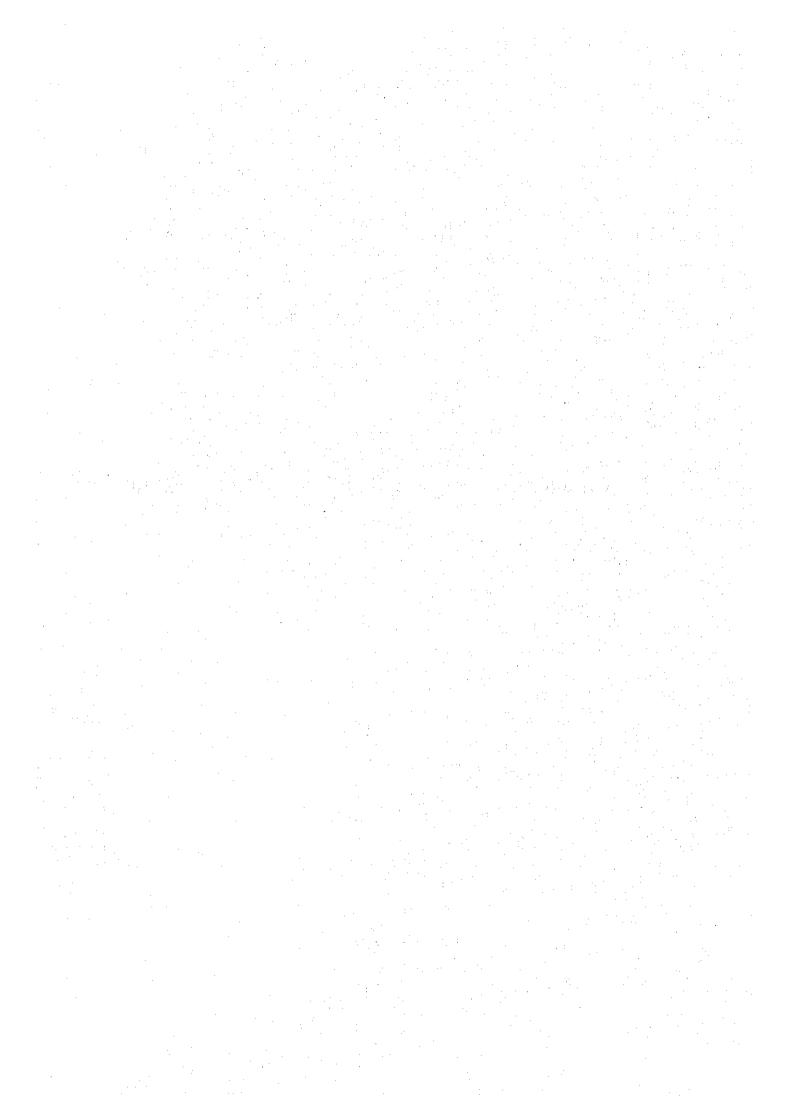
Chapter 4 Project Evaluation and Recommendation



Chapter 4 Project Evaluation and Recommendation

4-1 Project Effect

Through implementation of this Project, it will be possible to contribute to the paediatric medical services in Fiji for the specific item (1) - (4) mentioned below.

CWMH, in addition to acting as the district hospital for the Central and Eastern Divisions, also functions as the top referral hospital in Fiji and the surrounding countries. The population covered directly by CWMH is about 40% (300,000 people: the population of the Central and Eastern Divisions) of the total population (750,000) of Fiji. CWMH treats about 300,000 outpatients and has about 20,000 inpatients annually. However, about 8% of both categories are referral patients from surrounding countries. This means that every day 100 patients come to CWMH from outside the country of Fiji, receiving a considerable number of users. From this viewpoint, the population covered, including the surrounding countries, totals 1.75 million people. The group targeted by this Project are children, but in Fiji the number of children aged under 14 years and under occupies 35% (260,000) of the total population.

(1) Consolidation of paediatric medical functions

Currently, the paediatric medical functions of CWMH are dispersed throughout the entire hospital. Its management is in an extremely inefficient situation. Since upon completion of this Project, dispersed functions will be consolidated into a single location, paediatric medical activities will dramatically improve.

(2) Enhancement of clinical education

Furthermore, not only is CWMH positioned as the top referral hospital for the nation of Fiji and surrounding countries, it also functions as a clinical teaching hospital for Fiji School of Medicine and Fiji School of Nurse.

This Project will construct not only facilities for medical care activities, but also those for educational activities (seminar room, lecture room, etc.). This will make it possible to develop efficient educational activities.

(3) Improvement of capacity for accepting referral patients

Intensive care units are indispensable for treating seriously ill patients with infectious diseases of the respiratory system (pneumonia, etc.) and others, which are one of the primary causes of death among infants in Fiji.

Under this Project, the Paediatric and Neonatal Intensive Care Units (PICU, NICU) now dispersed in the existing premises are to be concentrated under a single roof. Along with this, provision of necessary equipment (supplementation, renewal, etc.) such as artificial

respirators, etc. are being planned for its operation. Thus, the capacity for accepting seriously ill referral patients will remarkably improve.

(4) Contribution to improving medical standards in the Southern Pacific Region

Through the implementation of this Project, the improvement of educational functions of those engaged in paediatric medical care and the enhancement of paediatric medical care service functions of the top referral hospital in the Southern Pacific Region can be materialized. It is therefore anticipated that this Project will make a contribution to the improvement of medical standards in the region.

