

Station: Lungga Bridge, Guadalcanal, CA=377km²
 Data: 1966-'68, '71, '77-'79, '86-'89, '96
 Maximum discharge=1.1m³/s, FUF=0.96
 Sources: Ministry of Natural Resources

Fig.5-7-21. Flow Duration Curve at Rori

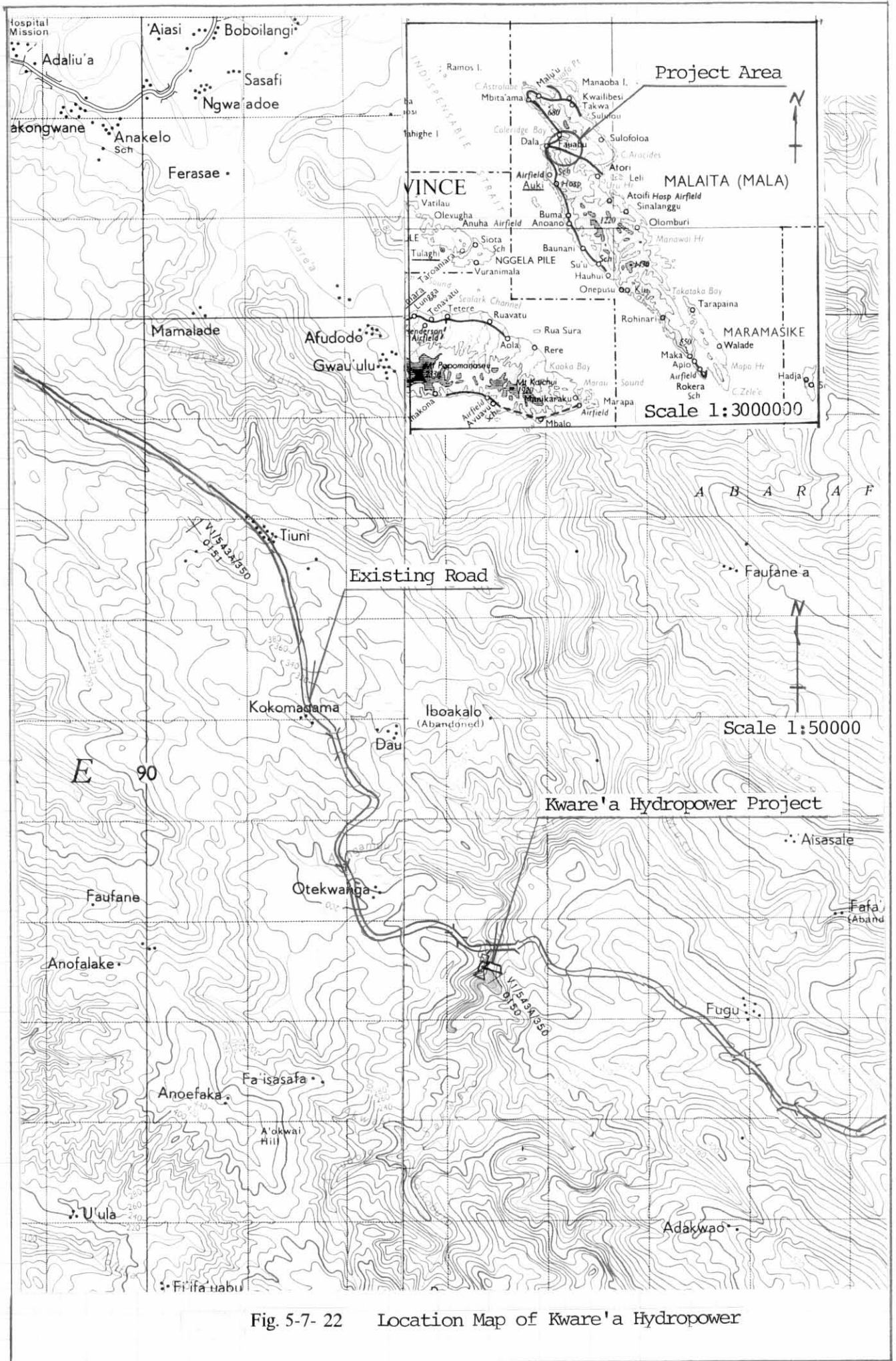
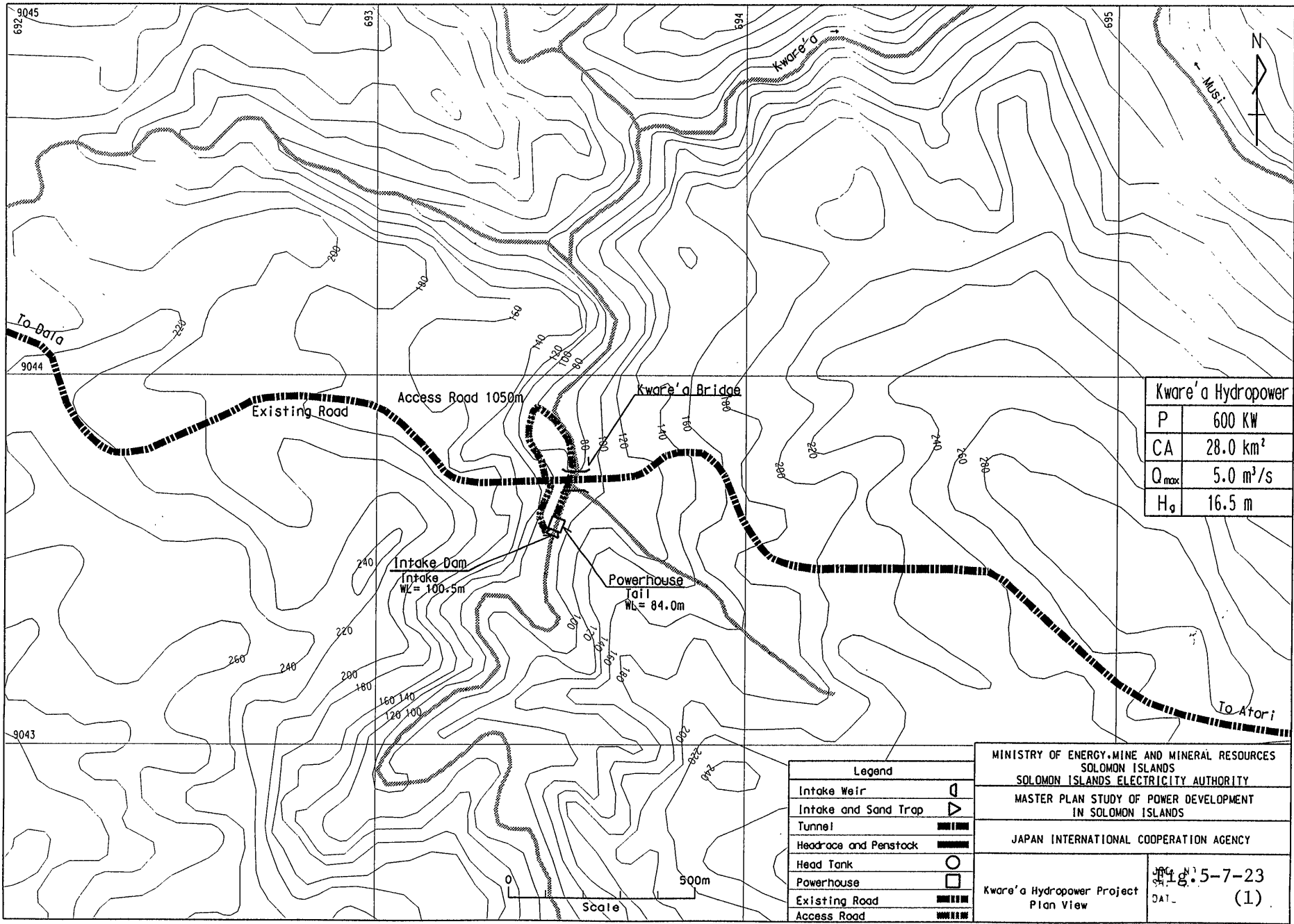


Fig. 5-7- 22 Location Map of Kware'a Hydropower

S-1167



| | |
|--------------------|-----------------------|
| Kware'a Hydropower | |
| P | 600 kW |
| CA | 28.0 km ² |
| Q _{max} | 5.0 m ³ /s |
| H _g | 16.5 m |

| Legend | |
|-----------------------|----------|
| Intake Weir | ▭ |
| Intake and Sand Trap | ▴ |
| Tunnel | ▬▬▬▬ |
| Headrace and Penstock | ▬▬▬▬▬▬ |
| Head Tank | ○ |
| Powerhouse | □ |
| Existing Road | ▬▬▬▬▬▬ |
| Access Road | ▬▬▬▬▬▬▬▬ |

