Creating a sandy beach: a new experience for Malta

by John Ebejer

It is finally a reality. The transformation of St George’s Bay in St Julian’s following sand replenishment is there for all to see.

The process which has resulted in the makeover of this bay appears to be simple enough. Bags of sand were brought to the site and slit open and 7,000 tons of sand were spread across the bay to form an area of 4,000 square metres of sandy beach. However, what appears to be a fairly straightforward process belies many months, even years, of preparation.

The main consideration in any sand replenishment project is that, once placed, the sand will remain in place. Wave action during storms is one factor which would result in sand loss. To avoid this, wave modelling of the beach was carried out to assess the likely impact of storm action on the sand.

Two different sizes of sand grains were tested in the model. Sand grain size typical of Maltese beaches (namely 0.17 mm) was tested. The sand would settle at a shallow angle and extend upwards to such a degree that the ‘Posidonia meadows’ found on the seabed would be smothered. Posidonia is part of a natural system which keeps the sand in place. Its loss could therefore undermine the stability of the sand.

On the other hand, 2 mm size sand was found to settle with a steeper slope. Sand losses would be small and in any case, easily recoverable. The model also indicated that weight of the sand had to be greater than that of local limestone.

The wave modelling was part of a more comprehensive Environmental Impact Assessment (EIA), which was commissioned to investigate the effect of the placement of a large volume of sand in the bay.

Quarries which could potentially provide the required sand were identified and after a selective call for quotes, a Jordanian company was selected. During sand production, all the possible precautions were taken to ensure that the sand is produced in accordance with specifications.

Storm water is another factor which has to be dealt with to ensure that the sand remains in place. Existing water channels must be diverted to the side of the bay so that the outflow of water will be beyond the sand. The sizing of the new culverts is such that they will cope with rainfall from most storms.

Road surface grills are to be provided at strategic locations to collect surface water and direct it to water channels.

Phasing of works

Preparatory work for the project started in earnest last October when Government allocated the necessary funds. Because of the extent of the work, it was decided to sub-divide works into two phases. Phase 1 was completed before the end of May and included the production, transport and placing of sand, as well as the construction of a storm water culvert on the south side of the bay.

During Phase 2, the storm water system on the north side of the bay will be constructed, while the sewerage pump room will be significantly upgraded to minimise the possibility of any overflow.

Moreover, a promenade will be created to connect the pavement coming from the Westin Dragonara Resort to that leading to the Corinthia Marina Hotel. Improving the facilities for pedestrians in the immediate area of St George’s Bay will be of particular benefit to those tourists who are staying in hotels in the area and should thus enhance the tourism product. The creation of the promenade will also benefit users of the leisure facilities at Bay Street and Eden Century who prefer to park their car near the Institute of Tourism Studies further up the road. Work on the promenade will begin in October.

Since this is a pilot project, the assessment of the environmental impact of the placing of ‘new’ sand will provide the authorities with important lessons for possible future replenishment projects. The impact of sand placing will be determined by comparing completed environmental surveys, with further surveys to be carried out in the coming months.

Beach management

The Malta Tourism Authority is well aware that now that the sand is in place, there needs to be effective beach management. The overriding objective is to keep the beach clean and generally ensure that the beach can be enjoyed by the public.

This summer, the beach management of St George’s Bay is being handled by the MTA’s Planning and Development Directorate. In 2003, the directorate was responsible for the beach management of Golden Bay and the lessons learnt from that experience are certain to prove useful.

The beach management model which has been adopted at St George’s Bay is one that strives to maximise public safety and comfort. The MTA has selected a team of experienced people to manage the beach for the summer months on a daily basis for the convenience of the public. The daytime team consists of a beach manager, beach cleaning attendants, life-guards and emergency medical resources. These are present at the beach from 10 a.m. till 6 p.m., seven days a week. During the night, the beach is also under surveillance every day. Night-time illumination has been provided to facilitate beach security.

Bags are provided for the separation of plastic, glass, and metal, as well as for mixed waste. This is an implicit form of encouragement for the public to also get used to waste separation practices for their domestic waste.

Members of the Department of Tourism beach cleaning crew will ensure that the bins are emptied regularly during peak time. The beach cleaning team also ensures that the bay is kept clean at all times, namely by collecting any waste washed up on shore and by picking up any litter on the bay itself and the surrounding areas. To maximise beach cleanliness, sand sifting and raking is also carried out overnight twice weekly.

The newly created sandy beach at St George’s Bay

The MTA has issued a beach code of conduct in its attempt to ensure that the beach remains a safe, clean and relaxing place for all to enjoy. No vehicles, barbecues, campfires, dogs, amplified music, overnight sleeping and pitching of tents (after sunset), will be permitted on the bay.

Moreover, no boats, paddleboats or canoes will be allowed within the designated swimming zone. The beach management team, together with night security officials, has taken on the responsibility to ensure that this code is respected.

The water quality of the beach is also being continually monitored, while toilets and showers have been provided. Services being offered to beach users will be consistently improved upon so as to reach Blue Flag level in two or three years’ time.

The MTA has appealed to all beach-goers to use the beach in a safe and responsible manner and to help it ensure that the code of conduct is adhered to. These should use the litter bins provided and avoid doing anything which may cause nuisance to others. The public has been asked to bring to the attention of the beach management team or the MTA, any breach of this code of conduct or any shortcomings in the bay or its immediate vicinity.

The beach management team also offers smokers at St George’s Bay reusable receptacles for disposing of cigarette butts. The MTA aims to create awareness on the damage that cigarette butt litter inflicts on Malta’s natural habitat and overall cleanliness of public spaces. Toxins from this type of litter are emitted within one hour of their disposal although it takes up to 12 years for a cigarette butt to decompose. Cigarette butts also cause death to any fish, turtles and sea birds that attempt to feed on this litter.

In the coming months, the Malta Tourism Authority will be issuing a call for tender for the leasing of a catering outlet, a kiosk and a gazebo for the rental of deckchairs and for open showers. The catering establishment is to be sited on one side of the bay whereas the kiosk will be placed on the sand. Strict conditions will be imposed on the operation of the beach facilities.

An agreement is in place whereby the MTA will be the nominated representative of the Land Department, duly authorised to ensure that the terms and conditions of the lease agreement are respected. Apart from lease payments, the beach operator will be required to pay an annual fee to MTA to cover beach management costs. It is envisaged that these new structures and arrangements will become operative next summer.