

5. Other Data and Information

5-1 Traffic Volume Survey

The traffic volume survey was conducted as shown below with the results shown in the tables

Date implemented: March 20, 2008 (Thursday)

Place: Rawal Bridge on the Buka side

Implementation time: 06:00~18:00 (12 hours)

Weather: Cloudy later fine

1) Traffic volume heading to Arawa

Type	06:00 -08:00	08:00 -10:00	10:00 -12:00	12:00 -14:00	14:00 -16:00	16:00 -18:00	Total
4WD	1	2	6	5	5	5	24
Truck	0	1	9	18	22	12	62
Total vehicles	1	3	15	23	27	17	86
Passengers	5	25	163	345	615	247	1400
Pedestrians	3	2	19	2	1	0	27

2) Traffic volume heading to Buka

Type	06:00 -08:00	08:00 -10:00	10:00 -12:00	12:00 -14:00	14:00 -16:00	16:00 -18:00	Total
4WD	10	7	2	2	1	2	24
Truck	16	24	3	1	2	2	48
Total vehicles	26	31	5	3	3	4	72
Passengers	359	548	54	10	17	29	1017
Pedestrians	11	8	2	0	1	1	23

3) Traffic volume in both directions

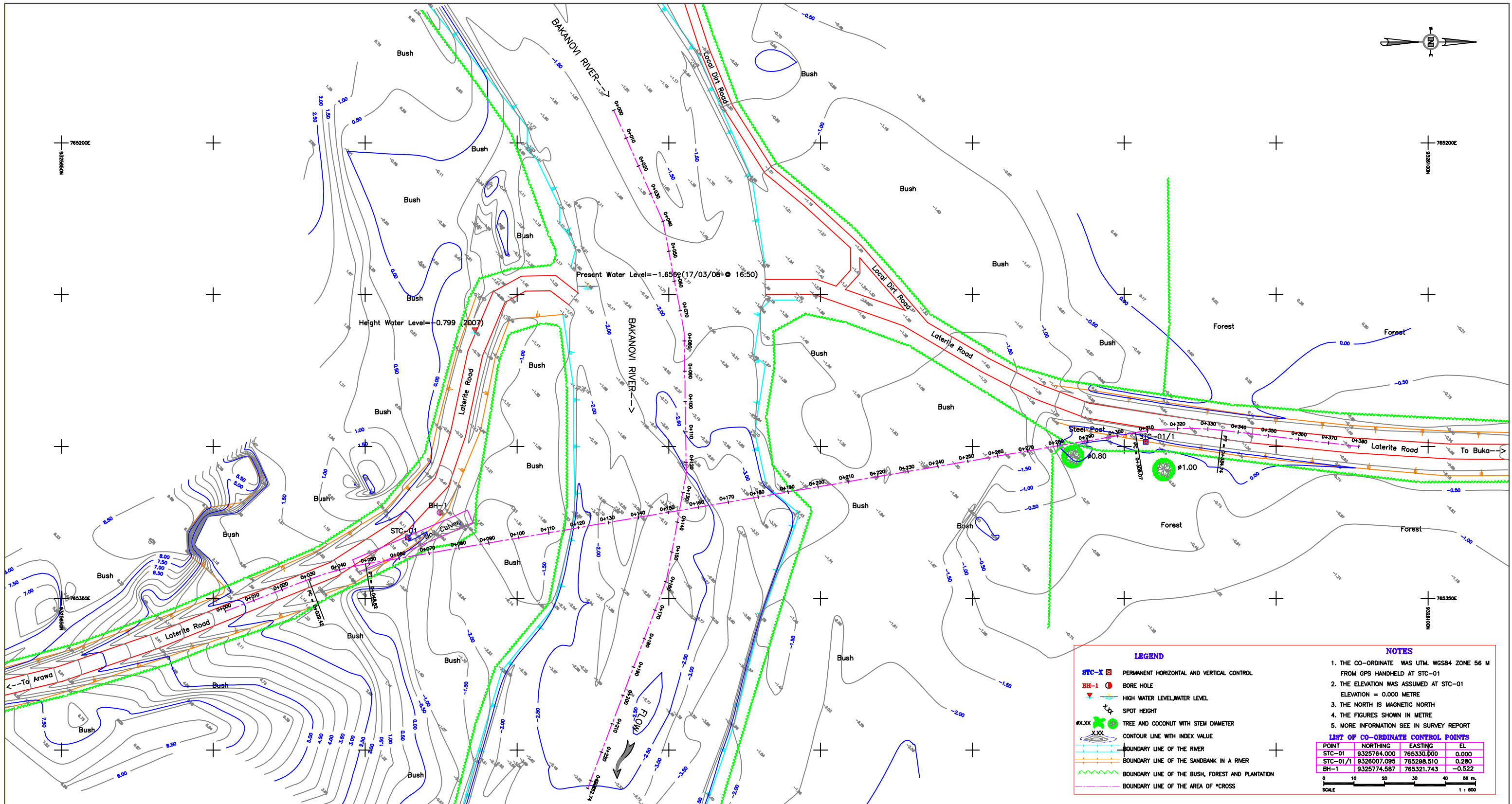
Type	06:00	08:00	10:00	12:00	14:00	16:00	Total
	-08:00	-10:00	-12:00	-14:00	-16:00	-18:00	
4WD	11	9	8	7	6	7	48
Truck	16	25	12	19	24	14	110
Total vehicles	27	34	20	26	30	21	158
Passengers	364	573	217	355	632	276	2417
Pedestrians	14	10	21	2	2	1	50

Since March 20 was the day before the Easter break from the 21st to the 24th, traffic volume was relatively high and vehicles were almost full with passengers. Regarding the types of freight being carried, there were numerous vehicles carrying bags of copra and cacao to Buka, while there were a lot of vehicles carrying food, daily necessities and fuel in the opposite direction to Arawa.