With the aim of enriching FSM to be a core of medical educational institutions in the Southern Pacific region, the government of Fiji, under the cooperation of WHO, formulated in 1989 a redevelopment plan for CWMH, an educational hospital of FSM. "The Project for the Redevelopment of the Fiji School of Medicine and the Colonial War Memorial Hospital", implemented in 1991 and 1992 under grant aid provided by the Japanese Government, is in line with the said redevelopment plan.

The necessity of improvement of paediatric ward under this Project is indicated in the basic concept of Master Plan of CWMH now being formulated.

Furthermore, National Health Plan (1998-2002) is being implemented in Fiji in which "Provision of high-level medical care/nursing service" and "developments of highly qualified personnel" are stated. In this connection, the role played by CWMH is positioned extremely important.

Thus, this Project is considered consistent with projects with high priority in this country.

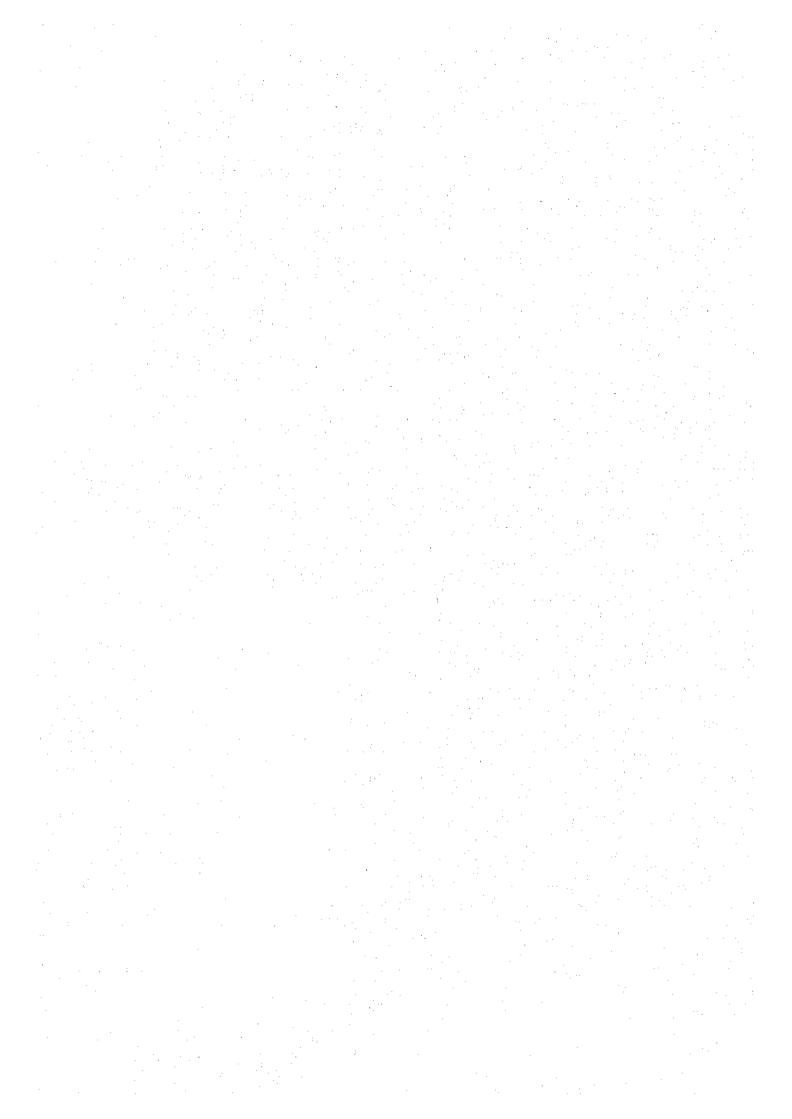
4-2 Recommendation

With regard to the grant aid by the Japanese government, the Basic Design Study Team has already explained to concerned person within the government of Fiji, but the construction that Fiji is responsible for, should be coordinated with the budgetary system of the nation of Fiji and carried out within a suitable period. In particular, it is essential that the demolishing, removal, and site clearing of existing facilities on the planned construction site be completed prior to commencement of construction work by the Japan side.

- (1) A maintenance inspection manual, operating manual and circuit diagrams will be delivered with medical equipment, and the maintenance training will be carried out by a trading firm. In order to implement maintenance effectively, it is recommended that those documents will be kept and used properly.
- (2) A record (logbook) will be kept for all equipment at CWMH including delivery date, frequency of use, and repair history. Plans for procuring spare parts and for renewing equipment will be formulated. Based on these plans, a mid to long range budget pan will be determined.
- (3) After completion of this Project, it is recommended that CWMH prepare annual reports regarding the status of operations (Diseases distribution of out-patients and in-patient, Average bed occupancy rate, Average admission, Mortality rate, Number of referral patients, etc.) for the previous year. By preparing these reports, the status of operations of the paediatric ward can be grasped separately, and also it will be able to be used as reference material for improving operations.



