SECTION C – THE WORKS INFORMATION

CAMOGLI HEALTH FACILITY REDEVELOPMENT

Concept Design Proposal for a new Health Facility on Tristan da Cunha

WORKS INFORMATION

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Report Summary

The following information has been produced taking into account the Concept Design Proposal for a New Hospital on Tristan da Cunha produced by Evidence on Demand for DfID along with the information contained in the BAFO and previous submissions made to DfID by Galliford Try, relating to the requirements for a new Medical Facility on Tristan da Cunha. This document is now the Works Information for the design and construction of the new Camogli Health Facility based on a combination of the original DfID reports and the Galliford Try offer.

SECTION 1 – THE SITE INFORMATION

Introduction

Tristan da Cunha is a remote island in the South Atlantic that falls under UK Overseas Territories responsibility. The resident population of Tristan da Cunha is approximately 270 although visiting cruise ships can increase the temporary population to approximately 350,albeit for very short periods of no more than a few days. 33% of the resident population is over the age of 60 with 12% over 75.

The island has an existing small hospital that is no longer fit for purpose and thus a new health facility that is more suited to modern medical standards is intended to be built adjacent to the existing hospital location.

The health facility provides primary care with secondary care limited by the capacity and experience of the Resident Medical Officer and nursing staff combined with restrictions imposed by the facilities and equipment available at the facility.

Access to more complicated secondary and tertiary diagnosis and treatment is infrequent, provided by referral to appropriate hospitals usually in Cape Town or by visiting consultants and specialists which to date has been limited to dental and ophthalmic specialties.

In situations other than a remote island environment a patient population of circa 300 would not justify the scale of facilities and services already provided. However, the unique circumstances of Tristan da Cunha must be addressed, particularly the need to deliver primary and selected secondary healthcare for extended periods without the supporting secondary and tertiary level referral opportunities that exist in mainland locations. The potential for epidemics and disasters must also be recognized. Any improvement in the facilities may also require an appropriate upgrading in terms of human resources and experience of personnel.

Tristan da Cunha has limited design and technical construction capability, so it is planned that the new health facility is developed on a design and build basis to UK standards by an international contractor. However, there may be opportunities for the local Public Works Department (PWD) workforce to be involved in some of the construction activities. Any potential contractor should be prepared to contract local labour

wherever possible, subject to this labour being readily available and fit for work. PWD may also be contracted to carry out initial work such as excavation, foundations and preparation of utility services.

Over the past year or so a number of proposals have been considered and a great many documents produced to support options under consideration. These have been accompanied with list of requirements but no detailed specification of the standards required has been raised. Nor has the associated infrastructure (roads, paths, outbuildings and services) been considered in any detail.

The purpose of this exercise is to create a concept design for the building to give an indication of a possible solution to the requirements. This comprises a preliminary layout of the proposed health facility and surrounding area, and includes the access road, main entrance, footpaths, likely out-buildings, a parking area for the ambulance and other vehicles, relocation of services and utilities.

SECTION 2

Existing Hospital

The hospital is located on the outskirts of the Island's only settlement, Edinburgh of the Seven Seas. It can be seen in the centre of the photograph below.

Figure 1: Aerial view of Camogli Hospital.

The site of the hospital comprises approximately 2,000 m^2 (0.5 acres). It is generally rectangular and flat but with a gentle fall of approximately 1 metre in its width of 34 metres, which also provides the road access to the hospital. The location provides spectacular sea views and has no immediate adjacent development.

The hospital was built in 1971 to replace the original Station Hospital which dated back to 1942. It is of single storey construction, planned as an H block with one wing generally accommodating outpatient services and the other accommodating inpatient services. However, some internal planning has resulted in outpatient activity, particularly dental services, being inappropriately located in the inpatient wing. The limited laundry facilities are located in an outbuilding as is the ambulance garage that also provides some storage for decommissioned medical equipment and furniture. The Doctor's house is located immediately adjacent to the hospital.

Figure 2: South view of Hospital

Figure 3: West view of Hospital

The hospital contains a waiting area, casualty/emergency room, consulting rooms, theatre, x-ray department, dental rooms, 2 general wards and a labour ward. Five local nurses assist the resident doctor. Hospital equipment includes 2 portable x-ray machines & developers and an emergency trolley with ECG and defibrillator. The theatre is fairly well equipped with an anaesthetic machine and endoscope. A new ambulance up to advanced life support standards was provided in 2003.

