

Poole Bridge to Hunger Hill Flood Defence Scheme Consultation

Information Document

BCP Council, in collaboration with the Environment Agency, landowners, developers and others is working to provide new flood defences from Poole Bridge to Hunger Hill. The infrastructure will reduce the significant tidal flood risk to residents and properties in Poole town centre, the Old Town and surrounding areas over the next 100 years.

The proposed scheme will span approximately 1.5 km along the eastern side of Holes Bay. When constructed, it will work in conjunction with other nearby flood defences including the Creekmoor and Sterte drainage channels, as well as the raised quayside wall along Poole Quay.

We are asking for your views on any potential impacts the proposed scheme could have on you/the area.

Please read this document before giving us your views. The deadline for responses is midnight on **30 September 2024**.

1. Why are we consulting?

We understand that construction activities may cause some disruption to people, businesses and organisations in the local community during the works. By giving us your views, you can help us plan how we can minimise these impacts on you and the area.

2. What is flood risk?

Flood risk refers to the likelihood and potential impact of flooding in a given area in any given year. Statistical probability calculations using the frequency and intensity of past storm events are made and these are expressed in terms of High, Medium or Low risk.

The proposed flood defence scheme is in an area of High risk which indicates a chance of annual flooding. A flood defence scheme in this area is crucial to reduce current day tidal flood risk as well as addressing future sea level rise predictions, in line with national guidance.

3. What are flood defences?

Flood defences are systems put in place to reduce, or ideally prevent, damage by flood water. They are used to counteract different hazards including coastal storm surge¹.

4. Why are flood defences needed?

The area from Poole Bridge to Hunger Hill is the last remaining undefended waterfront in the town centre. There is a present High risk of tidal flooding which increases significantly over the next century due to climate change and sea level rise.

Today, there is flood potential on a normal high spring tide with only a small surge (e.g. 0.2m) and we have seen this flooding take place several times over the years, as shown below.



A flood event at West Quay Road by Poole Bridge, 2008.

Recent developments have only provided raised defence lines along short lengths of the Back Water Channel. However, this still leaves the whole area vulnerable to tidal flooding which is expected to increase in frequency and severity with climate change. Extensive efforts are needed to raise up the remaining land levels and close the gaps in the defence line to ensure that the local community is effectively safeguarded against flood risk. New flood defences need to be built to a crest level height of 3.6m Above Ordnance Datum² (AOD) to adequately reduce flood risk over the next 100 years.

¹ Storm surge is the rise in seawater level caused solely by a storm.

² Above Ordnance Datum (AOD) is a fixed reference level which has replaced 'above sea level' as the standard reference from which vertical heights on maps are measured.

5. Background

The [Poole Bay, Poole Harbour and Wareham, Flood & Coastal Erosion Risk Management \(FCERM\) Strategy](#), adopted in 2014, identified that within the whole central Poole area there are currently 573 properties at risk of flooding. This is predicted to rise to over 2,000 properties by 2110.

The Environment Agency strongly support the delivery of a permanent flood defence scheme along Back Water Channel and has allocated grant funding for the associated costs. By working together, we intend to provide a coherent flood defence from Poole Bridge to Hunger Hill.