Appendices



1. Member List of the Survey Team

Basic Design Study Team (23 February 1998 ~ 18 March 1998)

| Role | Name | Organization | | | | | | |
|---|---------------------|--|--|--|--|--|--|--|
| Leader | Dr. Atsuo KAKEHI | National Institute of Health Service Management, Ministry of Health and Welfare | | | | | | |
| Technical Advisor | Dr. Osamu KUNII | International Medical Center of Japan, Ministry of Health and Welfare | | | | | | |
| Project Coordinator Mr. Norimasa FUJITA | | Grant Aid Project Study Department, Japan International Cooperation Agency | | | | | | |
| Project Manager | Mr. Masahiro IKAWA | Nihon Sekkei, Inc. | | | | | | |
| Building Planner | Mr. Takeshi ENDO | Nihon Sekkei, Inc. | | | | | | |
| Facilities Planner | Mr. Motohiro OKADA | Nihon Sekkei, Inc. | | | | | | |
| Equipment Planner | Mr. Koichi MURAO | Nihon Sekkei, Inc. | | | | | | |
| Cost Planner | Mr. Hideo Nakashima | Nihon Sekkei, Inc. | | | | | | |
| Facilities Planner | Mr. Eiji Kawaguchi | Nihon Sekkei, Inc. (Supporting Staff) | | | | | | |

Explanation Team for Draft Basic Design (28 May 1998 ~ 6 June 1998)

| Role | Name | Organization |
|---------------------|--------------------|---|
| Leader | Dr. Osamu KUNII | International Medical Center of Japan, Ministry of Health and Welfare |
| Project Coordinator | Mr. Seiji FUJITA | Accounting Section, Ministry of Foreign Affairs |
| Project Manager | Mr. Masahiro IKAWA | Nihon Sekkei, Inc. |
| Building Planner | Mr. Takeshi ENDO | Nihon Sekkei, Inc. |
| Equipment Planner | Mr. Koichi MURAO | Nihon Sekkei, Inc. |

2. Survey Schedule

Basic Design Study Team (23 February 1998 ~ 18 March 1998)

| No. | Date | Place | Activities |
|-----|------------|--|---|
| 1 | 2/23 (Mon) | • | Lev. Narita |
| 2 | 24 (Tue) | - | - Arr, Nadi |
| | | | Lev. Nadi - Arr. Suva |
| | | Suva | Courtesy Call to JICA Fiji Office |
| | | ļ | Courtesy Call to Embassy of Japan |
| | | | Courtesy Call to Permanent Secretary, MOFA |
| · | | | Courtesy Call to Resident Representative of WHO |
| | | | Tour to FSN |
| 3 | 25 (Wed) | Suva | Courtesy call and Meeting with MOH, CWMH and PWD |
| | . * | | Site Survey at CWMH |
| | | | Courtesy Call to FSM and other related facilities |
| 4 | 26 (Thu) | Suva | Discussion with MOH and CWMH |
| 5 | 27 (Fri) | Suva | Discussion with MOH and CWMH |
| 6 | 28 (Sat) | Suva | Internal Meeting within the Team |
| 7 | 3/01 (Sun) | Suva | Internal Meeting within the Team |
| 8 | 02 (Mon) | Suva | Discussion with MOH and CWMH |
| | | | Courtesy Call to MOF |
| | | | Courtesy Call to MNP |
| | | | Discussion with MOH, CWMH and PWD |
| 9 | 03 (Tue) | Suva | Discussion with MOH and CWMH |
| 10 | 04 (Wed) | Suva | Wrap up Meeting with Signing of Minutes of Discussions with MOH |
| 1 | | | Report to JICA Fiji Office |
| | | | Report to Embassy of Japan |
| | | - | JICA Officials: Lev. Suva - Arr. Nadi |
| 11 | 05 (Thu) | • | JICA Officials : Lev. Nadi - Arr. Narita |
| | | Suva | Discussion with CWMH and PWD |
| 1 | | | Site Survey at CWMH |
| | | | Discussion with JICA |
| 12 | 06 (Fri) | Suva | Discussion with CWMH and PWD |
| | | | Site Survey at CWMH |
| 13 | 07 (Sat) | and the second of the second o | Cost Planner (Consultant): Lev. Narita - |
| | | Suva | Survey on Construction Industry |
| | | | Survey on Medical Equipment Industry |
| 14 | 08 (Sun) | | Cost Planner: - Arr. Suva |
| | | Suva | Team Meeting |
| 15 | 09 (Mon) | Suva | Tour to Construction Site |
| İ | | | Discussion with JICA |
| | <u> </u> | | Discussion with CWMH and PWD |
| 16 | 10 (Tue) | Suva | Discussion with CWMH and PWD |
| | | | Discussion with MOH |

| No. | Date | Place | Activities |
|-----|----------|--------|--|
| 17 | 11 (Wed) | Suva | Discussion with CWMH and PWD |
| | | | Discussion with NFA |
| 18 | 12 (Thu) | Suva | Courtesy Call to PWD/HQ |
| | | | Signing on Technical Memorandum with MOH, CWMH |
| | | | Report to JICA Fiji Office |
| | | | Report to Embassy of Japan |
| 19 | 13 (Fri) | - | Lev. Suva - Arr. Nadi |
| | , | Nadi | Tour to Lautoka Hospital |
| 20 | 14 (Sat) | Nadi | Team Meeting |
| 21 | 15 (Sun) | - | Lev. Nadi - Arr. Sydney |
| 22 | 16 (Mon) | Sydney | Courtesy Call to JICA Australia Office |
| | | | Survey on Construction Industry |
| | | | Survey on Medical Equipment Industry |
| 23 | 17 (Tue) | Sydney | Survey on Construction Industry |
| | | | Survey on Medical Equipment Industry |
| 24 | 18 (Wed) | | Lev. Sydney - Arr. Narita |