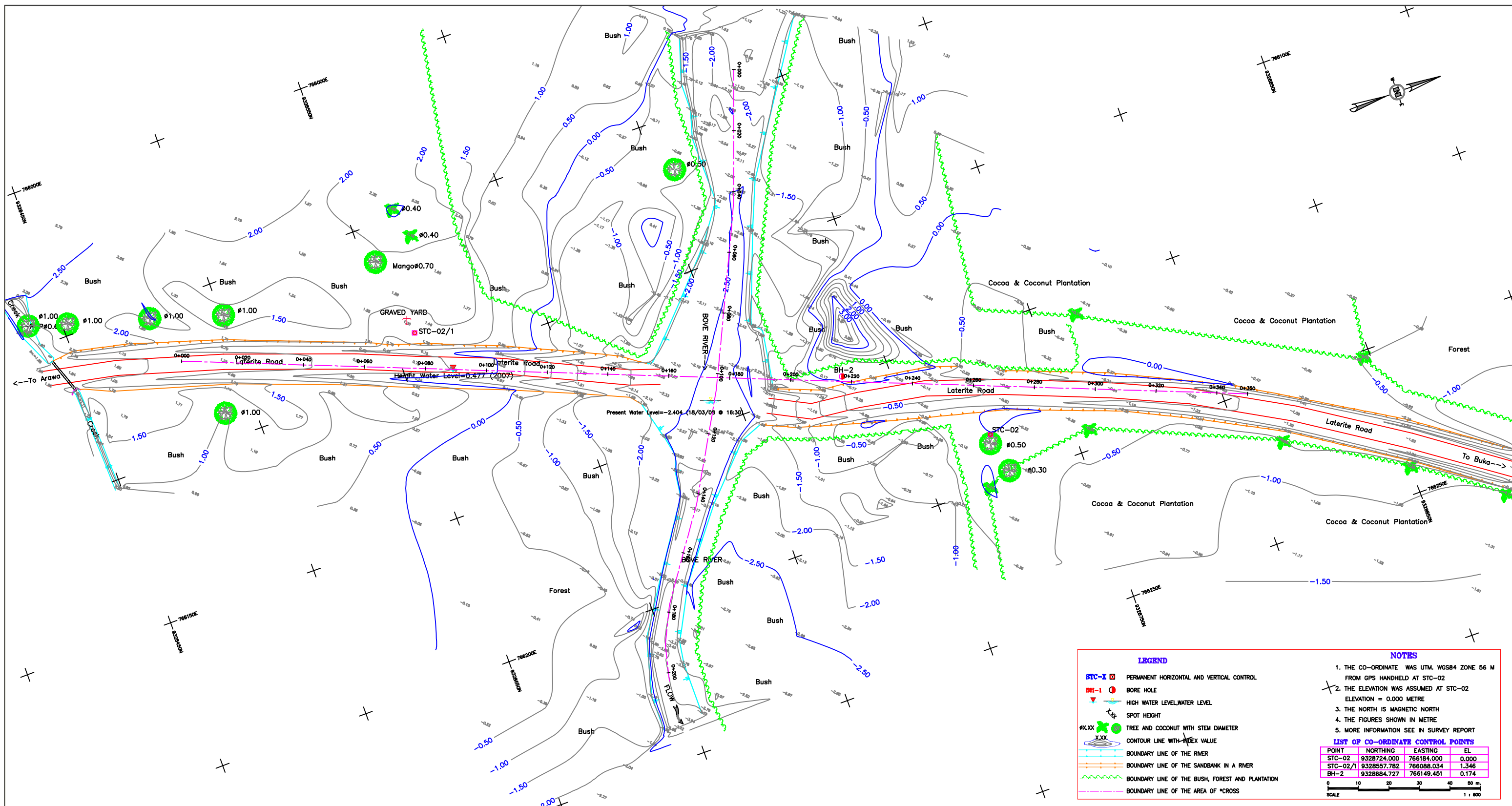
5 -2 Results of Surveying Investigation

In order to gauge the current state of the target bridges and conditions on the road, topographical surveying and longitudinal and cross-sectional surveying of the road and rivers were carried out, and ground plans, longitudinal sections and cross-sectional views were prepared for each bridge. These surveying activities were carried out using total station and GPS surveying instruments. At each bridge point, temporary benchmarks acting as reference points (2 at each bridge) were set under instructions from the Study Team.