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SOLOMON ISLANDS
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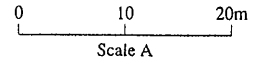
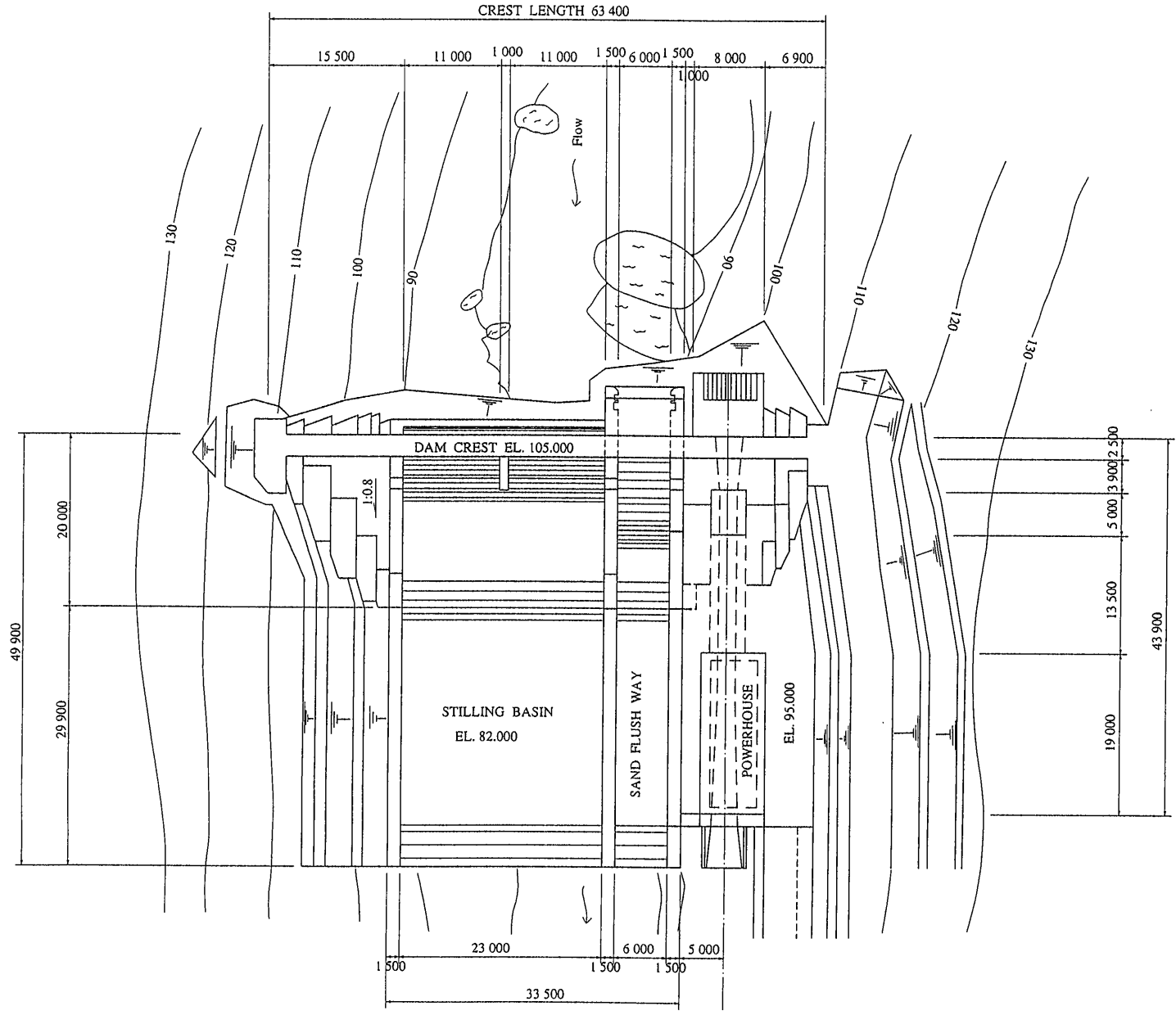
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Kware'a Hydropower Project
Plan View

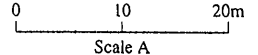
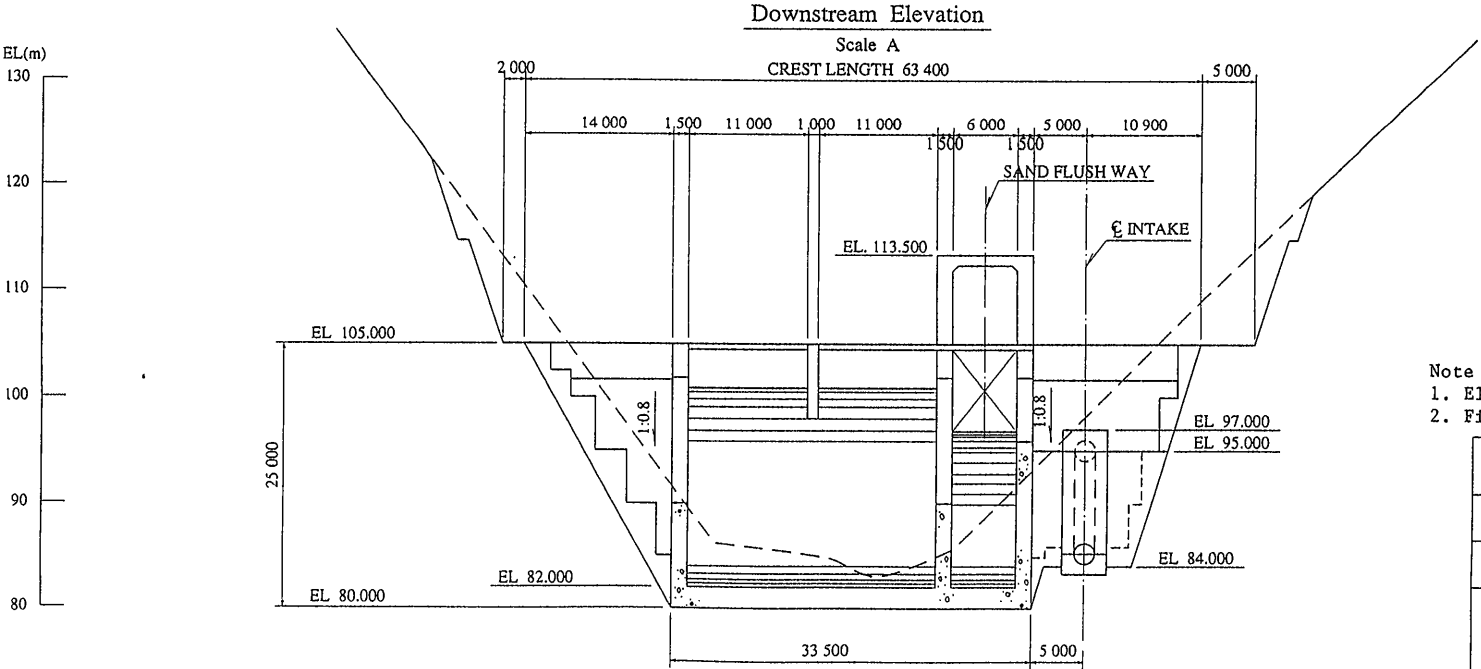
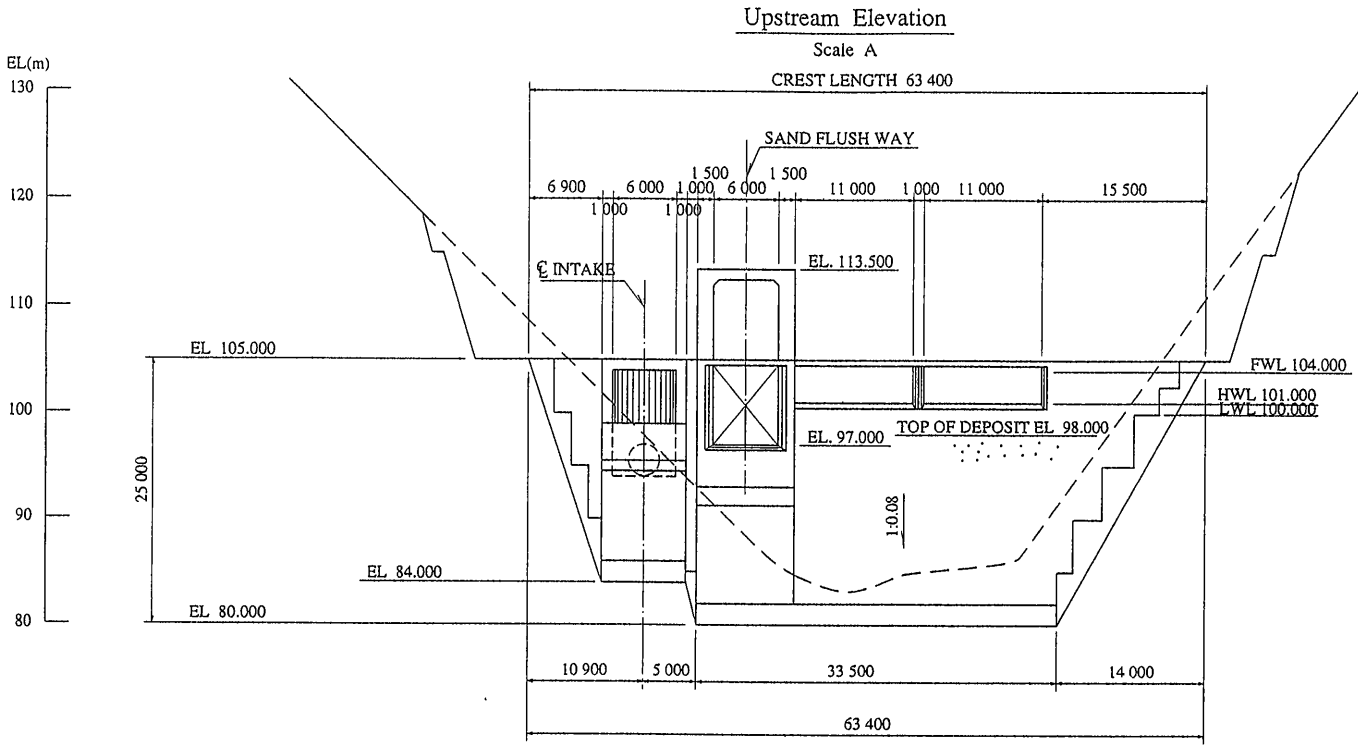
JICA
S-1167-5-7-23
DAT- (1)

Dam Plan Scale A



| | |
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| JAPAN INTERNATIONAL COOPERATION AGENCY | |
| Kwarea Hydropower Project Dam Plan | Fig. 5-7-23 (2) |

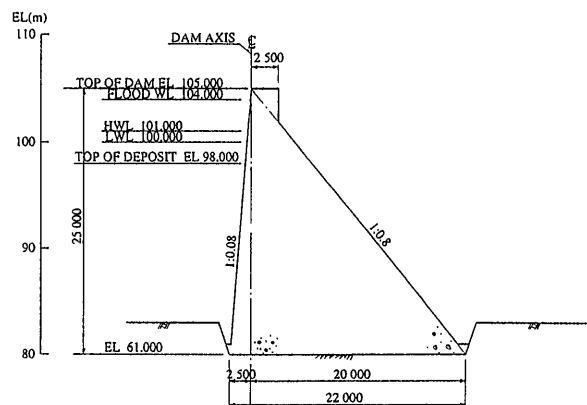
Note
 1. Elevation indicated is approximate only.
 2. Figure in "()" shows slope distance.