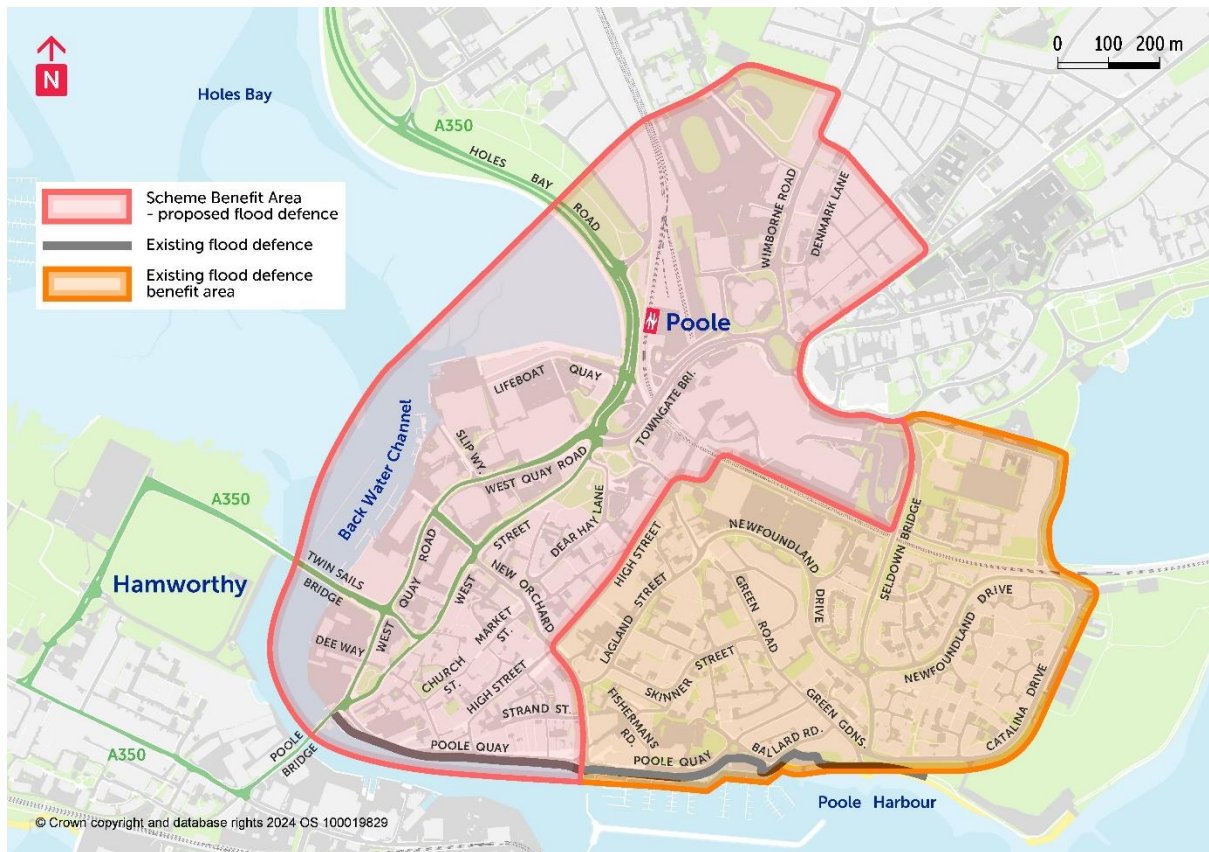
The land adjacent to Back Water Channel between Poole Bridge to Hunger Hill has many private owners and leaseholders. The current quay walls simply retain the earth and are not considered to be flood defence infrastructure. Many do not have a crest level higher than the land behind and some structures require urgent attention.



Example of the very low level and poor condition of the current quay walls.

6 What is the cost of doing nothing?

Without the new defence scheme, the potential cost of tidal flooding damages to town centre infrastructure and properties, over the next 100 years could exceed £161 million (highlighted in red below).



7 What are the plans for the new flood defence scheme?

In recognition that regeneration was not forthcoming to enable flood risk to be managed, we tabled the option of a council-led scheme and it gained business case approval by BCP Cabinet in 2020.

In January 2021, the Environment Agency confirmed £12.4 million of funding to build the new 1.5km flood defence infrastructure. This is fundamental to the area's safety and development, as outlined in BCP Council's [Local Plan](#) and [FCERM Strategy](#).

We have been working with landowners, developers, the Environment Agency, Poole Harbour Commissioners and other relevant organisations to help refine the most efficient and effective flood management design whilst acknowledging known site limitations.