Explanation Team for Draft Basic Design (28 May 1998 ~ 6 June 1998)

| No. | Date | Place | Activities |
|-----|------------|-------|---|
| 1 | 5/28 (Thu) | • | Lev. Narita - |
| 2 | 29 (Fri) | | - Arr. Nadi |
| | | | Lev. Nadi - Arr. Suva |
| | | Suva | Courtesy Call to JICA Fiji Office |
| | ł | | Courtesy Call to Embassy of Japan |
| | | | Courtesy Call to MOH |
| | | · | Courtesy Call to Resident Representative of WHO |
| 3 | 30 (Sat) | Suva | Team Meeting |
| 4 | 31 (Sun) | Suva | Team Meeting |
| 5 | 6/1 (Mon) | Suva | Discussion with MOH and CWMH |
| 6 | 2 (Tue) | Suva | Courtesy Call to MNP |
| 7 | 3 (Wed) | Suva | Tour to Health Center |
| | | | Discussion with MOH, CWMH and PWD |
| 8 | 4 (Thu) | Suva | Courtesy Call to MOF |
| | | | Discussion with PWD (FEA) |
| | | | Discussion with MOH and CWMH |
| | | | Signing on Minutes of Discussions |
| 9 | 5 (Fri) | Suva | Report to JICA Fiji Office |
| | | | Report to Embassy of Japan |
| | | | Lev. Suva - Arr. Auckland |
| 10 | 6 (Wed) | • | Lev. Auckland - Arr. Narita |

3. List of Party Concerned in the Recipient Country

1) Ministry of Health

Hon. Leo Smith

Minister

Mr. Luke Rokovada

Permanent Secretary

Dr. Salimoni Tuqa

Director of Health Planning & Information

Dr. Nacanieli Goneyali

Director of Hospital Services

Ms. Rigieta Nadakuitawki

Director of Nursing Services

Dr. Asinate Boladuadua

Director of Primary & preventive Health Services

Mr. A. Tamanitoakula

Director of Finance & Administration

Dr. Miliana Savua

Principal Administration Officer

Ms. Michelle Levene

Health Planning Unit

2) CWMH

Dr. Mary Schramm

Medical Superintendent

Dr. Lisi Tikoduadua

Consultant Paediatrician

Dr. Jai C. Autar

Paediatrician

Dr. Shakuntla Pal

Superintendent Radiographer

Dr. Shanta Kant

Senior Physiotherapist

Dr. Asinate J. Lesianawai

Supervisor

Ms. Losalini Tavaga

Chief Hospital Administrator

Mr. Virendra D. Singh

Bio-Medical Engineer

3) Ministry of Finance

Mr. Solomone Kofobalavu

Deputy Secretary

Mr. Bob Kumar

Chief Assistant Secretary (Budget)

Mr. Faga Solomone

A/Principal Assistant Secretary (Budget)

Ms. Paula Uluinaleva

Senior Assistant Secretary (Budget)

Mr. Naidote Katonitabua

Assistant Secretary (Aid)

Mr. Aisake Taito

Acting Chief Assistant Secretary

4) Ministry of Foreign Affairs

Mr. Kesaia Tuisawau

Deputy Permanent Secretary

Ms. Leilun Khan

Chief Assistant Secretary

Ms. Cheryl Braun

Graduate Traince (Aid/Trade)

Ms. Taina Tagicakabau

A/DPS Political/Treatise

5) Ministry of National Planning

Mr. Robin H. Yarrow Permanent Secretary

Mr. Peceli Vocea Acting Principal Planning Officer

Acting Principal Planning Officer

Mr. Jiten Mengal Acting Principal Planning Officer

6) Public Works Department

Mr. Cama T. Tuiloma Director of Buildings & Architect

Mr. Neil Billings Principal Architect

Mr. Narendra Dutt Supervisor High Grade Hospital Services

Registrar

Mr. J. Magoon Electrical Engineer

7) Fiji School of Medicine

Dr. Apenisa Ratu

Dr. Jimi Samisoni Dean

Mr. Charles Katoanga Manager, Development Planning

8) Lautoka Hospital

Dr. Serupepeli Goneyali Medical Superintendent

Dr. Shiva Nando Paediatrician Senior Registrar

9) National Fire Authority

Mr. Suliasi Ratumaikoro District Fire Officer, Training

Mr. Tsireli Qase Deputy Chief Fire Officer

10) Fiji Electrical Authority

Mr. R. K. Mua Regional Manager

11) WHO

Dr. Raymond S. K. Ahn Representative

Dr. T.M. Biumaiwai Advisor

Mr. O' Leary Officer in Charge

Ms. L. Y. Chan Program & Administration Office

4. Cost Estimation Borne by the Recipient Country

| (1) | Project site ———————————————————————————————————— |
|-----|---|
| (2) | Landscape works |
| (3) | Lead-in and connection work |
| (4) | Furniture and utensits |

