

CHAPTER 7 INVENTORY OF THE ELEMENTS AT RISK

7.1 INTRODUCTION

As part of the risk assessment process, a determination of the entities which can be damaged or destroyed needs to be documented. For this reason an inventory of the elements at risk was carried out. This involved the creation of a database of the important aspects of the built environment in the study area. The database was created as layers within the larger GIS database.

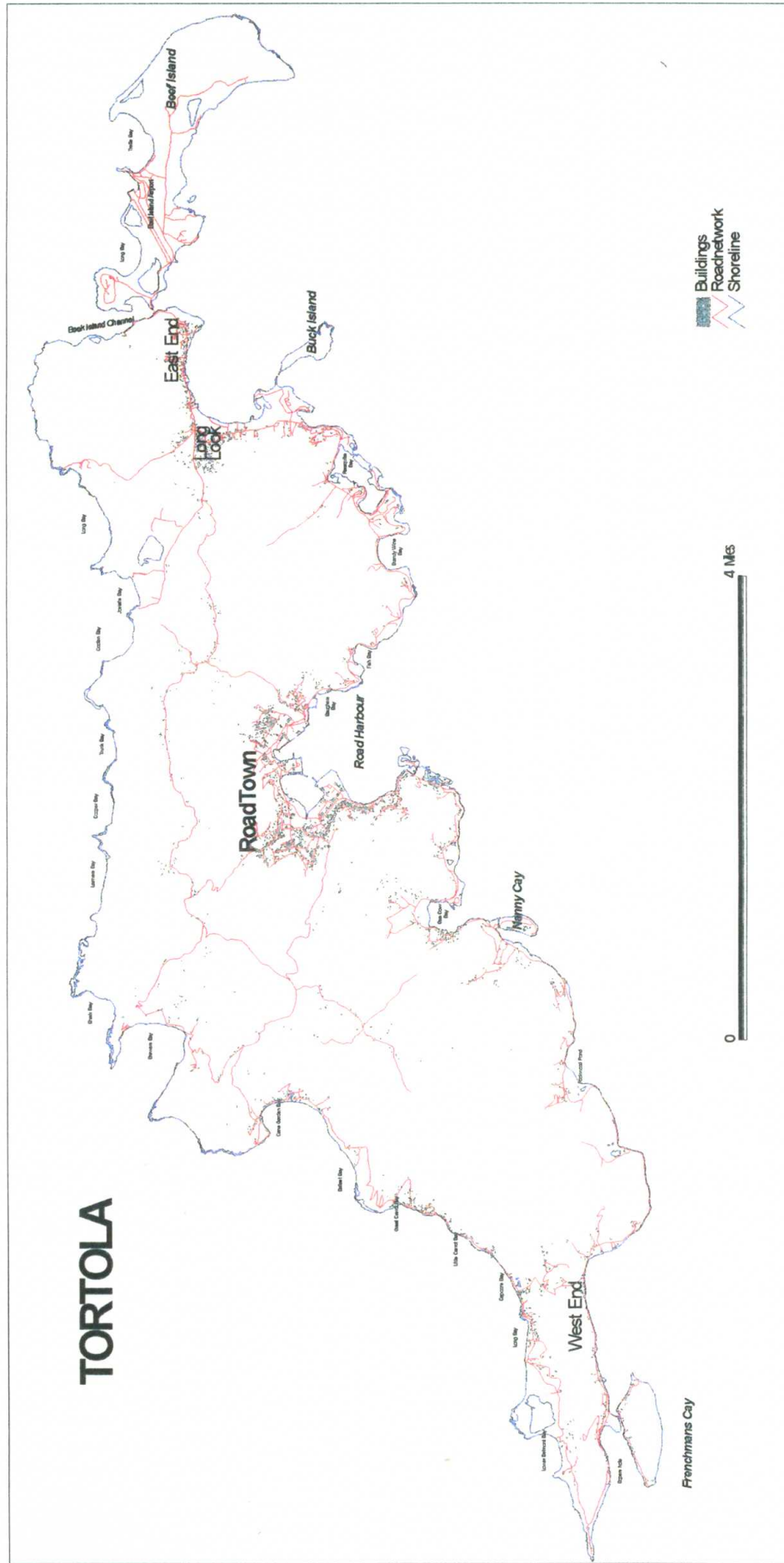
7.2 ELEMENTS AT RISK DATA SET

The data set includes an inventory of buildings in the four islands, utility networks, critical facilities, near shore biota and the boating sector. These are briefly described below.

7.2.1 BUILDINGS

The footprint of structures which have been mapped on the 1991, 1:2500 topographical sheets have been digitized by the Town Planning Department. This digitized dataset includes structures in Tortola, Virgin Gorda, and Jost Van Dyke. To this dataset was added the schematic structure locations found on the 1:25000 topographic sheet of Anegada. Maps 7.1. shows the distribution of buildings in Tortola.