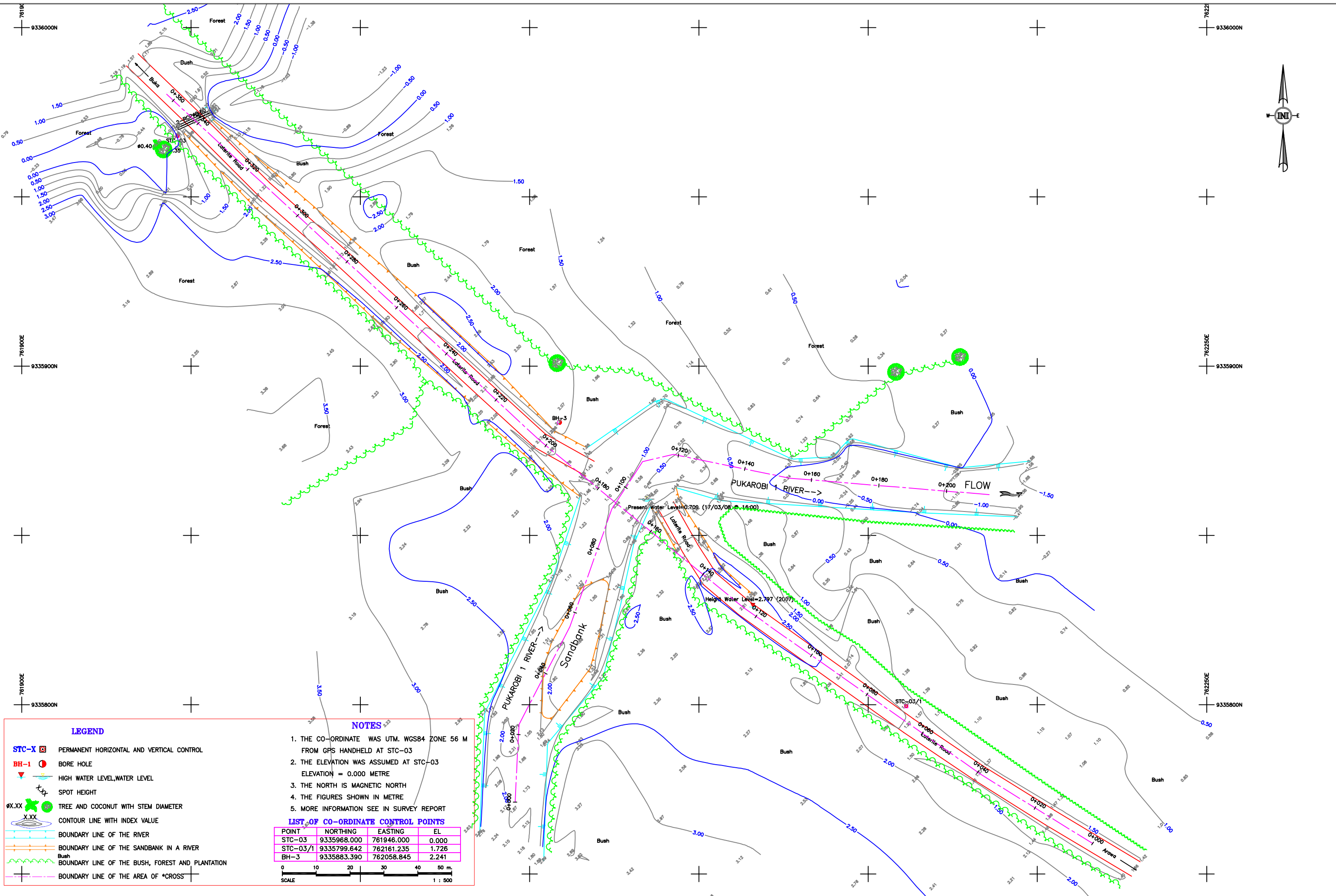
The surveying drawings, benchmarks and benchmark coordinates are indicated in the following drawings.



DEPARTMENT OF WORKS	THE PROJECT FOR CONSTRUCTION OF BRIDGES ON BOUGAINVILLE COASTAL TRUNK ROAD IN THE INDEPENDENT STATE OF PAPUA NEW GUINEA	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	TITLE TOPOGRAPHIC MAP OF THE BAKANОВI RIVER	SCALE HOR: 1:500 VER: 1:500	DATE 15/04/08	DRAWING NO. STC-01
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DEPARTMENT OF WORKS	THE PROJECT FOR CONSTRUCTION OF BRIDGES ON BOUGAINVILLE COASTAL TRUNK ROAD IN THE INDEPENDENT STATE OF PAPUA NEW GUINEA	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	TITLE TOPOGRAPHIC MAP OF THE BOVE RIVER	SCALE HOR:1:500 VER:1:500	DATE 15/04/08	DRAWING NO. STC-02
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LEGEND

- STC-X □ PERMANENT HORIZONTAL AND VERTICAL CONTROL
- BH-1 ● BORE HOLE
- ▽ HIGH WATER LEVEL, WATER LEVEL
- ⊕ SPOT HEIGHT
- ⊗ XX TREE AND COCONUT WITH STEM DIAMETER
- XX CONTOUR LINE WITH INDEX VALUE
- BOUNDARY LINE OF THE RIVER
- BOUNDARY LINE OF THE SANDBANK IN A RIVER
- Bush BOUNDARY LINE OF THE BUSH, FOREST AND PLANTATION
- BOUNDARY LINE OF THE AREA OF *CROSS