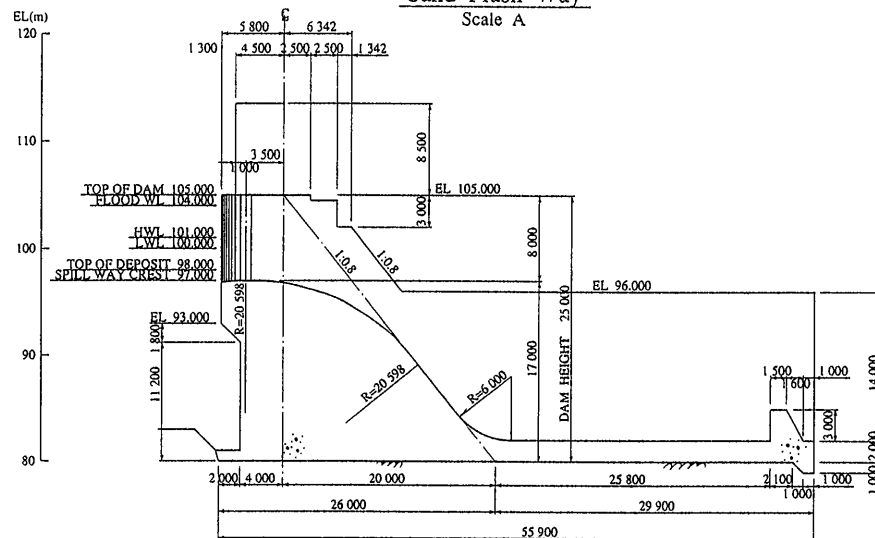
- Note
1. Elevation indicated is approximate only.
 2. Figure in "()" shows slope distance.

| | |
|---|--------------------|
| MINISTRY OF NATURAL RESOURCES SOLOMON ISLANDS SOLOMON ISLANDS ELECTRICITY AUTHORITY | |
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| JAPAN INTERNATIONAL COOPERATION AGENCY | |
| Kwarea Hydropower Project Upstream Elevation Downstream Elevation | Fig. 5-7-23 (3) |

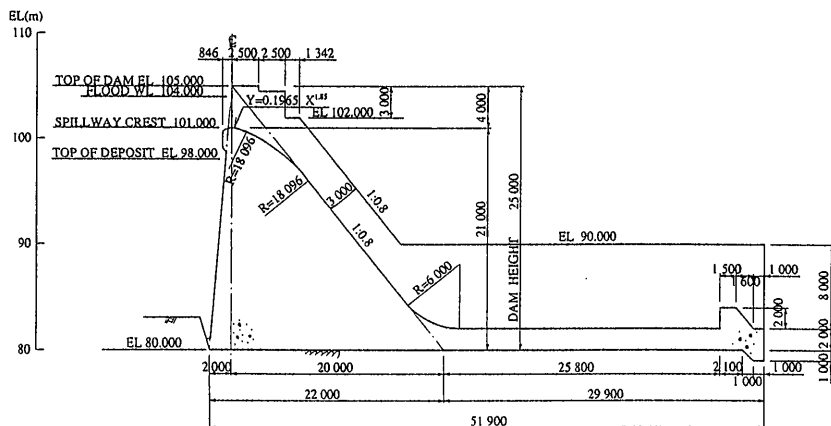
Non Overflow Section
Scale A



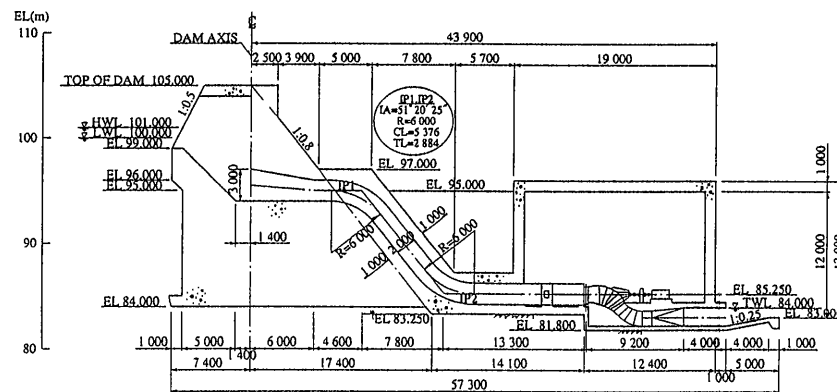
Sand Flush Way
Scale A



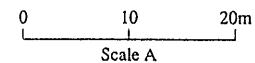
Overflow Section
Scale A



Penstock Profile
Scale A

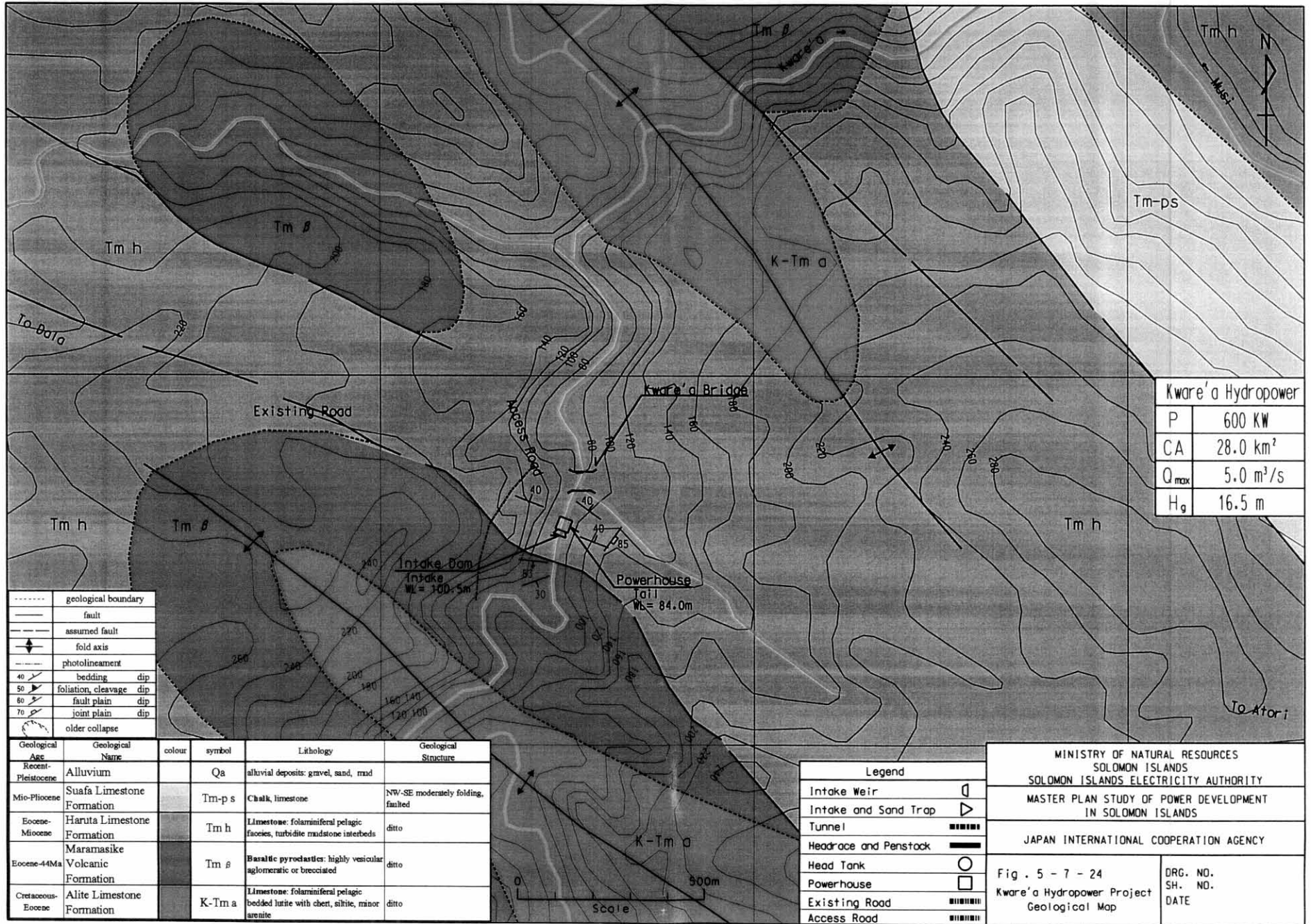


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- Note
1. Elevation indicated is approximate only.
 2. Figure in "()" shows slope distance.