Based on 1991 data there was a total of about 6,102 buildings in the four islands, Tortola, Virgin Gorda, Anegada and Jost Van Dyke. Of this figure Tortola accounted for about 5,136, Virgin Gorda 760, Anegada 100 and Jost Van Dyke 100. Road Town had about 1740 buildings in 1991, and since then 250 new structures have been built. This represents slightly less than a 14.5% increase. Most of the structures which were built are residential buildings located on the foothills around Road Town. If a more conservative figure of 10% is used to represent the number of structures built in the rest of the four islands, then the current stock of buildings in the four islands is probably in the order of 6790 in 1996.



MAP 7.1 INVENTORY DATASET OF TORTOLA

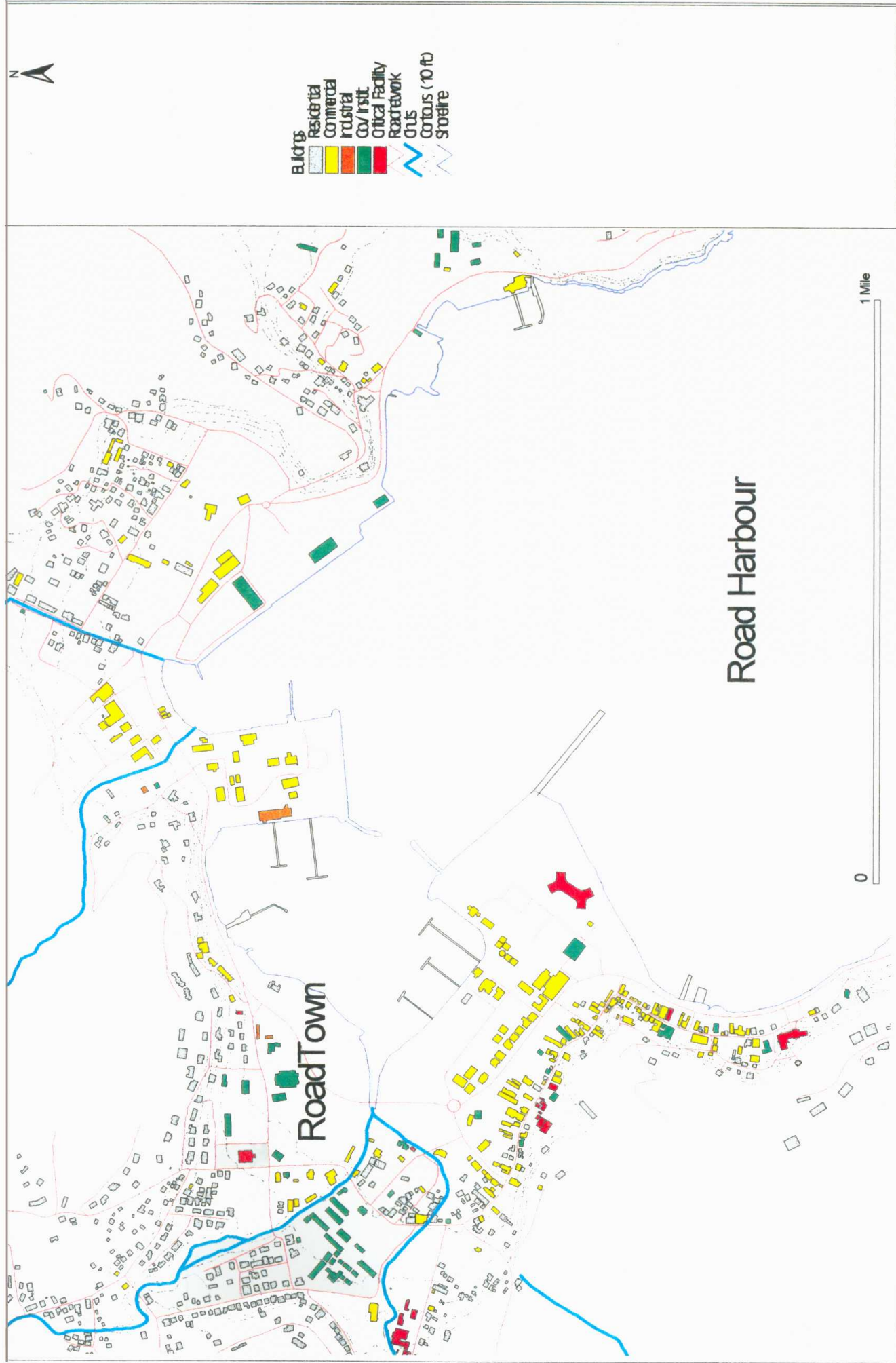
A detailed classification of the buildings in Road Town was carried out. The structures were placed into five categories based on their function. These included 1) Residential, 2) Commercial, 3) Industrial, 4) Government and Institutional (Gov./Instit.), and 5) Critical facilities. **Map 7.2** shows a detailed view of Road Town illustrating the classified buildings.

Residential buildings include individual houses and apartment buildings. Commercial buildings comprise all structures used for private enterprise. As a vital contributor to the BVI economy the tourism related structures ie. hotels and quest houses is an important subclass of the commercial buildings. Governmental and institutional buildings (Gov./Instit.) consist all governmental buildings, schools, churches and buildings used by non-profit organizations. Industrial buildings include all buildings used for manufacturing.