7.1 An adaptive approach

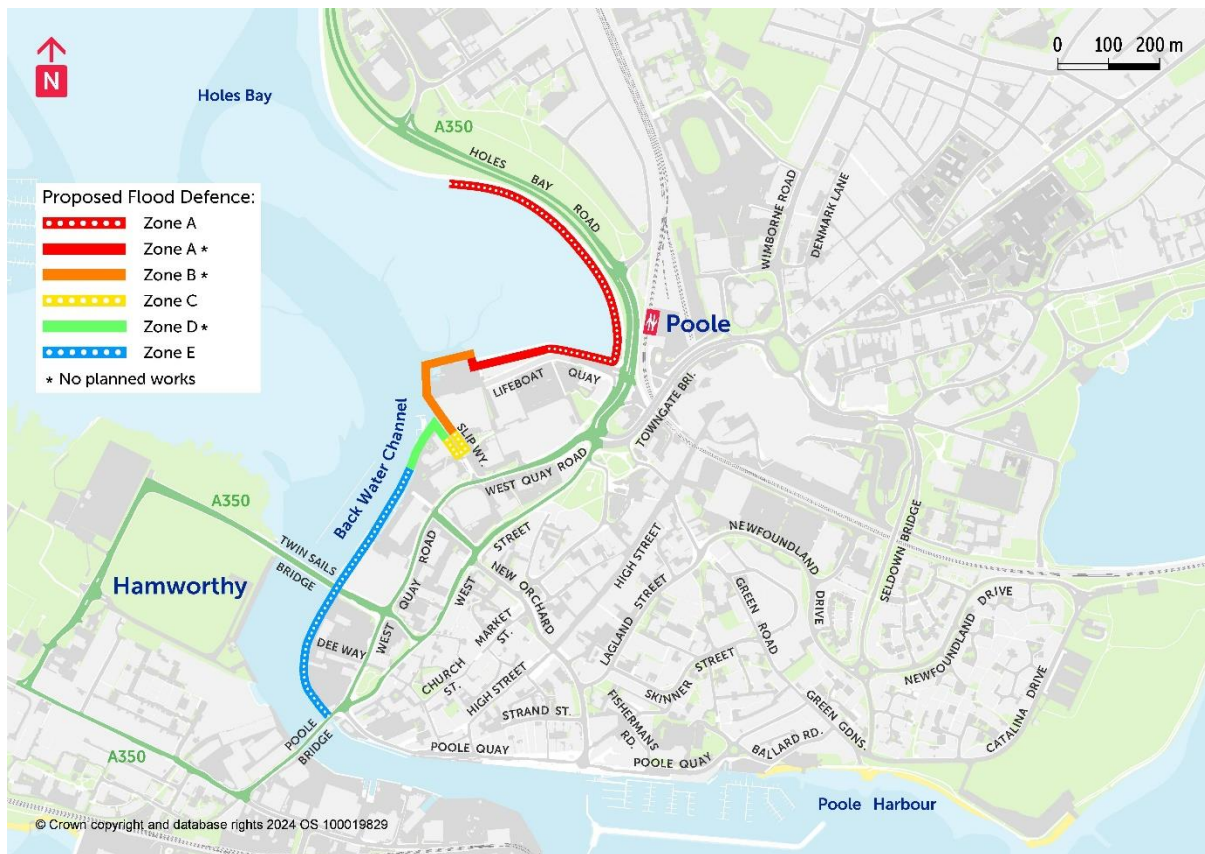
BCP Council is working with design and environmental consultant WSP and local contractor Knights Brown to design a flood defence scheme that can be adapted in the future when it will be clear how accurate sea level rise predictions are.

This allows us to make best use of the current available funding and still provide the desired standard of protection over the life of the scheme. In the short term, it means we can reduce the visual impact of defences and in the long term the height of defences can be increased gradually to keep pace with climate change.

After construction, BCP Council plans to take ownership and maintenance responsibility for the new flood defence infrastructure constructed using government funding. This is an important aspect of ensuring it is managed and adapted appropriately in the future.

7.2 Scheme area zones

The proposed scheme area will be separated into five zones with interventions planned for 2071 and 2105. The five zones are highlighted in the map and outlined below:



- Zone A –Holes Bay Road (A350) to Lifeboat Quay**
 Defences will be raised now to 2.65m AOD³ now, then raised to 3.6m AOD in 2071. Where there are existing flood defences in Zone A, no work is needed at this time (indicated by 'Zone A*' above).

³ Above Ordnance Datum (AOD) is a fixed reference level which has replaced 'above sea level' as the standard reference from which vertical heights on maps are measured.