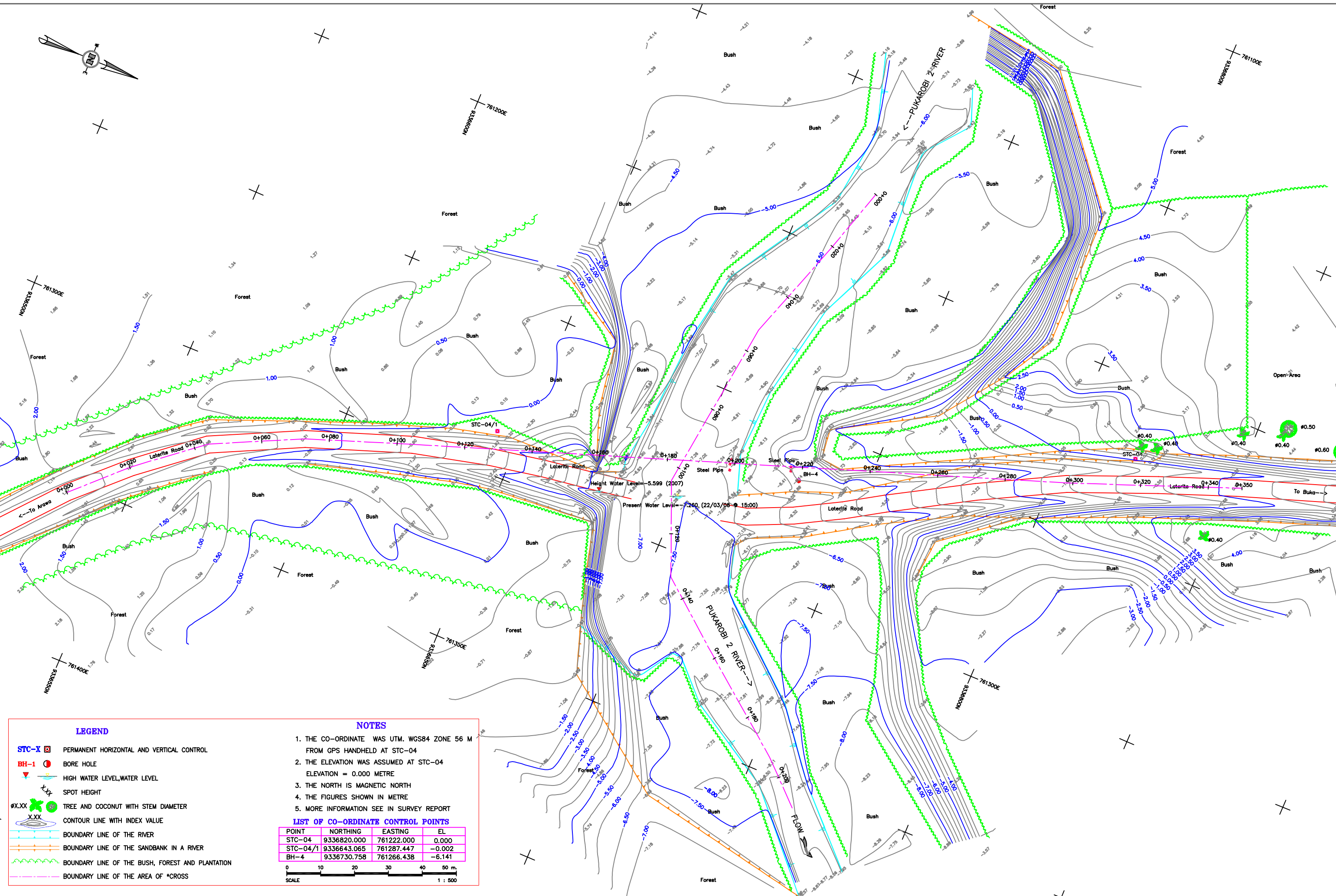
NOTES

1. THE CO-ORDINATE WAS UTM. WGS84 ZONE 56 M FROM GPS HANDHELD AT STC-03
2. THE ELEVATION WAS ASSUMED AT STC-03 ELEVATION = 0.000 METRE
3. THE NORTH IS MAGNETIC NORTH
4. THE FIGURES SHOWN IN METRE
5. MORE INFORMATION SEE IN SURVEY REPORT

LIST OF CO-ORDINATE CONTROL POINTS

POINT	NORTHING	EASTING	EL
STC-03	9335968.000	761946.000	0.000
STC-03/1	9335799.642	762161.235	1.726
BH-3	9335883.390	762058.845	2.241

SCALE 1 : 500



LEGEND

- STC-X PERMANENT HORIZONTAL AND VERTICAL CONTROL
- BH-1 BORE HOLE
- High Water Level, Water Level
- Spot Height
- ØX.XX TREE AND COCONUT WITH STEM DIAMETER
- X.XX CONTOUR LINE WITH INDEX VALUE
- BOUNDARY LINE OF THE RIVER
- BOUNDARY LINE OF THE SANDBANK IN A RIVER
- BOUNDARY LINE OF THE BUSH, FOREST AND PLANTATION
- BOUNDARY LINE OF THE AREA OF *CROSS