| | |
|---|--------------------|
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| MASTER PLAN STUDY OF POWER DEVELOPMENT SOLOMON ISLANDS | |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |
| Kwaraa Hydropower Project Non Overflow Section Overflow Section Sand Flush Way Penstock Profile | Fig. 5-7-23 (4) |



| Kware'a Hydropower | |
|--------------------|-----------------------|
| P | 600 KW |
| CA | 28.0 km ² |
| Q _{max} | 5.0 m ³ /s |
| H _g | 16.5 m |

| | |
|---------|-------------------------|
| ----- | geological boundary |
| --- | fault |
| - - - - | assumed fault |
| ↕ | fold axis |
| --- | photolineament |
| 40 / | bedding dip |
| 50 / | foliation, cleavage dip |
| 60 / | fault plain dip |
| 70 / | joint plain dip |
| ○ | older collapse |

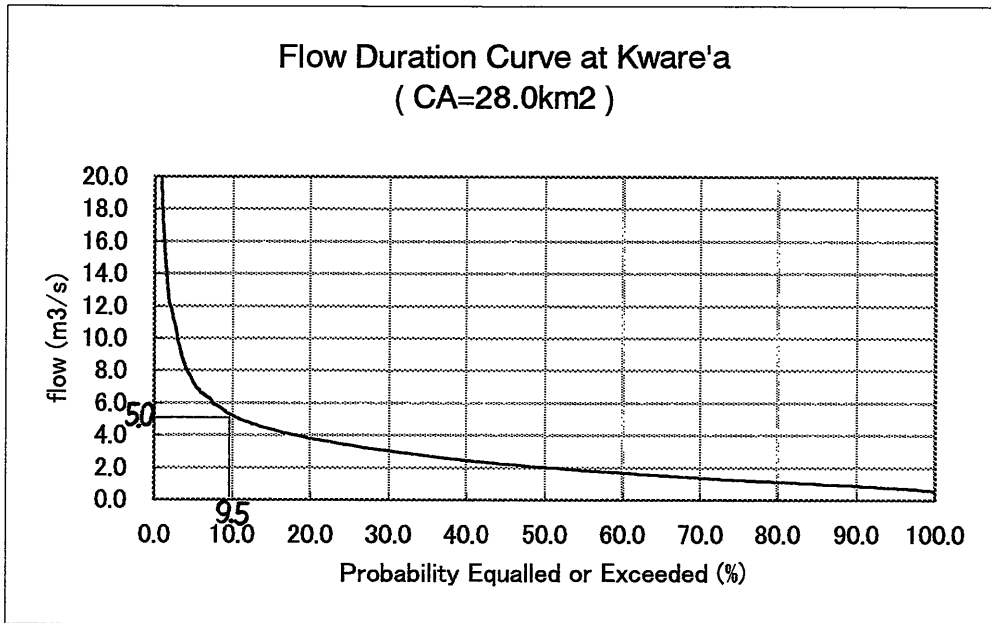
| Geological Age | Geological Name | colour | symbol | Lithology | Geological Structure |
|--------------------|-------------------------------|--------|--------|---|-----------------------------------|
| Recent-Pleistocene | Alluvium | | Qa | alluvial deposits: gravel, sand, mud | |
| Mio-Pliocene | Suafa Limestone Formation | | Tm-p s | Chalk, limestone | NW-SE moderately folding, faulted |
| Eocene-Miocene | Haruta Limestone Formation | | Tm h | Limestone: foraminiferal pelagic faoecies, turbidite mudstone interbeds | ditto |
| Eocene-44Ma | Maramasike Volcanic Formation | | Tm β | Basaltic pyroclastics: highly vesicular agglomeratic or brecciated | ditto |
| Cretaceous-Eocene | Alite Limestone Formation | | K-Tm a | Limestone: foraminiferal pelagic bedded lutite with chert, siltite, minor arenite | ditto |

| Legend | |
|-----------------------|------|
| Intake Weir | ⏏ |
| Intake and Sand Trap | ⏏ |
| Tunnel | ▬▬▬▬ |
| Headrace and Penstock | ▬▬▬▬ |
| Head Tank | ○ |
| Powerhouse | □ |
| Existing Road | ▬▬▬▬ |
| Access Road | ▬▬▬▬ |

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Fig. 5 - 7 - 24
Kware'a Hydropower Project
Geological Map

DRG. NO.
SH. NO.
DATE



Station: Lungga Bridge, Guadalcanal, CA=377km²
 Data: 1966-'68, '71, '77-'79, '86-'89, '96
 Maximum discharge=5.0m³/s, FUF=0.45
 Sources: Ministry of Natural Resouces

Fig.5-7-25. Flow Duration Curve at Kware'a

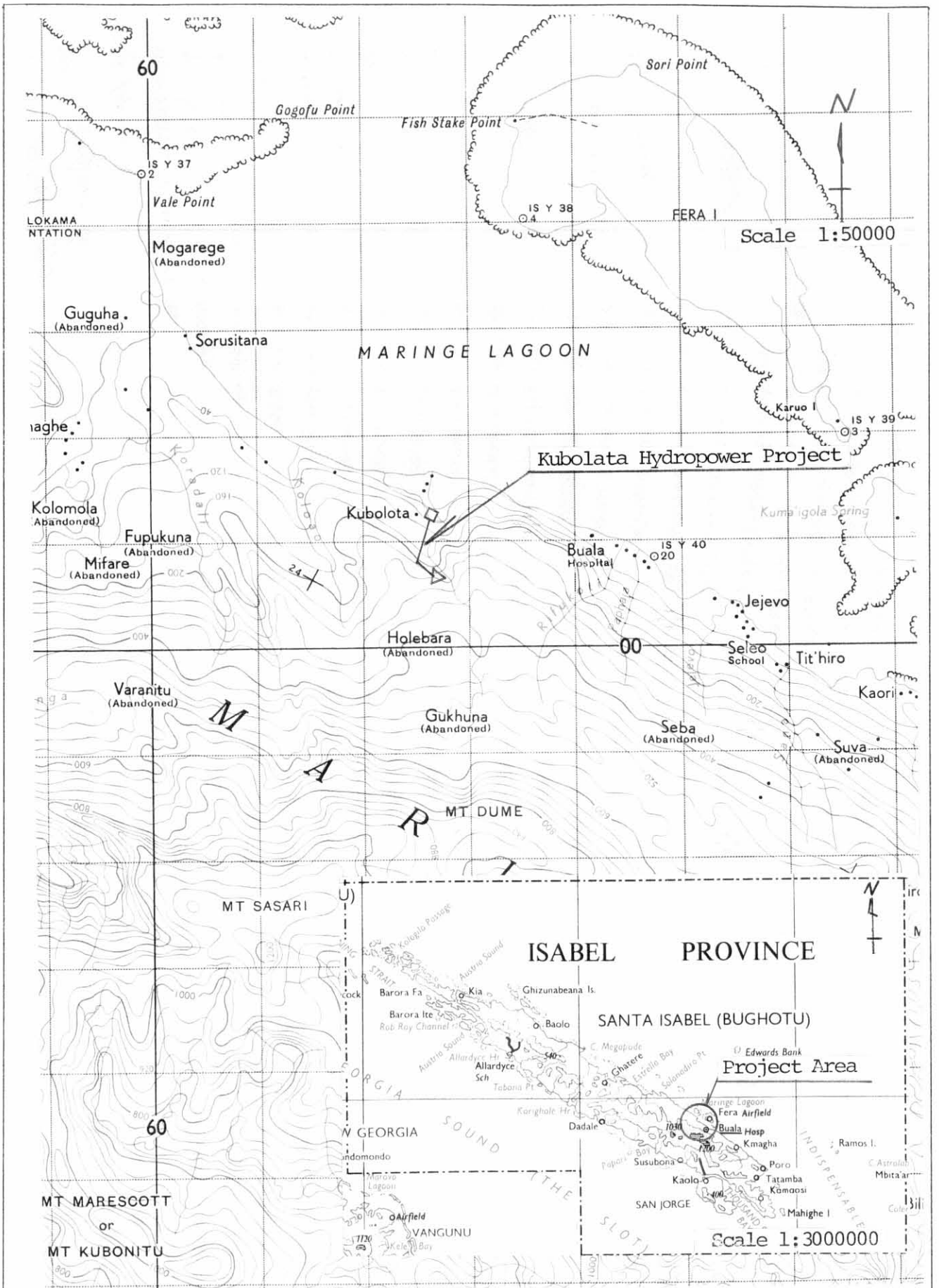
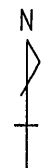
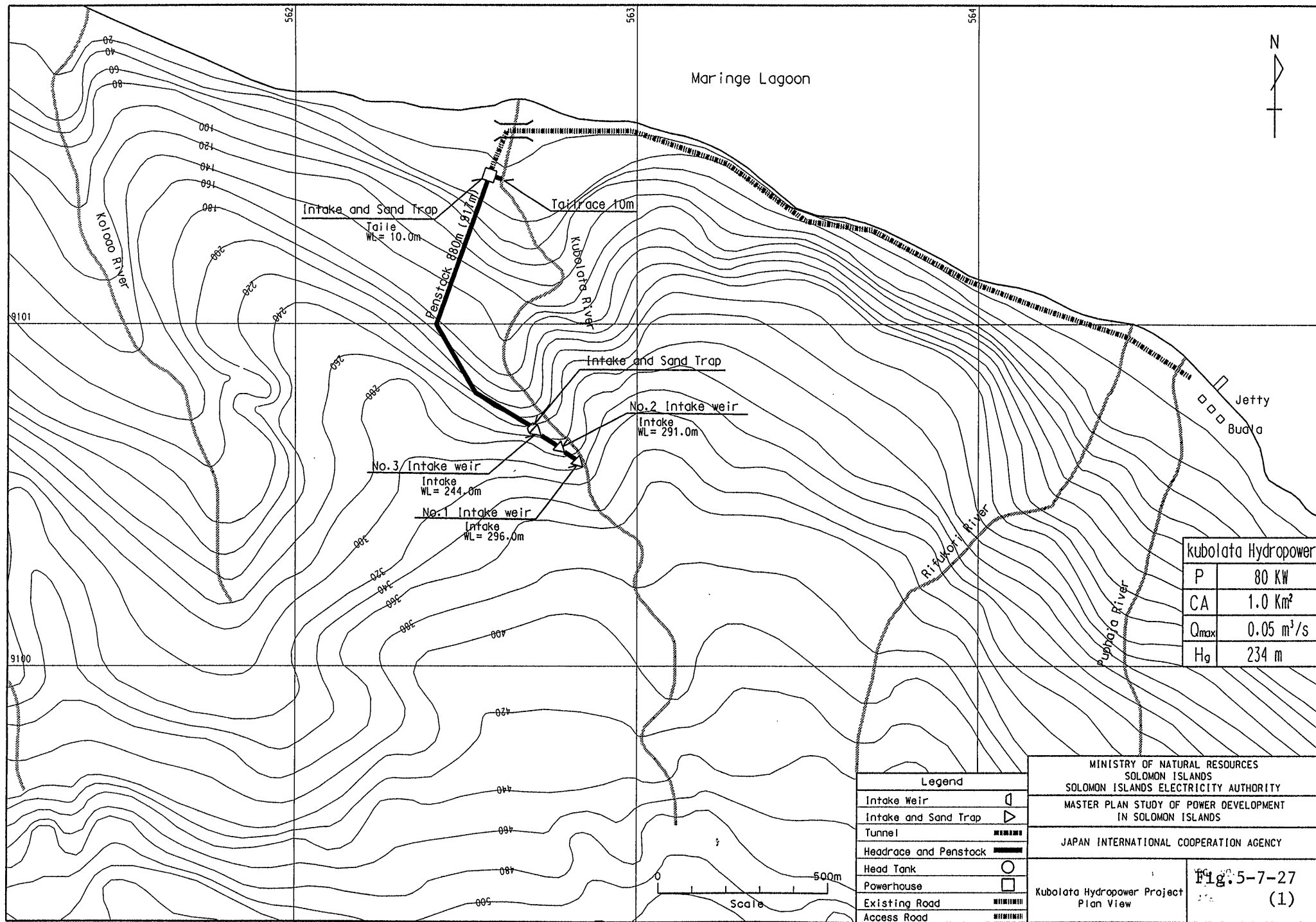