- **Zone B – RNLI All Weather Lifeboat Station**
Already protected for the next 85 years. No work is needed at this time (indicated by ‘Zone B*’ above).
- **Zone C – Slip Way**
To make best use of existing assets, ground levels will be raised to 2.49m AOD and then raise again to 3.6m AOD in 2071.
- **Zone D – RNLI College**
Already protected for the next 50 years. No work is needed at this time (indicated by ‘Zone D*’ above).
- **Zone E – RNLI car park to Poole Bridge**
It is more cost effective to replace the current quay walls, raising the height to 3.6m AOD.

8 What improvements will the flood defence scheme make to the environment in Poole Harbour?

The proposed flood defences are next to Poole Harbour which has a range of protected special designations including: Ramsar – wetland sites of international importance, Site of Special Scientific Interest (SSSI) and Special Protection Area (SPA). To carry out any work in the Harbour, a range of environmental assessments and special approvals are required from Natural England, Marine Management Organisation and planning permission from BCP Council.

8.1 Biodiversity Net Gain (BNG)

The creation of BNG in England is a new law⁴, introduced in February 2024. It aims to ensure that all development projects requiring planning permission have a positive impact on the environment and wildlife habitats, by creating new or improving existing green networks⁵. As part of our environmental commitment, we will be implementing a range of environmental enhancements. This will offset the impact of the new infrastructure and achieve the mandatory 10% net gain for biodiversity.

8.2 The Moors at Arne

In 2014, the [Poole Bay, Poole Harbour and Wareham, Flood & Coastal Erosion Risk Management Strategy](#) identified the need to compensate for climate change impacts

⁴ [Town & Country Planning Act 1990 and Environment Act 2021](#).

⁵ Green networks help to create healthy, attractive places in which to live, work and do business, and can benefit the environment.

on intertidal⁶ habitats caused by future flood defences around Poole Harbour. Up to 80 hectares of habitat including intertidal saltmarsh and mudflats will be created at Arne. Saltmarshes provide essential habitats (and feeding grounds) for many species of animals and plants and help protect shorelines from coastal erosion.

8.3 Planned environmental improvements

We aim to bring about the following improvements to the environment through the proposed flood defence scheme:

- **Wintering & breeding birds** – Specific areas within the flood defence scheme will be managed to enhance conditions for birds, we will also use tailored construction phasing, providing a safe and nurturing habitat.
- **Fish breeding seasons** – Sensitive construction methods are used to mitigate impacts on fish and support breeding cycles of local fish species, ensuring their populations remain robust.
- **Seahorses & sea sponges** – To maintain breeding grounds for seahorses (crucial for the ecological diversity of marine environments) we will use a phased construction approach to minimise disruption to their natural breeding cycles. We will also introduce enhancement measures on the quay wall.
- **Marine habitat enhancement installations** – Ropes and recycled wooden timbers will be strategically placed to match the natural marine environment, providing additional habitats for marine life.
- **Tree management** – At Lifeboat Quay we will ensure that replacement trees are appropriate for coastal conditions and beneficial to native species.

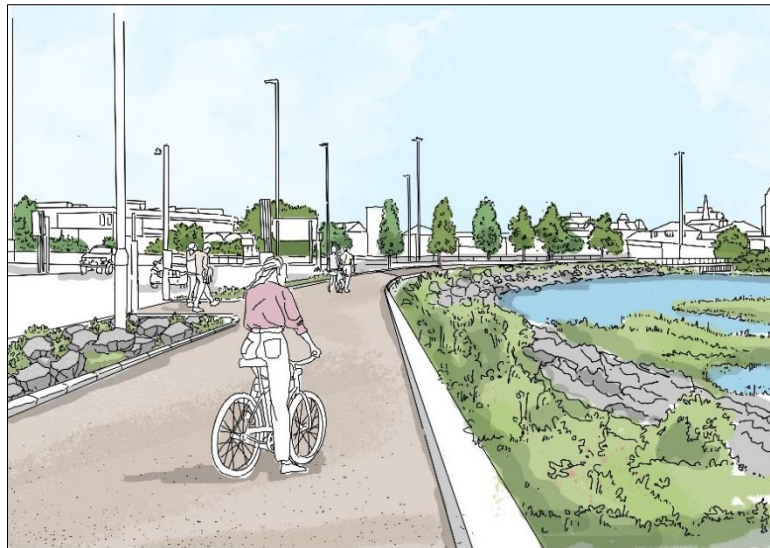
9. What would the proposed flood defence scheme look like after construction?