5. Other Relevant Data

UNCONFINED COMPRESSIVE STRENGTH TESTS

| BH No. | Depth (m) | Maximum Stress(MPa) |
|--------|-----------|---------------------|
| 1 | 4.42-4.52 | 1.6 |
| | 6.06-6.16 | 2.3 |
| | 7.08-7.18 | 2.0 |
| 2 | 3,66-3,76 | 1.9 |
| | 5.30-5.40 | 1.1 |
| | 6.40-6.50 | 1.0 |
| 3 | 3.06-3.16 | 1.5 |
| | 4.20-4.30 | 1.0 |
| | 7,00-7,10 | 4.7 |
| 4 | 2.24-2.34 | 3.6 |
| | 4.00-4.10 | 0.9 |
| | 7.50-7.60 | 1.5 |
| 5 | 2.00-2.10 | 4.3 |
| | 4.60-4.70 | 1.8 |
| | 5,90-6,00 | 3.1 |

Average Unconfined Compressive Strength in Mpa: 2.2

STANDARD PENETRATION TESTS

| BH No. | SP Test No. I | Depth (m) | SPT Blow Counts | N Value | Remarks |
|--------|---------------|-------------|-----------------|-------------|---|
| 1 | 1 | 1.00-1.45 | 3,1,2 | 3 | Fill |
| • | 2 | 2,00-2.45 | 1,2,3 | 5 |] Fill |
| | 3 | 2.90-3.35 | 5 . 4 . 7 | 11 | Fig |
| | 4 | 4.00-4.45 | 3 , 6 , 32 | 38 | Rock |
| 2 | 1 | 1,00-1,45 | 1,2,2 | 4 | Fill |
| _ | 2 | 2.00-2.45 | 10,10,21 | 31 | Rock |
| | 3 | 6,50 - 6,75 | 16 | | 30 Blow for 100mm only |
| 3 | 1 | 1.00-1.45 | 1,1,1 | 2 | Fill |
| | 2 | 2.00-2.30 | 21,40, | Too Hard | Rock Did not drive SPT. |
| 4 | 1 | 1.00-1.20 | 15 | Too Hard | Rock 20 blows for 50mm |
| 5 | 1 | 1.00-1.14 | | Too Hard | Rock 15 blows for 140mm penetration only hammar double bounce |
| | J | | <u> </u> | | Then Refusal |

Average SPT N - Value in Fill = 5

Average SPT N - Value in Rock => 40

| ECCATION AS SHOWN ON PLAN | | |
|---------------------------|-----------------------------------|--------------|
| SURFACE ELEVATION 55.4m | BORF HOLE NO. 1 | FIGURE |
| INCLINATION VERTICAL | | SHEET 1 OF 1 |
| DRILL TYPE GEMCO ROTARY | PROJECT C.W.M. CHILDRENS HOSPITAL | |

| 0 | RILL TYPE GEMCO ROTARY | C.W.M. CHILDRENS HOSPITAL | | | | | | | | |
|------------------|---|---------------------------|------------------|--|-------------------|----------------------|-------------|------|---------|-------------------------------|
| | | | GROUND | LEYEL: | | | | | 04 | TE:23-3-98 |
| C | DESCRIPTION | | REDUCED LEVEL | S S | DEPTH & THICKNESS | SAMPLE/TE | sts | | | FIELD RECORDS |
| | | | REDUC | רבמבאם | THC THC | 0EP1H | TYPE | | | SPT RECORD |
| Zudu | ROAU SURFALL Bituminious Seoi Somm II ROAD PAVEMENT: River Gravel upto 150mm dia fragments dark grey brown hard and com [FILL] SUVA MARL(SOAPSTONE) | | | | 0.15 | | n Barrel | | | 8 |
| سسلت | light brown, friable not well compacted. with few grovel fragments in SPT sample 1. Somm sample recovery. | | | | 1 | 1.0m 1.45m | sed SPT | 1 | | 3,2,1 N=3 |
| <u>}</u> | 3. revia emit Managa Actores | | : : : | • | , | 2.0m | 0/B | | | 8 |
| | 2 <u>[FILL] SUVA MARLISOAPSTONE]</u> light brown . with frighte fragments. | | | | | 2.5 <i>m</i> | SPT | 2 | | 1,2,3 N=5 |
| F | SPT2 50mm sample recovery. Some white coral fragments. | | | | 3 | 2.9m | 9/8 | | | 5,4,7 |
| 1 | tight brown friable to non-friable. | , | | | | 3.35m | | 3 | | 3.4.7 N=11 |
| - | with a piece of Ceramic pipe and plant root. 4 SPT4 400mm sample recovery | ٠ | | | £ 4 | 4. m | 0/8 | | | В |
| SuvA | SUVA MARE (SOAPSTONE INSITU) | | - | | | 4.45m | | ٤. | | 90% REC 3.6.32 N=38 |
| [| light brown friable and moist SUVA MARL (SOAPSTONE INSITU) light brown friable to hard. Change color to blue grey no structures, core broken by drill action | | <u> </u> | | - | 5.50 | Core Run | 1 | • | 90% CORE RECOVERY |
| 03 ما | change color to light brown. Hard. SUVA MARL (SOAPSTONE INSTU) Light brown with some black spots 0.3m fau weak area. Sandstone. SUVA MARL (SOAPSTONE INSTU) | lł | _ | | 4.2 | | Care Run | ·į | | 100% CORE RECOVERY |
| } } } - | light grey hard without any fault layers core broken by drill action. Horizontally bed SUVA MARL ISOAPSTONE INSITU) light grey; no joints; horizontally bedded | lded. | | | 7 | 7.0m | | | | |
| F100396 | core broken by drill action. friable to hard. 8 End of Hole. 8.5m. | | | | 8 | 8.50 | Care Run | 3 | | 100% CORE RECOVERY |
| No. | | | | ــــــــــــــــــــــــــــــــــــــ | | 0.50 | | | | |
| 90. F | 9 | | | | 9 | : | | | | |
| | 10 | | <u> </u> | | 10 | | | | | |
| | REMARKS Casing down to Sm No water level measured because of cave in when we pulled casing out. | 8 SP SV U0 0/ | ' - ! - | SHEA UNDIS | DARD R VAI | PENETRO: NE EO | KETE III | R TE | st : | LOGGED BY: A.DEO SCALE: |