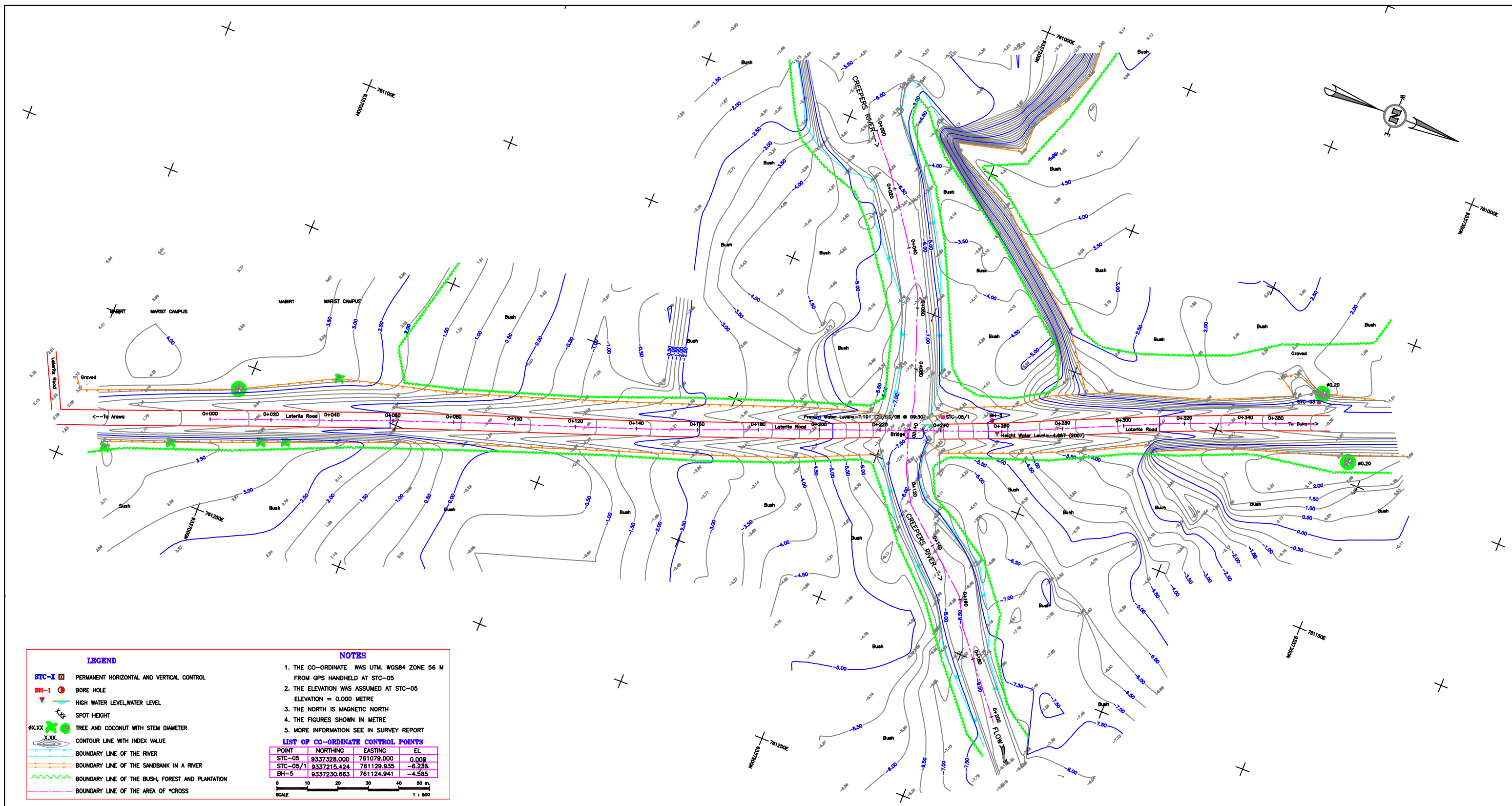
NOTES

1. THE CO-ORDINATE WAS UTM. WGS84 ZONE 56 M FROM GPS HANDHELD AT STC-04
2. THE ELEVATION WAS ASSUMED AT STC-04 ELEVATION = 0.000 METRE
3. THE NORTH IS MAGNETIC NORTH
4. THE FIGURES SHOWN IN METRE
5. MORE INFORMATION SEE IN SURVEY REPORT

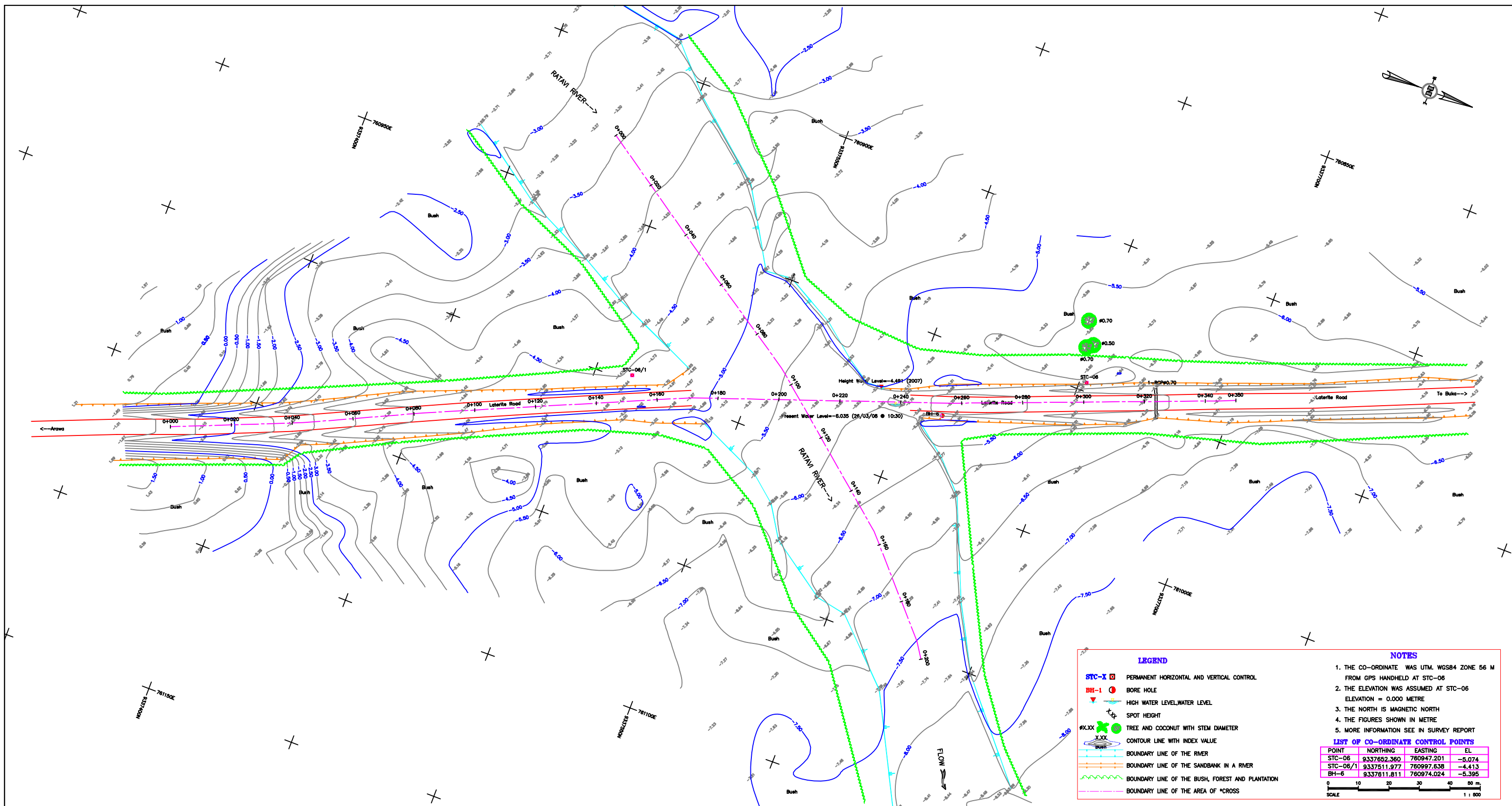
LIST OF CO-ORDINATE CONTROL POINTS

POINT	NORTHING	EASTING	EL
STC-04	9336820.000	761222.000	0.000
STC-04/1	9336643.065	761287.447	-0.002
BH-4	9336730.758	761266.438	-6.141

SCALE 1 : 500



DEPARTMENT OF WORKS	THE PROJECT FOR CONSTRUCTION OF BRIDGES ON BOUGAINVILLE COASTAL TRUNK ROAD IN THE INDEPENDENT STATE OF PAPUA NEW GUINEA	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	TITLE TOPOGRAPHIC MAP OF THE CREEPERS RIVER	SCALE HOR. 1:500 VER. 1:50	DATE 15/04/08	DRAWING NO. STC-05
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LEGEND