9.1 Zone A: Holes Bay Road (A350) to Lifeboat Quay

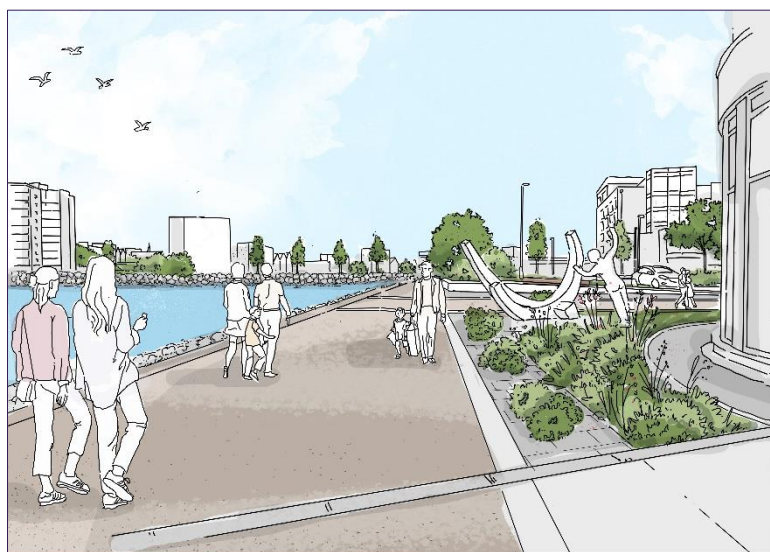
To reduce the risk of tidal flooding in Poole Town Centre, the proposed flood defence scheme will blend in with high ground at both ends of Zone A, near Sterte Avenue West up to The Aqua Apartments. Generally, the path will be raised and widened, and the rock revetment will be upgraded. At certain pinch points where the path

⁶ The intertidal zone is the area above water level at low tide and underwater at high tide.

cannot be raised, sheet piles will be installed adjacent to the rock revetment. Surface water from the new path will be directed to the grassed area.

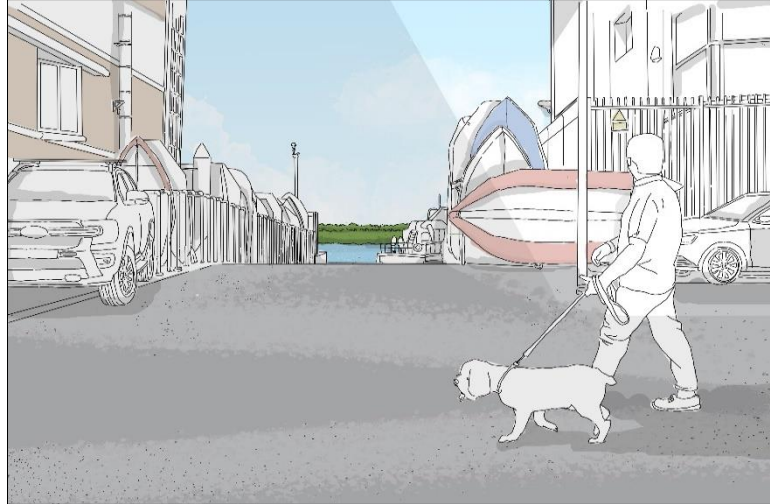


The raised Holes Bay path will gradually slope down to the current pedestrian crossings on Holes Bay Road and Lifeboat Quay. The defence line will run parallel to Lifeboat Quay, to avoid SSE's high voltage electricity cables (situated below the quay edge) which supply the town of Poole. Two flood gates will be installed: one on the corner of Asda's waterfront path and one at the pedestrian crossing, both will be closed when risk of flooding is high and allows easy access during normal conditions. Some trees and self-seeded plants will be removed after construction, will be replaced with low lying, low maintenance coastal planting.



9.2 Zone C: Slip Way

The land around the access point to the harbour will be raised to reduce flood risk for the next 50 years. Marine vessels stored at this location will be rearranged after construction to accommodate the new defence height.