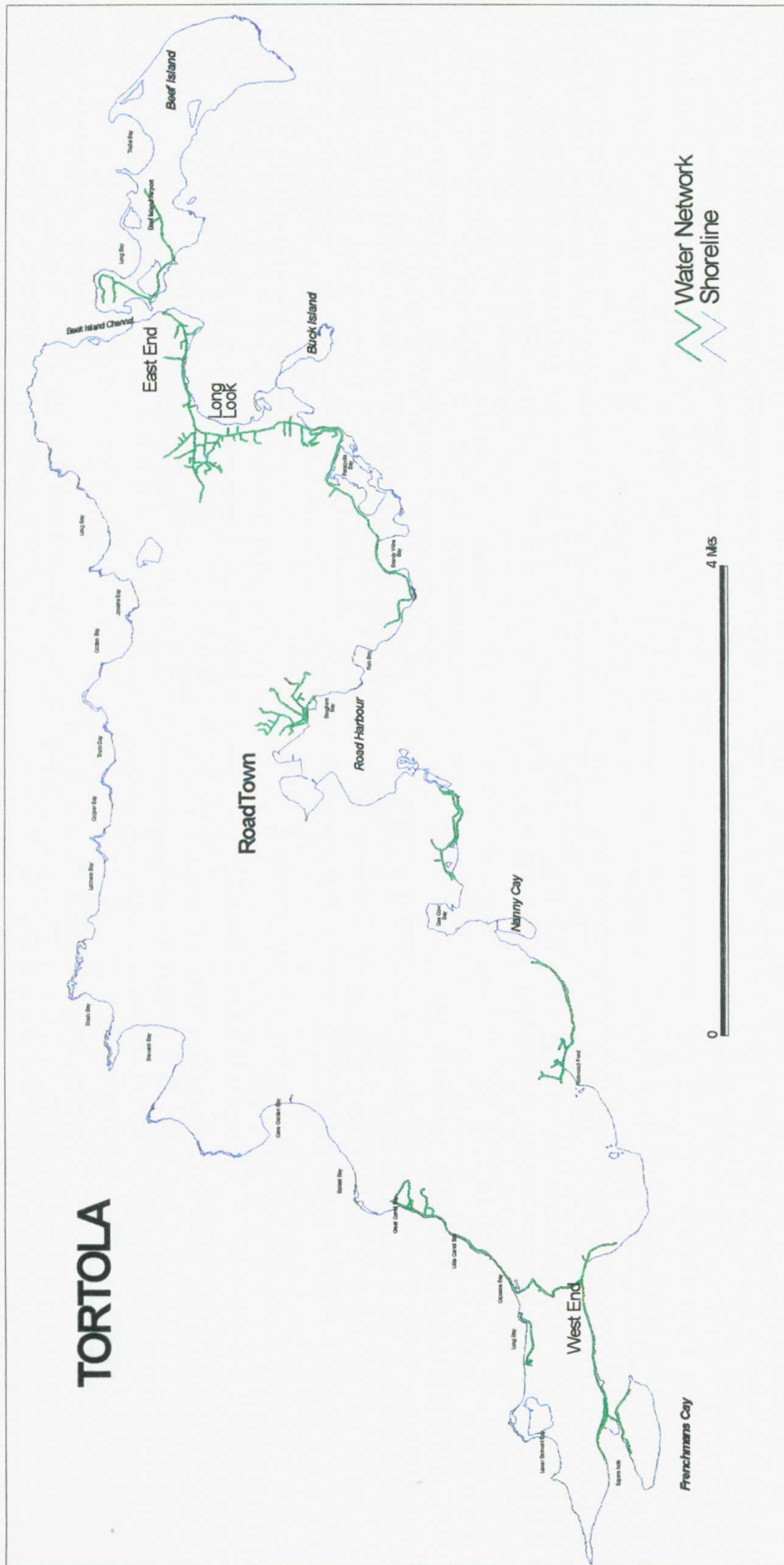
7.2.2 UTILITY NETWORKS

The digitized water, and electrical distribution networks which have been made available from the Town Planning Department were added to the database, **Map 7.3** and **7.4**. The database also contains the road network, and the location of jetties.

The BVI Electricity Corporation is the sole, government operated, power supply company. There are two main electricity generation facilities at Long Bush in Road Town and at Pockwood Pond, which produce 10 MW and 15.2 MW respectively. Virgin Gorda and Jost Van Dyke receive electricity from the Tortola grid via submarine cables, while Anegada has a small 18 Kw generator. In Road Town a large part of the distribution network is underground, in addition to large sections of high voltage lines which supplies electricity to the eastern end of Tortola. Throughout the rest of the islands electricity is carried by 13.2 conductors on standard 35 -45 ft. wooden utility poles, which are generally located along roadways. **Map 7.4.** shows the parts of the electrical distribution system which has been digitized by the Town Planning Department. This dataset is currently being updated.



MAP 7.2 Road Town Inventory Dataset



MAP 7.3 WATER NETWORK IN TORTOLA