Fig 5-7- 26 Location Map of Kubolata Hydropower

173
40

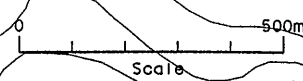
int

S - 174

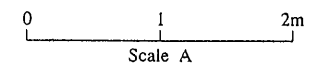
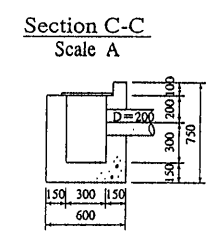
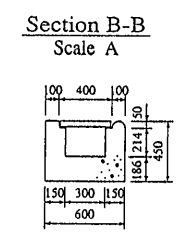
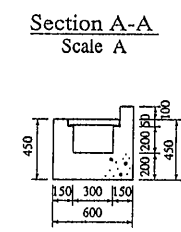
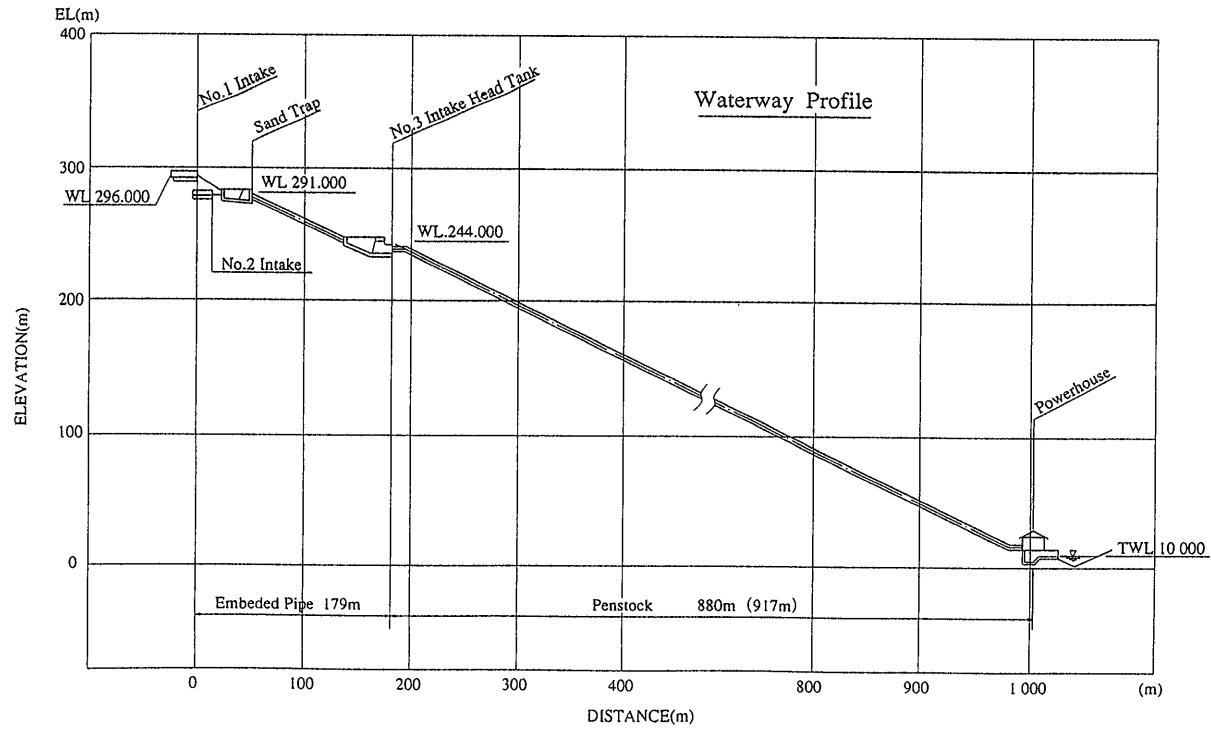
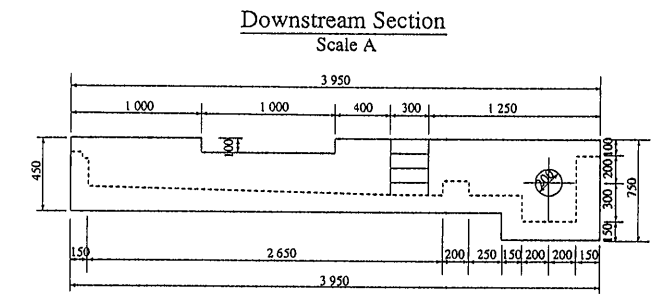
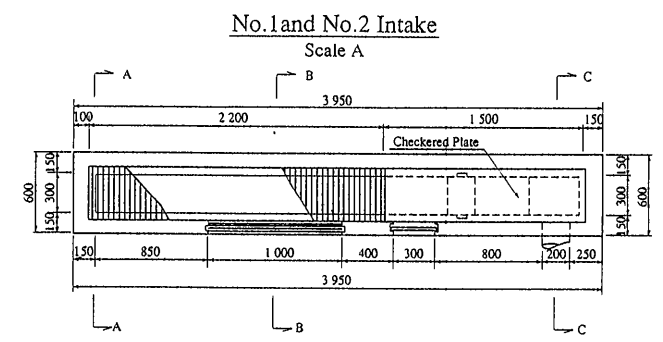
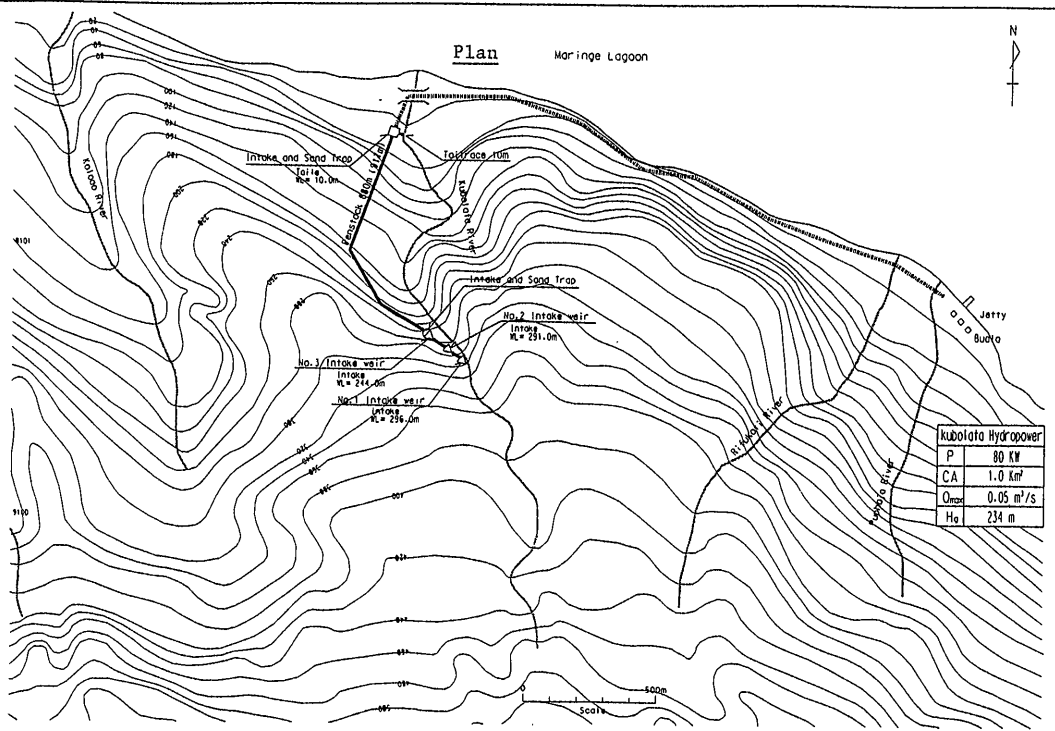