9.3 Zone E: RNLI car park to Poole Bridge

There are three key areas that will be impacted by the proposed flood defence scheme in Zone E:

RNLI car park to Sunseeker

A full-height, steel tubular and sheet-piled wall designed to withstand tidal forces over the next 100 years will be constructed from the RNLI car park to Poole Bridge. It will pass in front of the new development, The Waterfront. At Sunseeker, the boat hoist will remain operational and will have additional defence features so it can be sealed when the risk of flooding is high. Existing pontoons will be re-instated after construction.



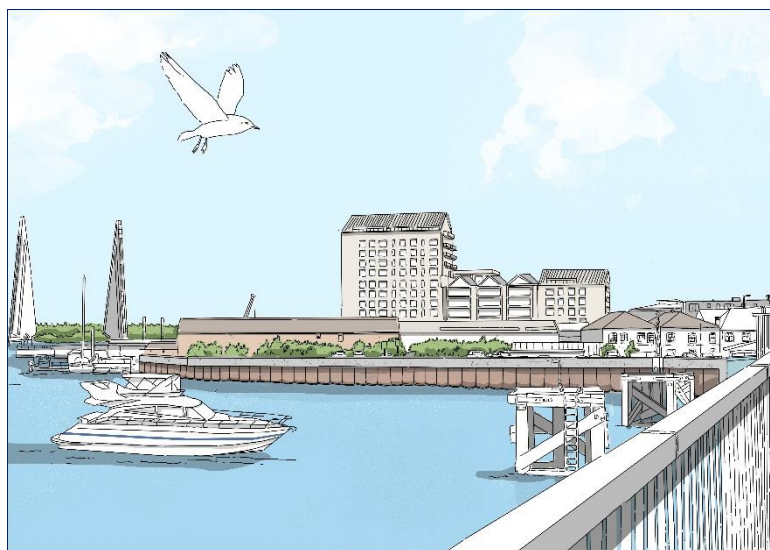
Whittles Way & Dee Way

At Whittles Way, a flood gate will be installed which will be closed to protect the town when there is flood risk. In normal conditions it will remain open allowing vehicular, harbour and pedestrian access. The new wall will continue across the privately owned Dee Way to reduce flood risk in the Old Town and surrounding areas. Access to the harbour here will be lost. A flood gate will be installed by Poole Moorings and Jetties to avoid business closure.



Arthur Bray's Yard to Poole Bridge

The full-height, steel tubular and sheet-piled wall continues to Poole Bridge. In front of Poole Amateur Rowing Club, a flood gate will be installed to enable it to continue operating from its current site.



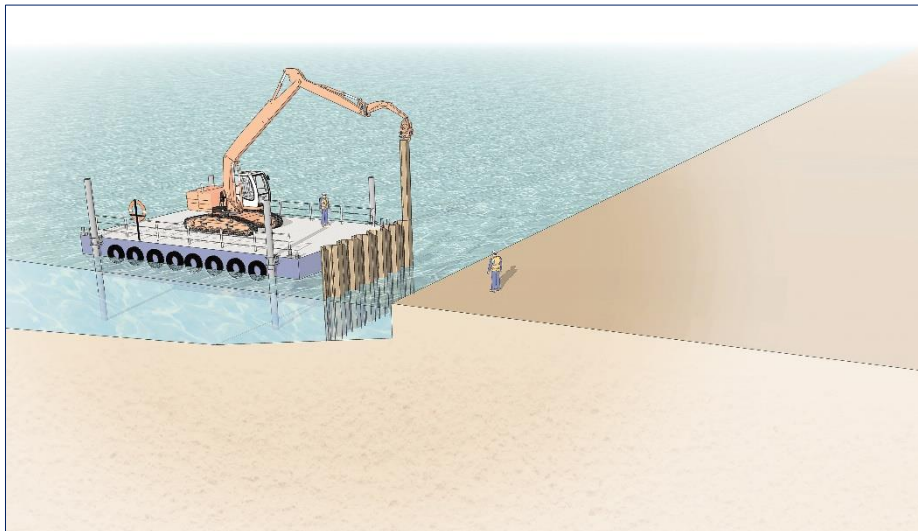
11. How will the proposed flood defence scheme benefit future regeneration in the area?

