



1 INTRODUCTION

In March 2000, WS Atkins were commissioned by Barrow-in-Furness Borough Council to investigate whether there was a need to provide a strategic framework for future coastal management of Walney Island near Barrow in Furness, Cumbria.

This report relates to preliminary assessment of the development of a strategic approach; including examination of the benefits that can be gained from adopting such a way forward and whether proceeding with a strategic approach is viable to the bodies who have the responsibility for shoreline management in the area.

Walney Island is the largest of a series of islands off the south west corner of the Cumbrian peninsula and was formed during the Quaternary period. The island entirely consists of unconsolidated sediments: boulder clays and sands that were deposited by glaciers or streams from the glaciers as the ice retreated. There is no exposed bedrock but the island is generally underlain by three Mercian mudstones - Hambleton, Singleton and Kirkham. As a result of this formation the island has always been vulnerable to erosion from external influences.

At present, the island is some sixteen kilometres in length and between 1500 and 200 metres in width. During the last millennium the width of the island has gradually decreased over its southern half, while the two extremities of the island have grown. Present understanding of processes indicates that erosion of sediments on the west coast is providing sediment feed to the north and south of the island.

The earliest settlements on the island are thought to date from about the 9th century AD. However, the oldest known inhabitants of which there are specific records would appear to be the Cistercian Monks from the 12th to the 16th century. The monks built the first defences to protect the island from the ravages of the sea and encouraged the agricultural development of the land.

The island was only sparsely populated up to the time of the Industrial Revolution, being made up of two primary settlements: North Scale and Biggar. However, with the introduction of a regular ferry service to the mainland in the latter part of the 19th century, followed by the construction of the Jubilee Bridge in the early years of the last century, the population increased from just a few hundred to 3,000 in 1902. Vickerstown was established to house workers from the ship building industry on the mainland and the settlement has seen a gradual increase in population to over 10,000 by the 1990's.

Notwithstanding the above there is little industrial activity on the island, although salt extraction and sand and gravel mining have both taken place at the south end. In more recent times, what had been agricultural land has been used for the disposal of household waste in landfill tips. At the northern end, residential housing and an airfield, constructed originally for the Ministry of Defence in World War Two but now owned and operated by BAe Systems who use it for company aircraft, are the only forms of development.

Photographs of the island are provided in Appendix A. An overview plan of the island, which identifies key locations is reproduced as Figure 1.1.



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Figure 1.1 – General Location Plan