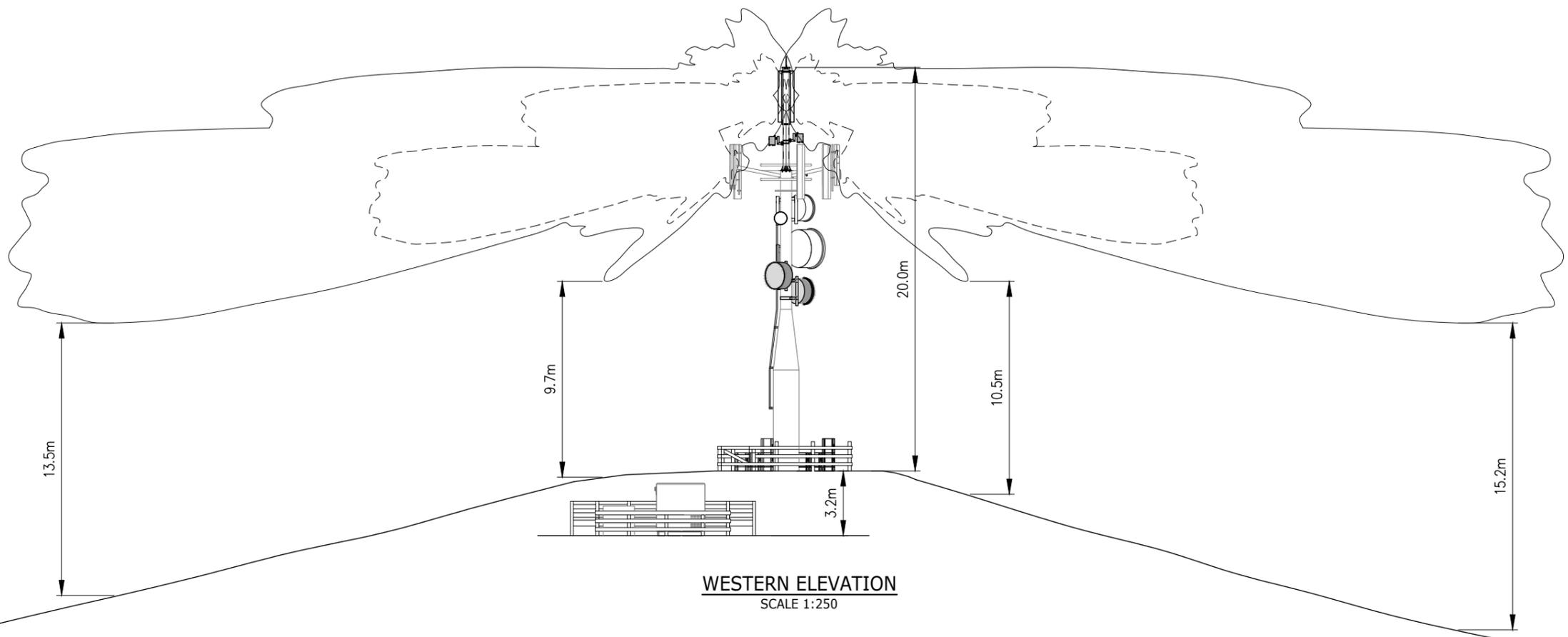
JOB No: NTH-001-051	CANDIDATE ID: A	SCALES: AS SHOWN A3 ORIGINAL	A3
DRAWING No:			REV

NTH-001-051-P03 **2**

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USE DIMENSIONS SHOWN, ONLY SCALE FROM THIS DRAWING FOR APPROXIMATE USE.

- NOTES:**
- REFER TO P02 & P03 FOR NOTES.
 - DRAWING SHOWS CUMULATIVE EFFECT OF VODAFONE, SPARK & 2degrees ANTENNA PLUMES.



ANTENNA PLUME
NZS 2772

— 25%
- - - 100%

ANTENNA PLUME LEGEND
ANTENNA PLUME NZS 2772

— 25% @ 38.1m DISTANCE
- - - 100% @ 20.3m DISTANCE

PANEL ANTENNA PLUME ELEVATION (CUMULATIVE EFFECT)
SCALE 1:250

2	SHEET ADDED	RF	18.07.18
1	APPROVED	XX	26.10.16
0	FOR APPROVAL	XX	13.10.16
REF	AMENDMENT	BY	DATE

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PROJECT ADDRESS:
MATAURI BAY
WAINUI ROAD
MATAURI BAY

PROJECT TITLE:
SITE ELEVATIONS - 2
VODAFONE ID:

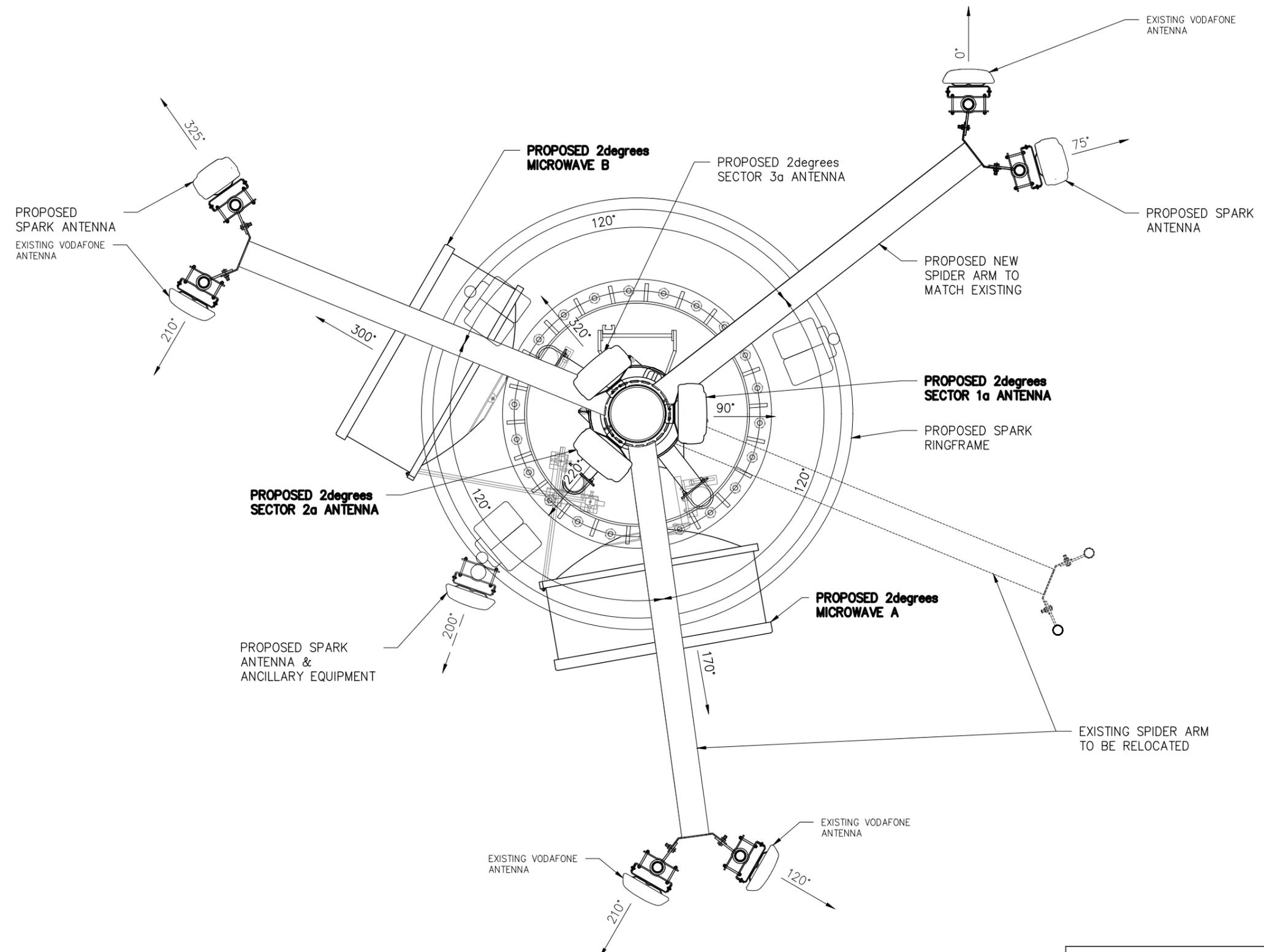
DESIGNED: JG	DATE: 14.09.16	SITE ACO APPROVAL: BC	CAD FILE: ...051-A-COLO-PD
DRAWN: XX	DATE: 11.10.16	RMA APPROVAL: SP	CAD DIR:
REVIEWED: -	DATE: -	RF APPROVAL: TL / MW	SITE ACO BY: BC
STRUCTURAL: -	DATE: -	TRANS. APPROVAL: GH	SURVEY BY:
APPROVED: JG	DATE: 26.10.16	CONST. APPROVAL: RB	SURVEY DATE:
			ASBUILT BY:

2degrees DRAWING TITLE:
VODAFONE CO-LOCATION - PLANNING

JOB No: NTH-001-051	CANDIDATE ID: A	SCALES: AS SHOWN A3 ORIGINAL	A3
DRAWING No:			REV
NTH-001-051-P04			2

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HEADFRAME PLAN
SCALE 1:25

EXISTING VODAFONE ANTENNA AZMUTHS TO BE CONFIRMED, RELOCATION MAY BE REQUIRED. RF ENGINEER TO CONFIRM.

EXISTING VODAFONE MICROWAVES NOT SHOWN FOR CLARITY.

NOTES:

1. REFER TO P02 & P03 FOR NOTES.

2	NO CHANGE	RF	18.07.18
1	APPROVED	XX	26.10.16
0	FOR APPROVAL	XX	13.10.16
REF	AMENDMENT	BY	DATE

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PROJECT ADDRESS:
MATAURI BAY
WAINUI ROAD
MATAURI BAY

PROJECT TITLE:
HEADFRAME PLAN
VODAFONE ID:

DESIGNED:	DATE:	SITE ACO APPROVAL:	CAD FILE:
JG	14.09.16	BC	...051-A-COLO-PD
DRAWN:	DATE:	RMA APPROVAL:	CAD DIR:
XX	11.10.16	SP	
REVIEWED:	DATE:	RF APPROVAL:	SITE ACO BY:
-	-	TL / MW	BC
STRUCTURAL:	DATE:	TRANS. APPROVAL:	SURVEY BY:
-	-	GH	
APPROVED:	DATE:	CONST. APPROVAL:	SURVEY DATE:
JG	26.10.16	RB	

VODAFONE CO-LOCATION - PLANNING

JOB No:	CANDIDATE ID:	SCALES:	A3
NTH-001-051	A	AS SHOWN A3 ORIGINAL	
DRAWING No:			REV

NTH-001-051-P05

2