Sea level is predicted to rise over the next century. The proposed defence scheme will minimise flood risk to the local community while enabling BCP Council to continue its commitment to rejuvenate the area by encouraging a vibrant, attractive and sustainable mix of homes and businesses.

11.1 Regeneration enabling works

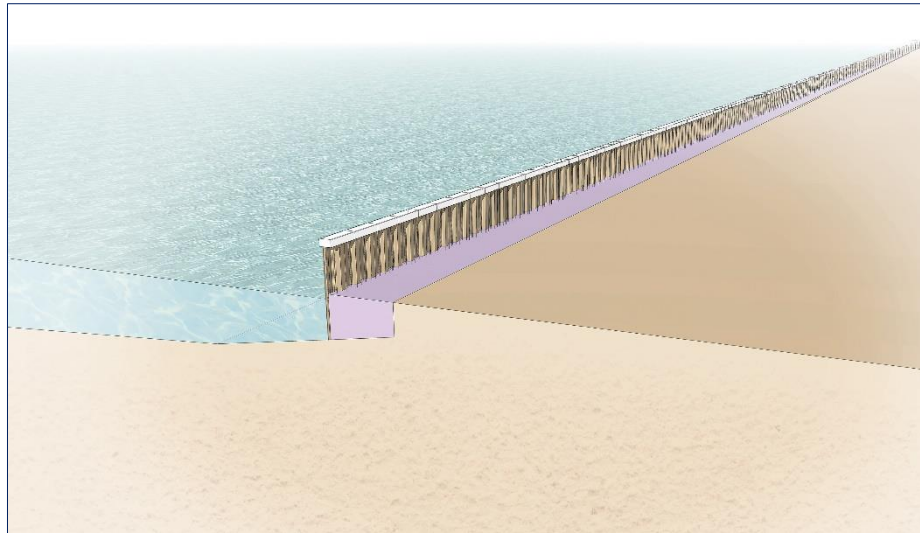
Sheet and Tubular piling

Steel tubular and sheet piles are driven into the seabed as close to the existing quay wall as possible to provide a raised level of flood defence, along with localised land raising. A capping beam is installed on top, and this indicates the height of the future quay wall edge at 3.6m AOD.



Back-filling behind new defences

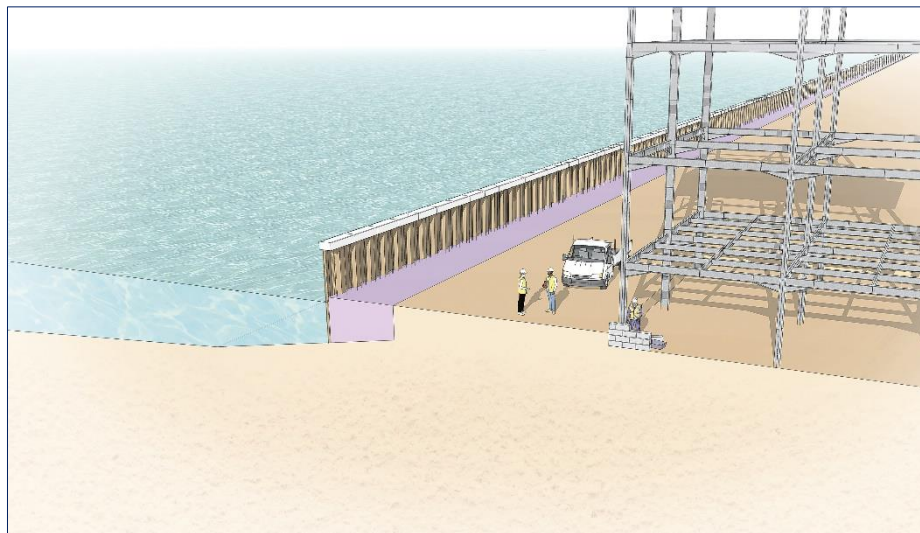
The gap between the new sheet piled flood defence and the original quay wall edge is filled in. The flood risk for Poole town centre, the Old Town and surrounding areas has been reduced for the next 100 years.