| LOCATION As Shown on Plan | | | | | | _ | | | |
|--|--|------------------|---------------------------------|--------------|--------------------|-------------|-------------|--------|--|
| SURFACE ELEVATION SS.4m | J 80F | RE HOLE NO. 2 | | | | | | 1 | GURE |
| INCLINATION VERTICAL | | | | | · . | | | S٢ | EET 1 OF 1 |
| ORILL TYPE GEMCO ROTARY | PROJECT | | | ILORE | NS HOSPI | TAL | | | |
| | | GROUND | LEVEL- | | | | | 0.4 | ^{(TE:} 23-3-98 |
| DESCRIPTION | | KED | Q. | H & | SAMPLE/TO DEPTH | STS | | | FIELO RECORDS |
| | | REOUCED LEVEL | ונפנאס | DEPT THIC | DEPTH | SAN TYPE | 4₽CE No. | | SPT RECORD |
| D ROAD SURFACE 8/tuminious Seal 50mm | Phick | | ****** | 0 | | Ī | | | sample |
| ROAD PAVEMENT River Gravel upto 50mm dia hord fragments dork grey with some concrete tradments. [Fill SUVA MARL [SOAPSTONE] 1 light brown friable to hard. | / | | | | 1.0 m | 9/0 | | В | washed away only few fragments recovered |
| -1 light prown tracks to tidio. | | | | -1 | 1,45m | SPT | 1 | | 20% rec 1,2,2 N=4 |
| SUVA MARL (SOAPSTONE INSTITU) Jight brown frights to hard. | 1 24 /3 /60 | | 77 | | | 8/0 | | 8 | : |
| light brown friable to hard . Water Leve | | | | - ? | 2.0M | 0 | | - | 100% гес |
| Blue grey at bottom of SPT. | | | | | 2.45m | SPI | 2 | | 10,10,21 N=31 |
| SUVA MARL (SOAPSTONE INSITU) 3 blue grey friable to hard. No fault visible core braken due to drilt action. Morizontally | y Bedded. | _ | | -3 | | CORE RUN | 1 | | 75% rec due to SPI on |
| SUVA MARL (SOAPSTONE INSITU) | | | | | 3.5m | 8 | | | top |
| 8lue grey friable to hard. No joints visible, sample fractured white extruding from core | barcel. | - | | 4 | | E RUN | 2 | | 100% rec |
| | | | | 5 | 5.0 m | CORE | | | |
| Blue grey friable to hard, some joint visible Sample fractured while extruding. | e | | | | | RUN | | | |
| 6 SUVA MARL (SOAPSTONE INSITU) | | _ | | 6 | | CORE | 3 | | 100% rec |
| Blue grey friable to hard. | | | | | 6.Sn | | | | 15,30 blows |
| End of Hole. 6.75m | | <u> </u> i | | - | | SPT | 3 | | for |
| 1-1 1 1- | | _ | | +7 | | | | | 100mm only |
| 8 | | | | -8 | | | | | |
| | | | | 9 | | | | | |
| | | | | 10 | | | | | |
| REMARKS casing down to 2.0m | 8 | | BULK | SAMP | | |)l | cr | LOGGED BY: A.OEO |
| | SP SV U0 0/8 | | STANG SHEAR UNDIS OPEN | VAN TURBE | | it 161 | H 1E |) i | SCALE: |