- STC-X □ PERMANENT HORIZONTAL AND VERTICAL CONTROL
- BH-1 ● BORE HOLE
- ▽ HIGH WATER LEVEL, WATER LEVEL
- SPOT HEIGHT
- #X.XX TREE AND COCONUT WITH STEM DIAMETER
- CONTOUR LINE WITH INDEX VALUE
- BOUNDARY LINE OF THE RIVER
- BOUNDARY LINE OF THE SANDBANK IN A RIVER
- BOUNDARY LINE OF THE BUSH, FOREST AND PLANTATION
- BOUNDARY LINE OF THE AREA OF *CROSS

NOTES

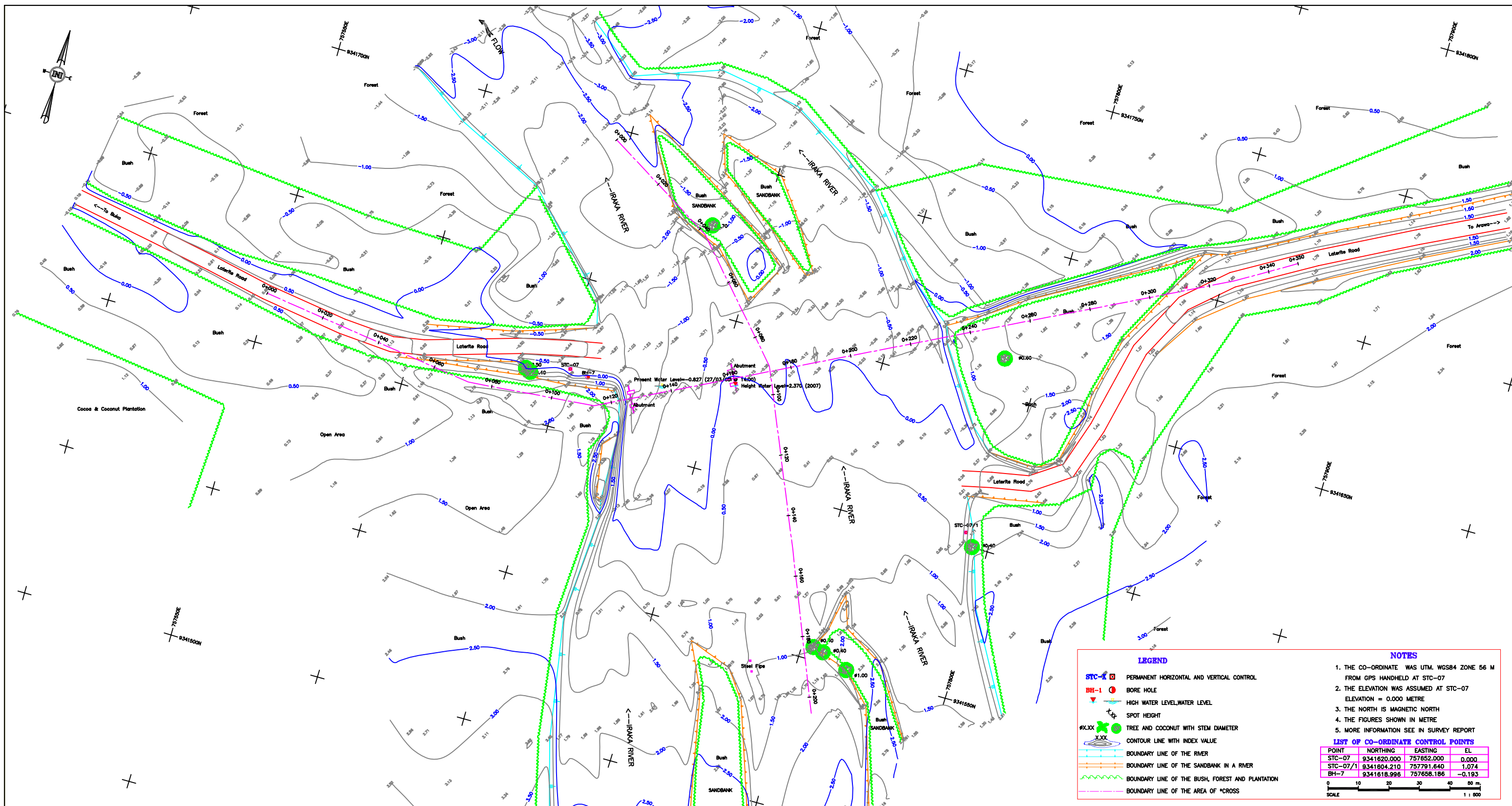
1. THE CO-ORDINATE WAS UTM, WGS84 ZONE 56 M FROM GPS HANDHELD AT STC-06
2. THE ELEVATION WAS ASSUMED AT STC-06 ELEVATION = 0.000 METRE
3. THE NORTH IS MAGNETIC NORTH
4. THE FIGURES SHOWN IN METRE
5. MORE INFORMATION SEE IN SURVEY REPORT

LIST OF CO-ORDINATE CONTROL POINTS

POINT	NORTHING	EASTING	EL
STC-06	9337652.360	760947.201	-5.074
STC-06/1	9337511.977	760997.638	-4.413
BH-6	9337811.811	760974.024	-5.395

0 10 20 30 40 50 m
SCALE 1 : 500

DEPARTMENT OF WORKS	THE PROJECT FOR CONSTRUCTION OF BRIDGES ON BOUGAINVILLE COASTAL TRUNK ROAD IN THE INDEPENDENT STATE OF PAPUA NEW GUINEA	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	TITLE TOPOGRAPHIC MAP OF THE RATAWI RIVER	SCALE HOR: 1:500 VER: 1:500	DATE 15/04/08	DRAWING NO. STC-06
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LEGEND

- STC-07 PERMANENT HORIZONTAL AND VERTICAL CONTROL
- BH-1 BORE HOLE
- High Water Level, Water Level
- Spot Height
- #X.XX TREE AND COCONUT WITH STEM DIAMETER
- Contour Line with Index Value
- Boundary Line of the River
- Boundary Line of the Sandbank in a River
- Boundary Line of the Bush, Forest and Plantation
- Boundary Line of the Area of Cross