11.2 Future development potential

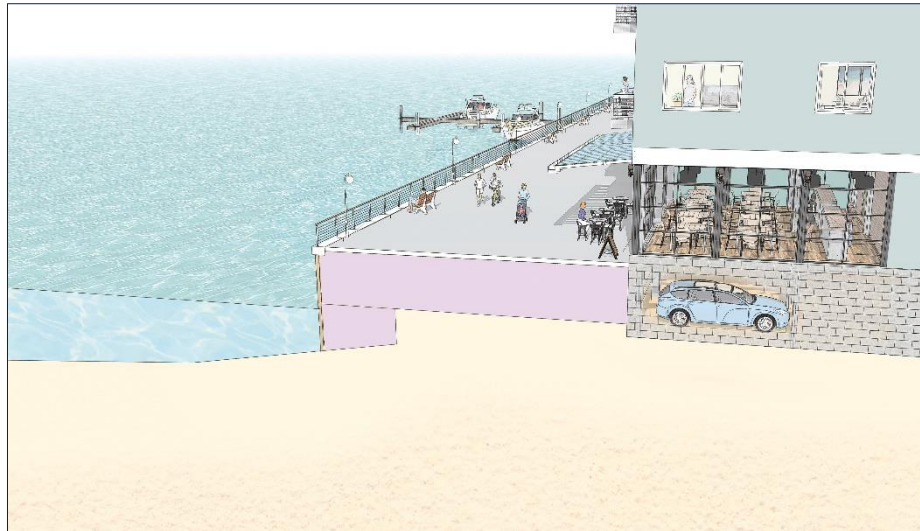
Private Development

Once the flood defence work is complete, we anticipate private landowners and developers will begin to submit planning proposals to regenerate the area. As indicated in the [Local Plan](#), buildings are expected to provide vibrant frontages on the ground-floor for shops, cafes and restaurants, while upper floors will provide new homes.



New Public Quayside

After construction, land levels will be raised to 3.6m AOD ensuring that flood risk to new and existing properties is reduced over the next century. BCP Council aims to work with landowners and developers to deliver the Local Plan aspiration to create a new public quayside and leisure route around Poole Harbour.



12. Next steps

Since 2018, we have been carrying out investigatory and supporting work to develop and design the scheme. These stages have included asset condition assessments⁷, flood modelling⁸, optioneering engineering solutions⁹, economic appraisals¹⁰, extensive engagement (with landowners, developers and businesses) and rigorous environmental impact assessments¹¹.

Whilst we recognise that construction activities may cause some short-term disruption to people, businesses, and organisations within the local community, we are committed to actively seeking ways to minimise any impacts.

⁷ Asset condition assessments help an organisation plan its capital maintenance and renewal budgets. Purchased assets are given an estimated useful life, which, when combined with estimated maintenance costs, allows them to estimate how much it will cost to replace the asset in the future.

⁸ A flood model is an important part of developing projects to manage flood risk. A model helps us understand how a river system behaves during flood conditions. It helps us identify areas that may be affected by flooding. It also enables us to assess the impact of both natural and man-made features upon flood risk.

⁹ Optioneering enables us to compare alternative solutions or products to meet flood risks in the best way possible.

¹⁰ These enable us to work out which is the most cost-effective approach.

¹¹ Environmental Impact Assessment (EIA) is a tool used to assess the significant effects of a project or development proposal on the environment.

Have your say...

While we are in our planning stage, we'd like you to tell us:

- how important the flood defence scheme is to you
- what impact you think the construction for the proposed flood defence scheme could have on you
- any ideas you have for temporary arrangements that could help shape our approach to managing the impacts of construction on you.

Please tell us your views:

- by completing our [online survey](#) after reading the information in this document
- by downloading a paper copy on the [main consultation page](#) or collecting a hard copy from any [BCP library](#)

More information can be found on the main consultation page:
haveyoursay.bcpCouncil.gov.uk/poole-hunger-hill.

If you have any questions or need the documents in a different format, please email coastal@bcpcouncil.gov.uk.

This consultation will close at **midnight on 30 September 2024**.