| kubolata Hydropower | |
|---------------------|------------------------|
| P | 80 KW |
| CA | 1.0 Km ² |
| Q _{max} | 0.05 m ³ /s |
| H _g | 234 m |

| Legend | |
|-----------------------|--|
| Intake Weir | |
| Intake and Sand Trap | |
| Tunnel | |
| Headrace and Penstock | |
| Head Tank | |
| Powerhouse | |
| Existing Road | |
| Access Road | |

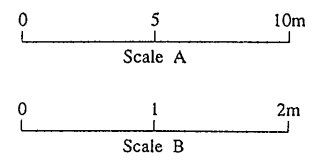
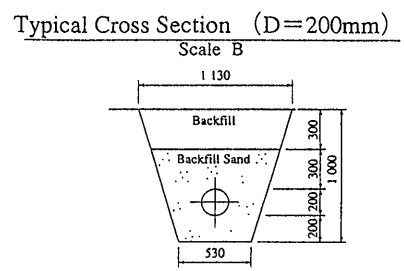
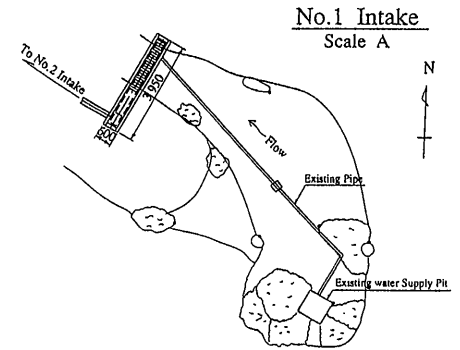
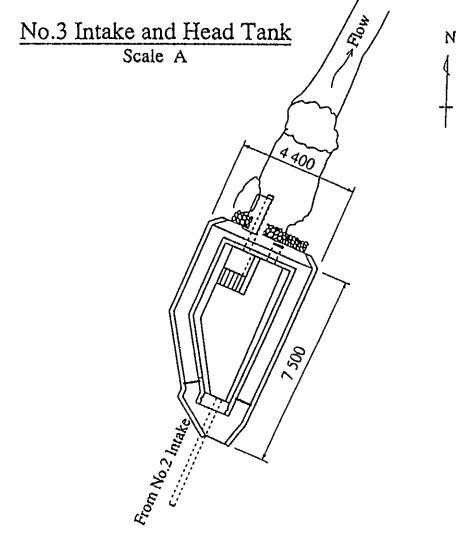
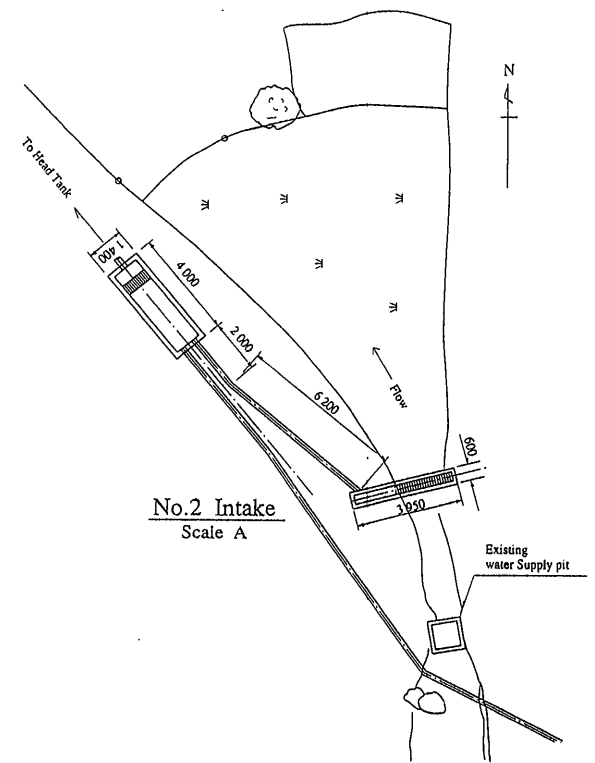
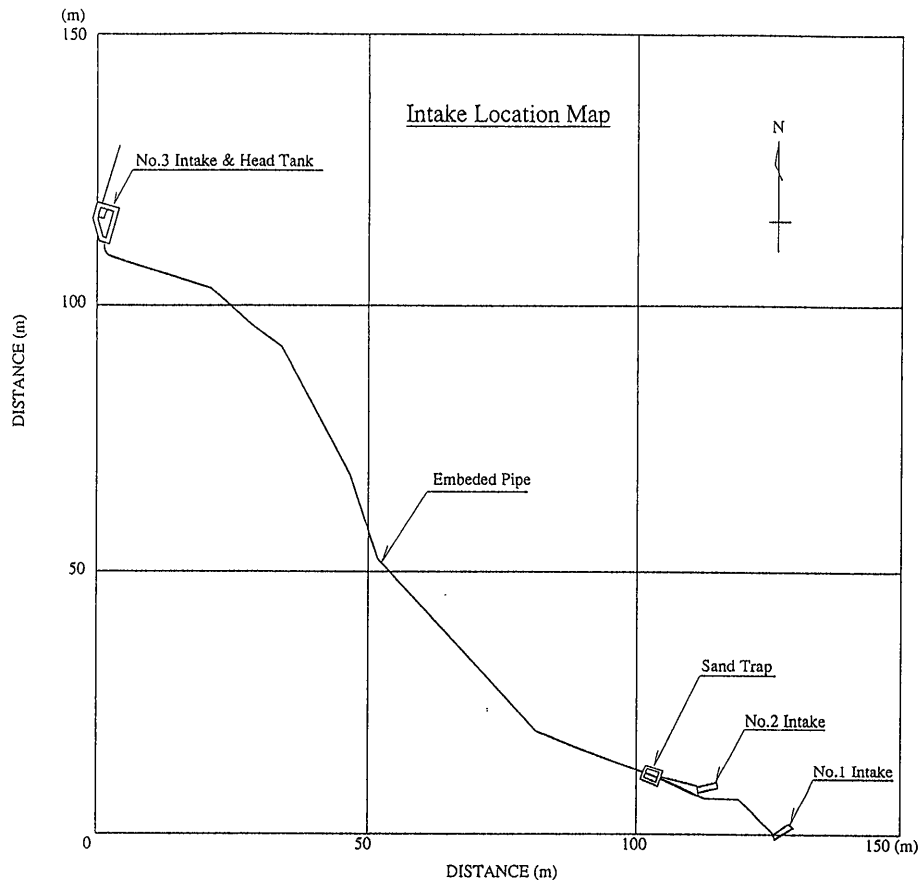


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| JAPAN INTERNATIONAL COOPERATION AGENCY | |
| Kubolata Hydropower Project Plan View | Fig. 5-7-27 (1) |



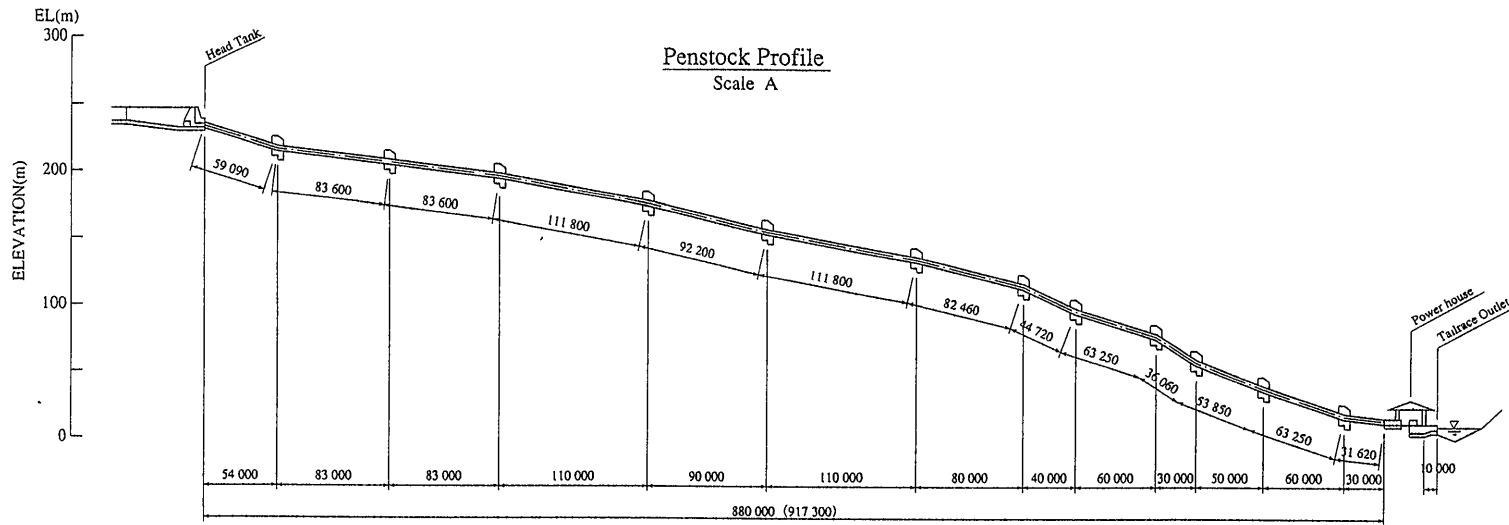
- Note
- Elevation indicated is approximate only.
 - Figure in "()" shows slope distance.

