FOLKESTONE HARBOUR
FOLKESTONE, UK

BuroHappold Engineering is playing a leading role in the regeneration of Folkestone Harbour. Sir Roger De Haan purchased the harbour in 2004. His vision was to develop the area into a high-quality residential and commercial development that would serve as both a legacy and a catalyst for further regeneration of the town where he was born.

This ambitious project is now coming to fruition. BuroHappold has provided almost the full spectrum of their technical services for this exciting development, ranging from masterplanning to structural design to economics to flood defence. Our team has been the only constant presence throughout the enterprise - a technically excellent, provoking, and collaborative partner, enabling the Folkestone Harbour vision to come to life.

The viability of the project has always been in the balance because of concerns about flood risk and the consequently high cost of building sea defences needed to mitigate this threat.

Under extreme storm conditions, the site was at risk from sea flooding; a risk that will only increase with expected rises in sea levels. The flood protection needed to work with the development needed to minimize capital costs, whilst also increasing the economic and social value of the development. It was clear that a successful flood defence strategy was the key to unlocking this exposed site.

The harbour estate included a derelict railway viaduct, station and breakwater extending 500m into the deep waters of the English Channel. This had a poignant role in the First World War as it was where many soldiers departed from. All of these structures were derelict, unsafe and closed to public access. This provided both a risk and opportunity to the project; a legacy of under-investment required significant investment but offered the opportunity of place-making – creating a vibrant historic commercial quarter from which the rest of the development would springboard.

BuroHappold has been pivotal in solving the harbour’s challenges through two initiatives. The first was the promotion of an innovative flood defence strategy, accepted by the Environment Agency, that adopted cost-effective solutions harnessing the site’s natural resources and

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Folkestone Harbour (GP) Limited

ARCHITECTS
Terry Farrell and Partners and ACME

DURATION
2009 - ongoing

SERVICES PROVIDED BY BuroHappold
Coastal and maritime engineering, infrastructure planning and design, ground engineering, structural assessment and design, environmental assessment, transport planning, economic appraisal, construction contract management

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working with natural beach processes. By excavating the reservoir of natural beach shingle that lay under the development site, the shingle beach was increased in height and width, providing a reinforced sea defence. This shingle will be proactively maintained over the lifetime of the development to sustain the sea protection and amenity value alike. This avoids the need for ‘hard’ sea defences such as concrete seawalls. The residents will have open and immediate beach access, and yet be safe from storm waves and the effects of sea level rise.

The hole left by the shingle excavation from the development site was filled with sand dredged from the harbour. This has enabled a long-held desire of the fishing and leisure boat communities for a deeper outer harbour, increasing tidal access time. The project only recycled existing site-won sand, shingle, and hardstanding, eliminating the negative environmental and economic impacts of importing or exporting materials. Our experts designed, procured, and supervised the ensuing earthworks, delivering a near 50% reduction from the original cost plan.

The second initiative was our Economics team successfully submitting a business case to the Local Enterprise Partnership. This secured public part-funding for both the flood defence works, and works to restore the railway station and viaduct. The latter creating a 800m long open public space with thriving food and beverage outlets, which hosts popular public events. Work we designed, procured, and supervised. The renovation of structures often more than a hundred years old, exposed to the aggressive saltwater climate of the sea, presented an additional challenge which was effectively overcome by our team.

These two projects create the physical and social foundation from which the wider residential and commercial development will now be built. A full spectrum of building engineering technical services is now being delivered to enable the commencement of the first phase of residential development. The project is proudly ‘non-standard’, with the aim of providing a suitable legacy for the town, client, and spectacular site. The development will challenge preconceptions about seaside property development, with BuroHappold at the forefront of the technical design.

This is a diverse and complex project that showcases BuroHappold’s multifaceted skills, at both building scale and beyond. The work we carried out on Folkestone Harbour celebrates the town’s poignant history, opening it up to both residents and visitors for years to come. The area is now the hub that the wider residential and commercial development will revolve around, spurring the regeneration of the rest of the town.

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