| LOCATION As Shown on Plan | 0.00 | | 101.1 | - | | · · | : | | cunc |
|--|----------------------|------------------|---------------|---|-----------------|--------------|--|----------|---------------------------|
| SURFACE ELEVATION SS.4m | ROF | RE H | IUL | <u> </u> | IU. | 3 | | 1 | GURE EET 1 OF 1 |
| ORILL TYPE GEMCO ROTARY | PROJECT | (.) | 7.M. CH | ILORE | NS HOSPIT | AL | | 1 3 | 101 |
| Control of the total of the tot | | GROUND | | | | | | O.A | 16:23-3-98 |
| | | - " | | 8 | <u> </u> | - | | - : | FIELD RECORDS |
| DESCRIPTION | | REDUCED LEVEL | 2 | DEPTH & THICKNESS | SAMPLE/TE | STS | | | 1200 1440103 |
| | | REDUCI LEVEL | LEGEND | 196 197 197 197 197 197 197 197 197 197 197 | 0EP1H | SAN | 1PLE | | |
| 0 FILL MATERIAL on surface of concrete & gravel fr | agments | | 4, | - 0 | 0.15m | | | | |
| [FILL] SUVA MARL ISOAPSTONELIN clayey silt m | atrix | | | | | 60 | | | |
| tight to dark brown. Firm to stiff. Clay portion is highly plastic with soapstone for | ragments | | | | | 9/0 | | В | · |
| L up to 100mm dia | _ | _ | | 1 | - 1 .0 m | ! | | | |
| E ` | | | | | 1.45m | SPT | 1 | | 30% rec 1,1,1 |
| <u> </u> | | | | | 1,4,318 | | <u> </u> | | N=2 |
| | | | | | 1.9m | 9/8 | | 8 | 100% rec |
| SUVA MARL ISOAPSTONEI INSTU | Oid not drive SPI | _ | | - 2 | 2.3m | SPI | 2 | | 21,40 |
| tight brown friable to hard. | the tast | | |] | 2.50m | | | | SPT broken inside hole |
| Land to the second seco | 150am | | | | 1: | | | | so dry |
| SUVA MARL (SOAPSTONE) INSITU tight brown, friable and weak, with shear pl | 000 | <u> </u> - | |] } | | S. S. | | | plug to |
| at 45 deg; and rusty brown stain on fault | face. | | | = | | | ١. | | recover tube. |
| - - - | | | | = | * : | CORE | 1 | | |
| 4 SUVA MARE ISOAPSTONE) INSITU 26/3 | /98 W/L | L | | 14 | 4.0M | | | | |
| light brown with custy brown & black soots | 4.32m | | | Ξ | | | | | |
| light brown, with rusty brown & black spots on fault face:friable to weak and sheared @ 45 deg angle | - | | | = | | 3 | | | |
| <u> </u> | | ļ | | 5 | | ORE RUN | 2 | | 100% rec |
| , [- 5 | | Γ | | : ' | | ະ | | | |
| SALVA MADE ECOADICTORS INCITED | | İ | () |] | 5.5m | | | | |
| 304% TIAKE (SOME STOKE INSTO) | | | |] | | | | | |
| friable to weak.occassional 45 deg shear vi | sible. | ┝ | | -6 | | S S | | | 100% rec |
| Dark brown getting friable to hard fine grain | | | | - | | 1000 | 3 | | |
| bark grown germing triadic to make the grown | | | | - | | 2 | | | |
| 1 7 | | L | | 7 | 7.0m | _ | <u> </u> | <u> </u> | |
| SUVA MARL (SOAPSTONE) INSITU change to light grey blue. Friable to hard. | | | | | | 3 | į | | 100% rec |
| End of Hote. 7.5m | · | | <u>]</u> | - | | | | | |
| <u>, </u> | | L | | 18 | | | | | |
| £-8 £ | | | | T | ŀ | | | | |
| | | | | = | | | | | |
| 9 | - | | | | | | | | |
| - 9 | | | | + 9 | | | | | |
| F | | | | = | | | | | |
| F | | | : | | | | | | |
| | | L | | - 10 | <u></u> | <u>L_</u> | J | L _ | - |
| REMARKS First photo on kodack film | 8 5P | - T - | BULK STAN | SAMF Dard | PENETRON | 18 T F | R IS | ST | LOGGEO BY. A.DEO |
| | sv | - | SHEAR | R VAI | ¥€ | - • | | | SCALE |
| | UD 078 | | UNDIS OPEN | TURB BARF | | | | | |

| Ļ | LOCATION As Shown on Plan | | | | _ | | | | | _ |
|---------------|--|----------------------------------|---------------|---|------------------------------|---------------|--------------|-------------|-------------|---|
| L | SURFACE ELEVATION SS.Sm BOF | | RE HOLE NO. 4 | | | | 4 | | | |
| } | INCLINATION VERTICAL | S | | | | | | SH | IEET 1 OF 1 | |
| L | DRILL TYPE GEMOO ROTARY PROJECT C.W.M. CHILDRENS HOSPITAL | | | | | | | | | |
| | | | | GROUND LEVEL: | | | | | | ITE:23-3-98 |
| | DESCRIPTION | | JCEO IL | | DEPTH & THICKNESS | SAMPLE/TESTS | | | | FIELD RECORDS |
| | | | REDUCED | LEGEND | DEPT THIC | 0EPTH | SAI TYPE | iple No. | | SPT RECORO |
| E | O ROAD PAVEMENT : 50mm seal and River gravel | | | XXXX | - 0 | 0.2๓ | | | | |
| | SUVA MARLISOAPSTONE) INSTITU Light brown frieble to hard 26/3/ | 98 W/L | | | | 1.0ភា | à | | | 15,20 blows for 50mm |
| F | -1 Light brown Suva Mart. | 1, 1m | - | | +1 | | SPT | 1 | | penetration |
| t. | SUVA MARL(SOAPSTONE) INSITU light grey blue to light brown friable to hard. | | | | | | d | | | SPT broken in hole so dry plug retrieve |
| ļ | -2 Occassional tight brown layers. | | - | | - 2 | | | | | |
| مستانستاني | SUVA MARLISOAPSTONE) INSTIU tight grey to light brown layers in between, frioble to hard no joint visible core broken by drill action white extruding Change to light grey blue. | | | | 3 | 3.5m | CORE RUN | 1 | | 100% rec |
| : SUVA | -4 <u>SUVA MARLISOAPSTONEI INSITU</u> light grey blue. Friable to hard. | | | | 4 | | CORE RUN | | | start 25/3/98 50% of core recovered by Recore which got |
| LOCATION | SUVA MARL (SOAPSTONE) INSITU blue grey friable to hard. | | _ | | 5 | 5.0m | RUN | | | shattered. sample stide out from barrel so we re-drive |
| بليييماني | SUVA MARE (SOAPSTONE) INSITU Friable to hard. | | | | 6 | 6.65m | CORE R | 3 | | to recover only shallered sample. was recovered |
| مالمنسند | Core fracture vertically; otherwise uniform co -7 | fe. | | | 7 | | CORE RUN | 4 | | 100% rec |
| F100396 | -8 End of Hote, 8.15m | | | | -8 | | | | | |
| JOB No. : F10 | -9 | | | | 9 | | | | | |
| . [- | REMARKS SPT stuck in the hole;so dry plug to take SPT out. Casing down to 1.4m. | 8 to 2m Sp SV UO 0/P | • | BULK STAND SHEAR UNDIST DRY P | SAMP IARD VAN IURBE | PENETROM E | ETEI | R TES | ī | LOGGEO BY: A.DEO SCALE |