NOTES

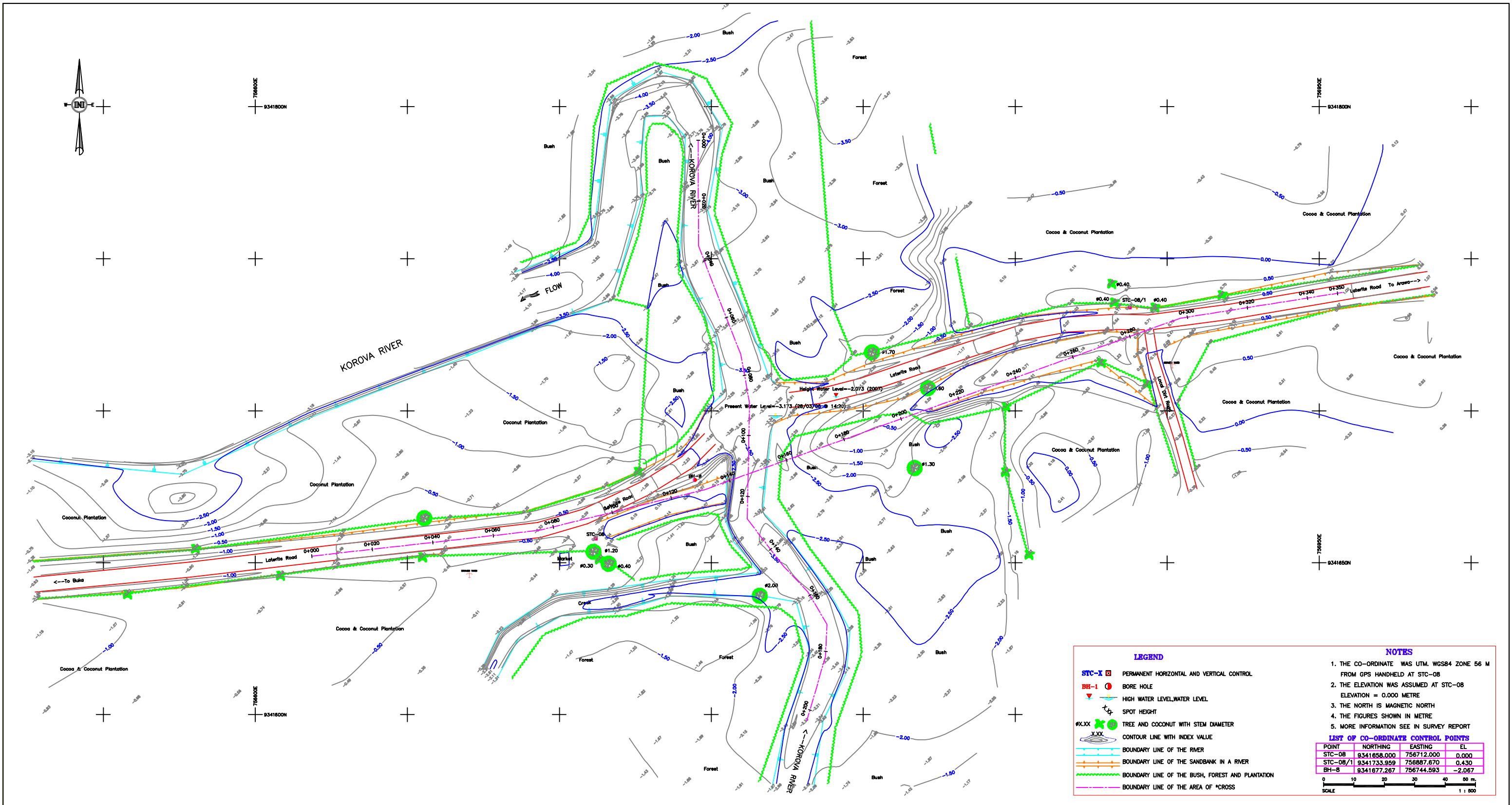
1. THE CO-ORDINATE WAS UTM, WGS84 ZONE 56 M FROM GPS HANDHELD AT STC-07
2. THE ELEVATION WAS ASSUMED AT STC-07 ELEVATION = 0.000 METRE
3. THE NORTH IS MAGNETIC NORTH
4. THE FIGURES SHOWN IN METRE
5. MORE INFORMATION SEE IN SURVEY REPORT

LIST OF CO-ORDINATE CONTROL POINTS

POINT	NORTHING	EASTING	EL
STC-07	9341620.000	757652.000	0.000
STC-07/1	9341604.210	757791.640	1.074
BH-7	9341618.996	757658.186	-0.193

0 10 20 30 40 50 m
SCALE 1 : 600

DEPARTMENT OF WORKS	THE PROJECT FOR CONSTRUCTION OF BRIDGES ON BOUGAINVILLE COASTAL TRUNK ROAD IN THE INDEPENDENT STATE OF PAPUA NEW GUINEA	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	TITLE TOPOGRAPHIC MAP OF IRAKA RIVER	SCALE HOR: 1:500 VER: 1:500	DATE 15/04/08	DRAWING NO. STC-07
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LEGEND

- STC-X □ PERMANENT HORIZONTAL AND VERTICAL CONTROL
- BH-1 ● BORE HOLE
- ▽ HIGH WATER LEVEL/WATER LEVEL
- ⊕ SPOT HEIGHT
- #X.XX ● TREE AND COCONUT WITH STEM DIAMETER
- CONTOUR LINE WITH INDEX VALUE
- BOUNDARY LINE OF THE RIVER
- BOUNDARY LINE OF THE SANDBANK IN A RIVER
- BOUNDARY LINE OF THE BUSH, FOREST AND PLANTATION
- BOUNDARY LINE OF THE AREA OF *CROSS