The Hospital and Doctor's house were re-roofed and re-furbished following serious damage incurred during a hurricane in 2001.

SECTION 3

Particular issues affecting the project

3.1 Transportation and access to the island

The only means of transport to the island is by ship. The island has a ship arrive every five to six weeks from Cape Town, South Africa. The trip can take as little as 7 days and as much as 14. The harbour is too small to physically receive a ship, so offloading is done by barges which travel out to an anchored boat. Off-loading is weather and swell dependant but can be done inside a week. This of course depends on bulk, tonnage etc.

3.2 Climatic condition

The climate is generally mild with average temperatures ranging from 12°C in August to 21°C in February. Rainfall is frequent with the probability of rain on a day ranging from 55% to 84% and strong winds are likely when rain is expected. Wind speeds are generally highest between August and October. On 23 May 2001, the islands experienced an extra tropical cyclone that generated winds up to 193 kilometres per hour (120 mph). A number of structures were severely damaged and a large number of cattle were killed, prompting emergency aid provided by the British Government. Snow does not fall on the settlement (but does on the volcanic peak) and hailstones have been known to fall in the settlement during winter.

3.3 Materials standards, testing and availability

Most materials are available ex Cape Town, and comply with the South African Bureau of Standards or its UK equivalent. The island does have two shipping agents with whom arrangements can be made for loading.

3.4 Capabilities and availability of human resources on the island

The island runs its own Public Works Department, which includes plumbing, electrical, carpentry, painting, telecoms etc. All unskilled labour functions can be done by the islanders

3.5 Sources of equipment and machinery

The PWD has its own plant and equipment, such as cranes, excavators, forklifts, digger loaders, dumpers, mixers, concrete trucks, tractors and trailers, all as listed below:

Liebherr crane at harbour - working condition
Ace tractor crane - working order
Dieci concrete mixer 2m3 - working order
Dieci concrete mixer 1m3 - working order
Tractor and trailer combination x 3 - working order

Volvo Excavator - working order
JCB digger loaders x 2 - working order
JCB Beetle excavator with blade - working order
Aggregate screener - in working order
Aggregate crusher - small in working order
Bomag roller - working order
Whacker compactor - working order
Water pumps x 2 x 50mm - working order.
Concrete vibrator motor and needle - working order.
Mini excavator x 2 - working condition
Wedgelock scaffolds with steel planks 2.5m high x 40m long x 1.2m wide
Assorted drills / breakers / bits
Generator sets with welding capacity + lights x 2 - in reasonable condition

If available, the above equipment, and additional equipment from the Harbour Repairs Project, may be used to support the construction of the new health facility and associated works. This would involve one or more contracts with PWD. The condition and suitability of this equipment will be verified on a pre-construction site visit. Should this be considered likely the Contractor should include as part of his re-costing exercise to be submitted on or prior to the 22nd January 2016 a suitable amount in the form of a provisional sum.

3.6 Power supply

The island is energised by Volvo power plants running on imported diesel fuel – two generators in use and two as back up. Renewable energy is a subject presently being reviewed but the timing is as yet unknown, although wind generation and /or solar panels would be worthy of consideration. The hospital has its own standby generator for use in an emergency. This is to be replaced with a new generator. Costings are to be included for a replacement 125kva standby generator. The specification will be confirmed during the pre-construction site visit.

SECTION 4

Regulatory Compliance and Design Guidance

The proposal contained within this document has been prepared on the basis of compliance with the UK Building Regulations and associated British Standards, Health Building Notes and Health Technical Memoranda. Health Building Notes give “best practice” guidance on the design and planning of new healthcare buildings.

It is understood that Tristan da Cuhna falls outside of UK health and safety legislation and legal jurisdiction, although it is recommended that wherever practical UK best practice should be followed. If an overseas contractor is awarded the work then every effort should be made to achieve UK best practice. Where this cannot be met the contractor should provide a suitable equivalent alternative.

Figure 4: View of Hospital with Doctor’s house to the left and the site for the new Health Facility in the foreground