SINCLAIR KNIGHT MERZ

CONSULTING ENGINEERS

| | LOCATION As shown on Plan | : | | 1 | | | _ | | | |
|---------|---|-----------------|----------|-------------------------|---------------------------|--------------|-------------|--|------------|----------------------------|
| | SURFACE ELEVATION | BORE HOLE NO. 5 | | | | | | | FIGURE | |
| | NCLINATION VERTICAL | | | | | | | SH | EET 1 OF 1 | |
| Ĺ | LE TYPE GEMCO ROTARY PROJECT C.W.M. CHILORENS HOSPITAL | | | | | | | | · , · | |
| | | GROUND LEYEL: | | | : | OATE:23-3-98 | | | | |
| | ESCRIPTION | | 8_ | 9 | H & | SAMPLE/TESTS | | | | FIELD RECORDS |
| | out Albuma (free fixe) (fixe) and a suite | | REDUCED | LEGEND | DEPTH & THICKNESS | HT930 | SAN | 12(E No | | |
| Ē | O ROAD PAVEMENT River gravel and seal. | | | | 0 | | 9/0 | | | open barrel |
| E | SUVA MARL (SOAPSTONE) INSITU light brown Frieble to hard some rusty brown spots. | | | | | 0.Sm | 1 | | | used to core |
| E | . Tridate to hard some rossy brown spors. | | | | | 0.640 | <u> 591</u> | | = | 15 blows for 14 One |
| ţ | CINIA MADI (CAADCTANCI INCITII | | | | | 1.0m | 9,8 | | | penetration and Refusat |
| È | -1 SUVA MARE (SOAPSTONE) INSITU occasional 0.3m of light brown and blue grey layers. Friable to hard. Core shattered and broken | | Γ | | [] | | 7 | | | |
| } | light brown and blue grey layers. Frinkle to hard fore shottered and broken | | | | | | S. | | | ĺ |
| - | due to drill action . | | | | | | CORE | 1 | | 100% rec |
| } | -2 | | L | | 2 | | ت | 1 1 | | 1 |
| - | | | | | Π' | | | ! | | |
| ł | - SUVA MARL (SOAPSTONE) INSITU | | 1 | £::::: | Ė | | | | | |
| | Light brown in color. | | | | E | | | | | |
| ţ | · · · · · · · · · · · · · · · · · · · | • | L | | 13 | | | li | | |
| ļ | - 3 <u>SUVA MARL (SOAPSTONE) INSITU</u> Blue grey in color; friable to hard. | | | | | , | 200 | | | |
| Ì | | | | | [] | | CORE | 2 | | 100%rec |
| ţ | SUVA MARL (SOAPSTONE) INSITU | | | | } | | ខ | | | |
| - { | -4 Light brown in color. | | L | | 14 | 4.0៣ | <u> </u> | | | |
| ∢ | | | | | | | | | Ì | |
| SUVA | (- | | | | | | S S |] | i | 100% rec |
| } | | | | £ | El | | بي ا | | | 100 70 160 |
| z l | -S SUVA MARE ISOAPSTONEI INSITU | | <u> </u> | | 5 | · | CORE | 3 | | |
| OCATION | blue grey friable to hard. | | | | È | | | | | |
| Š | · - | | 1 | | H | 5.5m | - | <u> </u> | | |
| }} | | | | | E | | 5 | | | 100% rec |
| 1 | 6 | | - | | 1 | ()5- | CORE | 4 | | |
| - 1 | End of Hole, 6.25m | | | Killi | <u> </u> | 6.25a | 12 | 1 1 | | |
| | <u>. </u> | | İ | | 3 | | | | | |
| | : | | | | - | , | | | | |
| | - 7 | | - | | +7 | İ | | | | |
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| | <u>.</u> | | | | 3 | | | | | |
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| F100396 | <u> </u> | | - | | 8 | | | | | |
| FICO | | | | | - | | | | | : |
| | | | | | - | | | 1 | | |
| Š | | | | | 3 | ŀ | | | | |
| 108 No. | 9 | | - | | - 9 | | | | | |
| ~ | | | | | 3 | | | | | |
| • | - - | | 1 | | 3 | | | | | |
| | 10 | | | | 10 | | | | | |
| | | 8 | | BULK | SAM | | <u></u> | #! | <u>-</u> - | LOGGED BY |
| | REMARKS Solid point used for SPT test no sample and it is hard hammer | | PT - | STANDARD PENETROMETER T | | | | RIE | EST [| A.0E0 |
| | double bounce at 140mm. | | V - | | SHEAR VANE UNDISTURBED | | | | | SCALE |
| | | U(0./ | | מוטאט ספאט מפאט | | | | .: | | |
| | | U/ | ٠ . | טרנא | DAK | 166 | | | | |