| | |
|--|---------------------------|
| MINISTRY OF NATURAL RESOURCES SOLOMON ISLANDS SOLOMON ISLANDS ELECTRICITY AUTHORITY MASTER PLAN STUDY OF POWER DEVELOPMENT SOLOMON ISLANDS | |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |
| Kubolata Hydropower Project Plan View, Intake | Fig. 5-7-27 (2) |

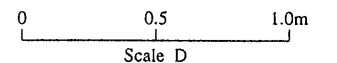
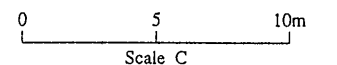
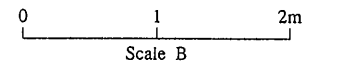
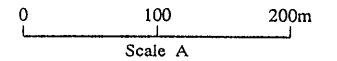
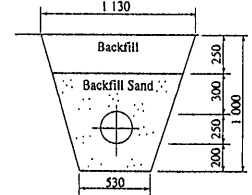


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| MASTER PLAN STUDY OF POWER DEVELOPMENT SOLOMON ISLANDS | |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |
| Kubolata Hydropower Project Intake Location | Fig:5-7-27 (3) |

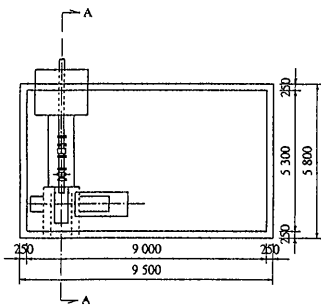
801



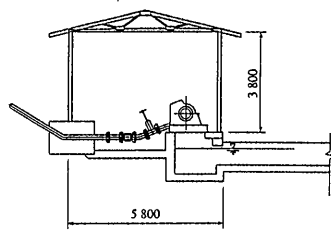
Typical Cross Section (D=250mm)
Scale B



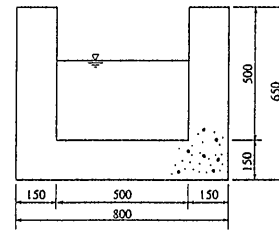
Power house
Scale C



Section A-A
Scale C



Tailrace
Scale D



Note
1. Elevation indicated is approximate only.
2. Figure in "()" shows slope distance.

| | |
|---|-------------------|
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| JAPAN INTERNATIONAL COOPERATION AGENCY | |
| Kubolata Hydropower Project Penstock, Powerhouse and Tailrace | Fig.5-7-27 (5) |

Station : Buala

Island : Santa Isabel

Data : 1982-1997

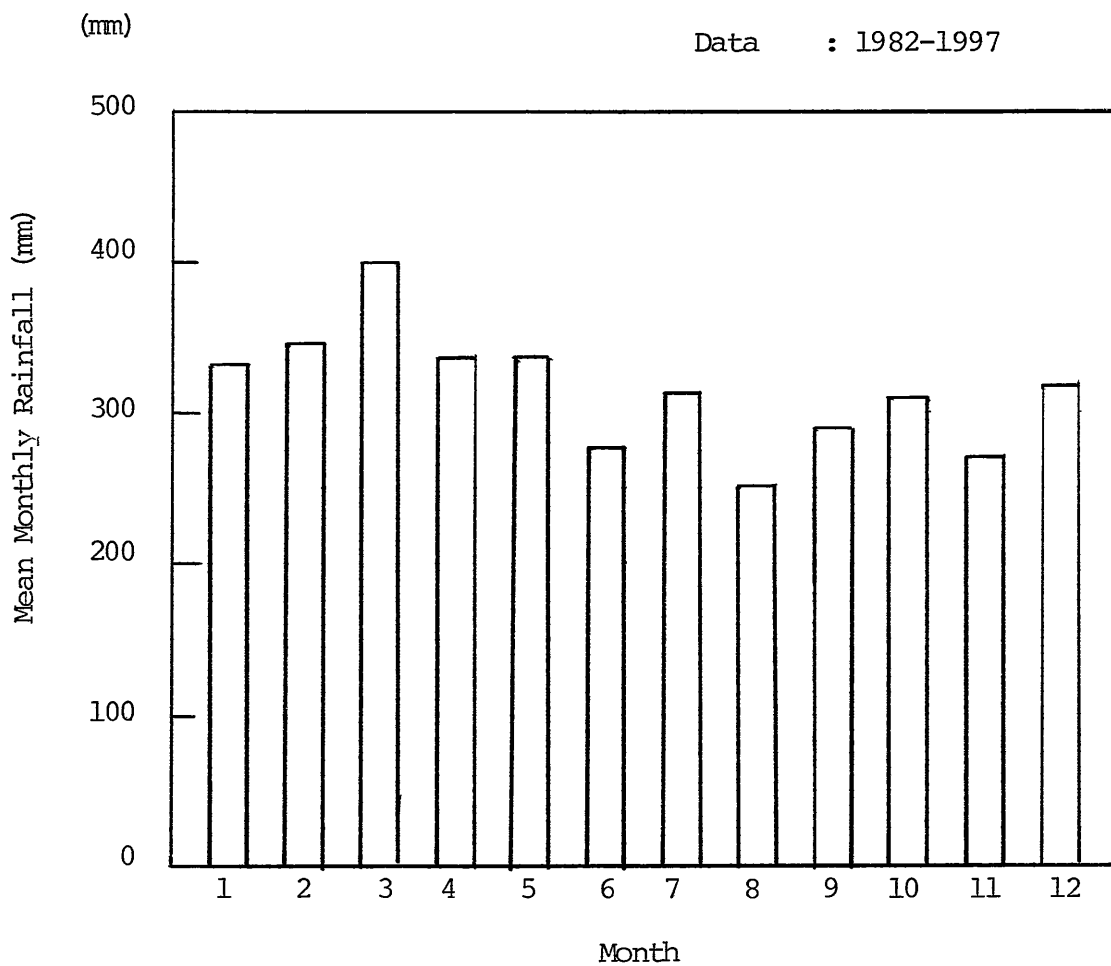
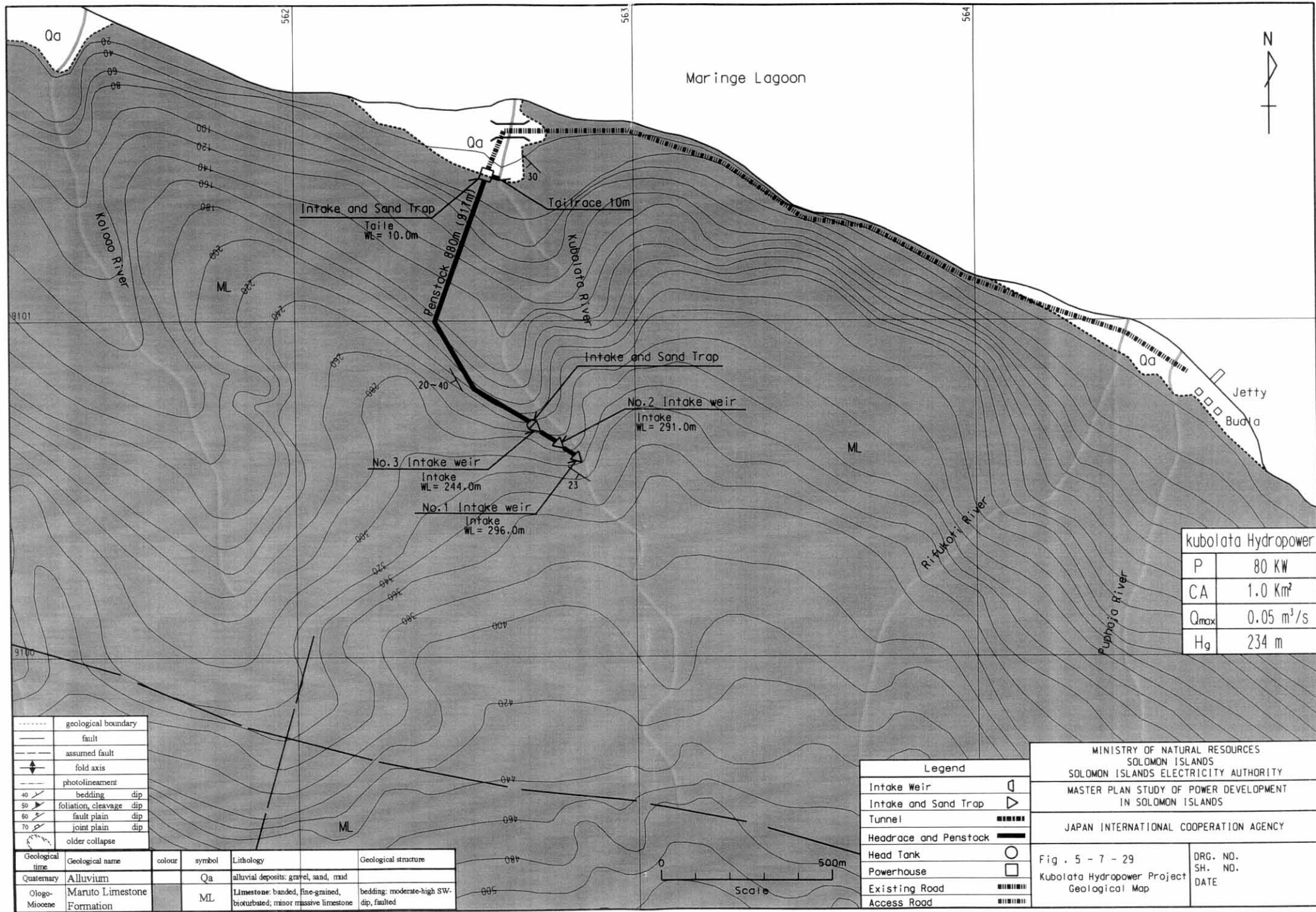