NOTES

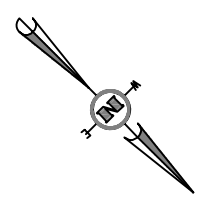
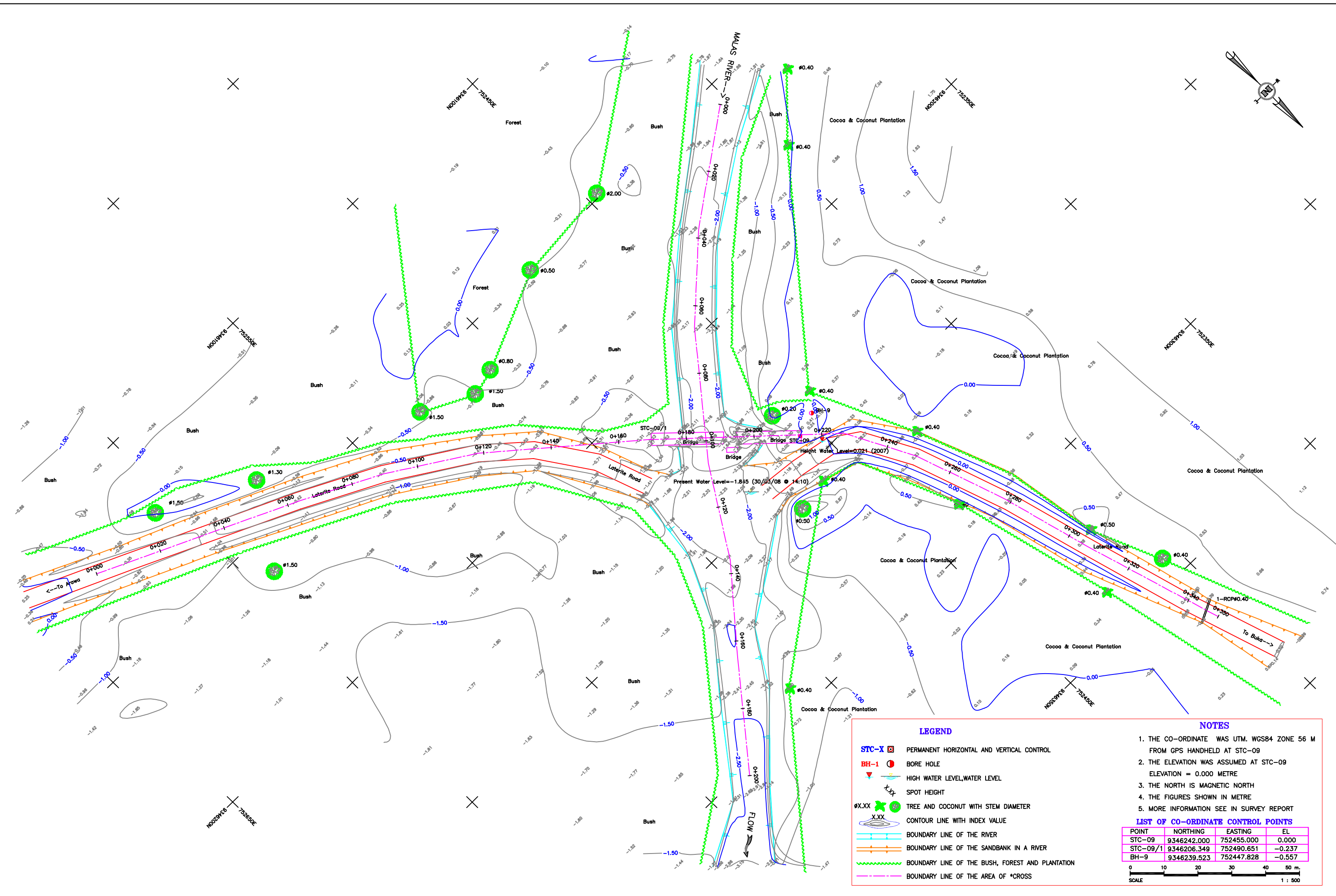
1. THE CO-ORDINATE WAS UTM, WGS84 ZONE 56 M FROM GPS HANDHELD AT STC-08
2. THE ELEVATION WAS ASSUMED AT STC-08 ELEVATION = 0.000 METRE
3. THE NORTH IS MAGNETIC NORTH
4. THE FIGURES SHOWN IN METRE
5. MORE INFORMATION SEE IN SURVEY REPORT

LIST OF CO-ORDINATE CONTROL POINTS

POINT	NORTHING	EASTING	EL
STC-08	9341858.000	756712.000	0.000
STC-08/1	9341733.959	756887.670	0.430
BH-8	9341877.267	756744.593	-2.067

0 10 20 30 40 50 m
SCALE 1 : 500

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LEGEND

- STC-X PERMANENT HORIZONTAL AND VERTICAL CONTROL
- BH-1 BORE HOLE
- High Water Level, Water Level
- X.XX SPOT HEIGHT
- #X.XX TREE AND COCONUT WITH STEM DIAMETER
- X.XX CONTOUR LINE WITH INDEX VALUE
- BOUNDARY LINE OF THE RIVER
- BOUNDARY LINE OF THE SANDBANK IN A RIVER
- BOUNDARY LINE OF THE BUSH, FOREST AND PLANTATION
- BOUNDARY LINE OF THE AREA OF *CROSS

NOTES

1. THE CO-ORDINATE WAS UTM. WGS84 ZONE 56 M FROM GPS HANDHELD AT STC-09
2. THE ELEVATION WAS ASSUMED AT STC-09 ELEVATION = 0.000 METRE
3. THE NORTH IS MAGNETIC NORTH
4. THE FIGURES SHOWN IN METRE
5. MORE INFORMATION SEE IN SURVEY REPORT

LIST OF CO-ORDINATE CONTROL POINTS

POINT	NORTHING	EASTING	EL
STC-09	9346242.000	752455.000	0.000
STC-09/1	9346206.349	752490.651	-0.237
BH-9	9346239.523	752447.828	-0.557

0 10 20 30 40 50 m.
SCALE 1 : 500