Fig. 5-7- 28 Mean Monthly Rainfall in Buala

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| Kubolata Hydropower | |
|---------------------|------------------------|
| P | 80 KW |
| CA | 1.0 Km ² |
| Q _{max} | 0.05 m ³ /s |
| H _g | 234 m |

| | |
|---------|-------------------------|
| ----- | geological boundary |
| --- | fault |
| - - - - | assumed fault |
| ↕ | fold axis |
| --- | photolineament |
| 40 | bedding dip |
| 50 | foliation, cleavage dip |
| 60 | fault plain dip |
| 70 | joint plain dip |
| ○ | older collapse |

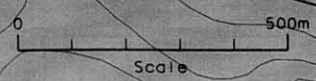
| Geological time | Geological name | colour | symbol | Lithology | Geological structure |
|-----------------|----------------------------|--------|--------|--|--|
| Quaternary | Alluvium | | Qa | alluvial deposits: gravel, sand, mud | |
| Oligo-Miocene | Maruto Limestone Formation | | ML | Limestone: banded, fine-grained, biotubulated, minor massive limestone | bedding: moderate-high SW-dip, faulted |

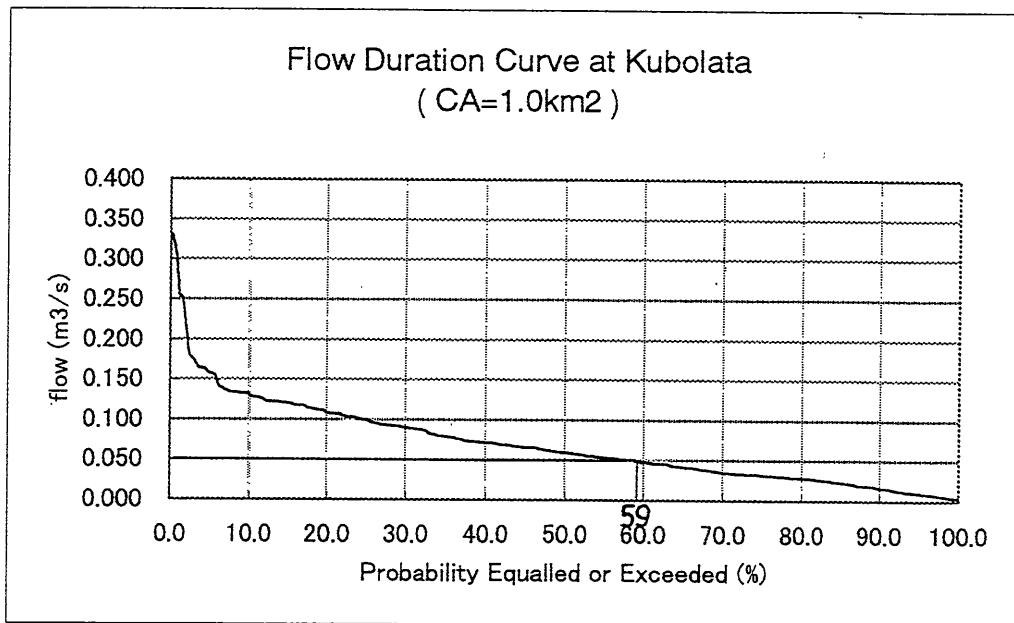
| Legend | |
|-----------------------|------|
| Intake Weir | ◁ |
| Intake and Sand Trap | ▷ |
| Tunnel | ▬▬▬▬ |
| Headrace and Penstock | ▬▬▬▬ |
| Head Tank | ○ |
| Powerhouse | □ |
| Existing Road | ▬▬▬▬ |
| Access Road | ▬▬▬▬ |

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Fig. 5 - 7 - 29
 Kubolata Hydropower Project
 Geological Map

| | |
|----------|--|
| DRG. NO. | |
| SH. NO. | |
| DATE | |





Station: Jejevo intake, Santa Isabel, CA=2.1km²

Data: 1988

Maximum discharge=0.05m³/s, FUF=0.6

Sources: Ministry of Natural Resouces

Fig.5-7-30. Flow Duration Curve at Kubolata

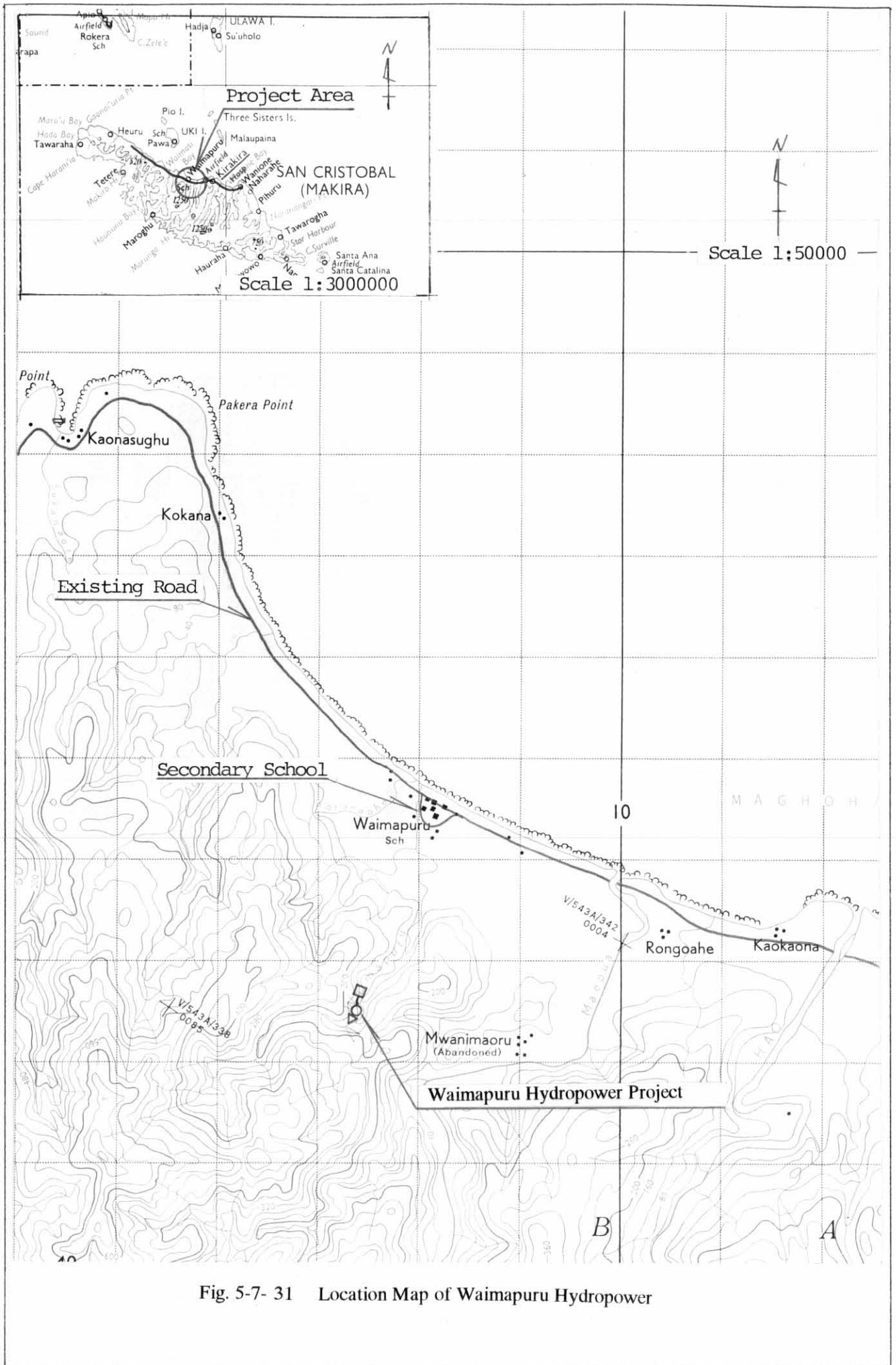


Fig. 5-7- 31 Location Map of Waimapuru Hydropower