

BA02: Medway Towns

What is in the Benefit Area

Benefit Area 2 covers the Medway towns including Chatham, Strood and Rochester. The area is generally an urban area with large industrial sites along the river. In addition to the commercial assets there are also many sites of historical importance in Rochester and Chatham. There are a wide variety of defences in the Benefit Area including concrete walls, earth embankments, flood gates, sea wall, rock armour, masonry walls, rock and concrete revetments and sheet pile walls. The current minimum SoP of the defences is for a 50% AEP event, and the defences have an average residual life of 20 years. The main risk in the area is from coastal flooding.

What is at risk?

- Roads – B2002 and A289
- Strood Railway Station
- Railway line between Strood & Rochester
- Historic dockyard
- Industrial Estate
- Residential and business properties

Other Considerations

- Medway Estuary and Marshes SPA and SSSI (seaward) around Gillingham
- Baty's Marsh Local Nature Reserve along the river near Borstal.

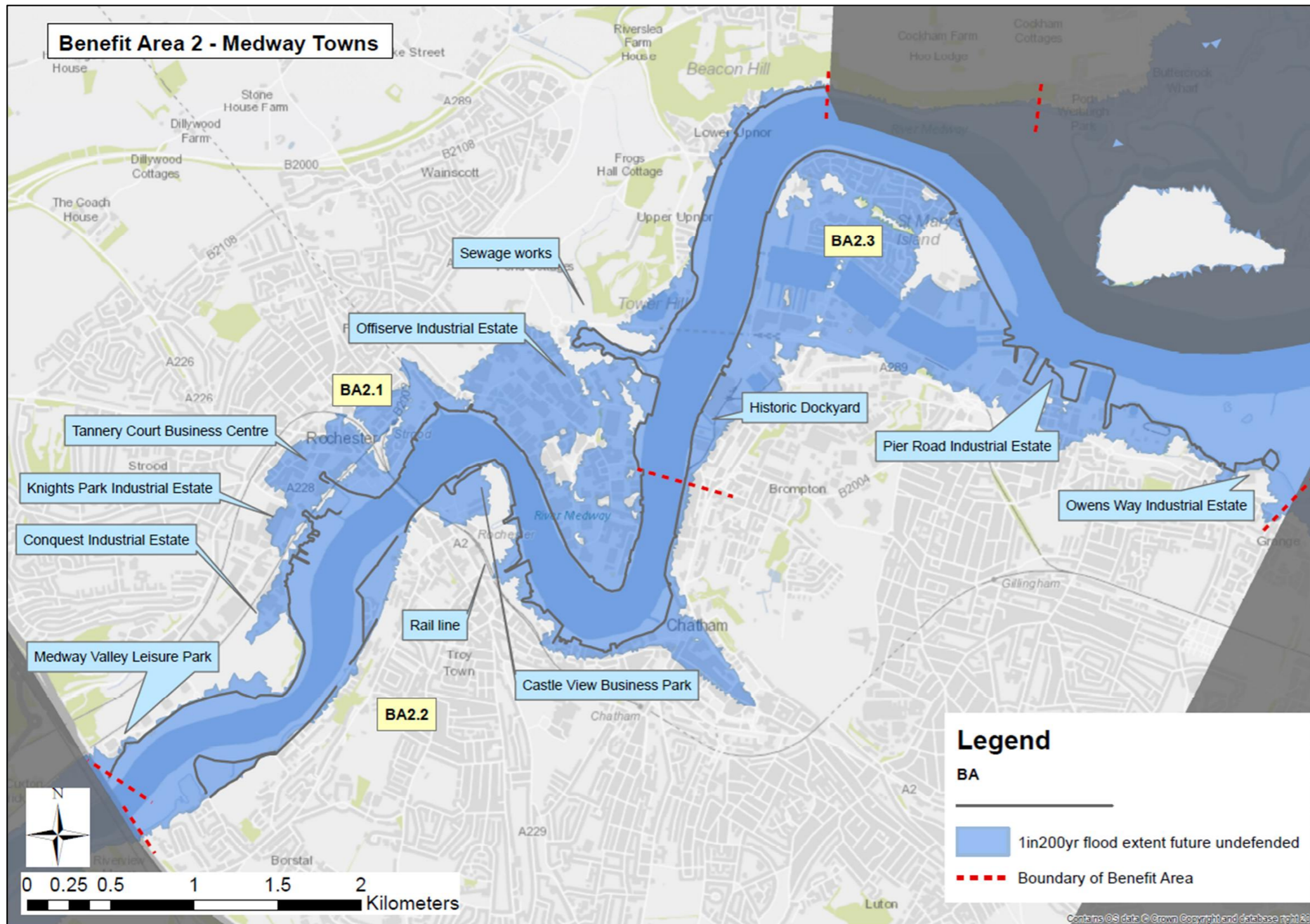


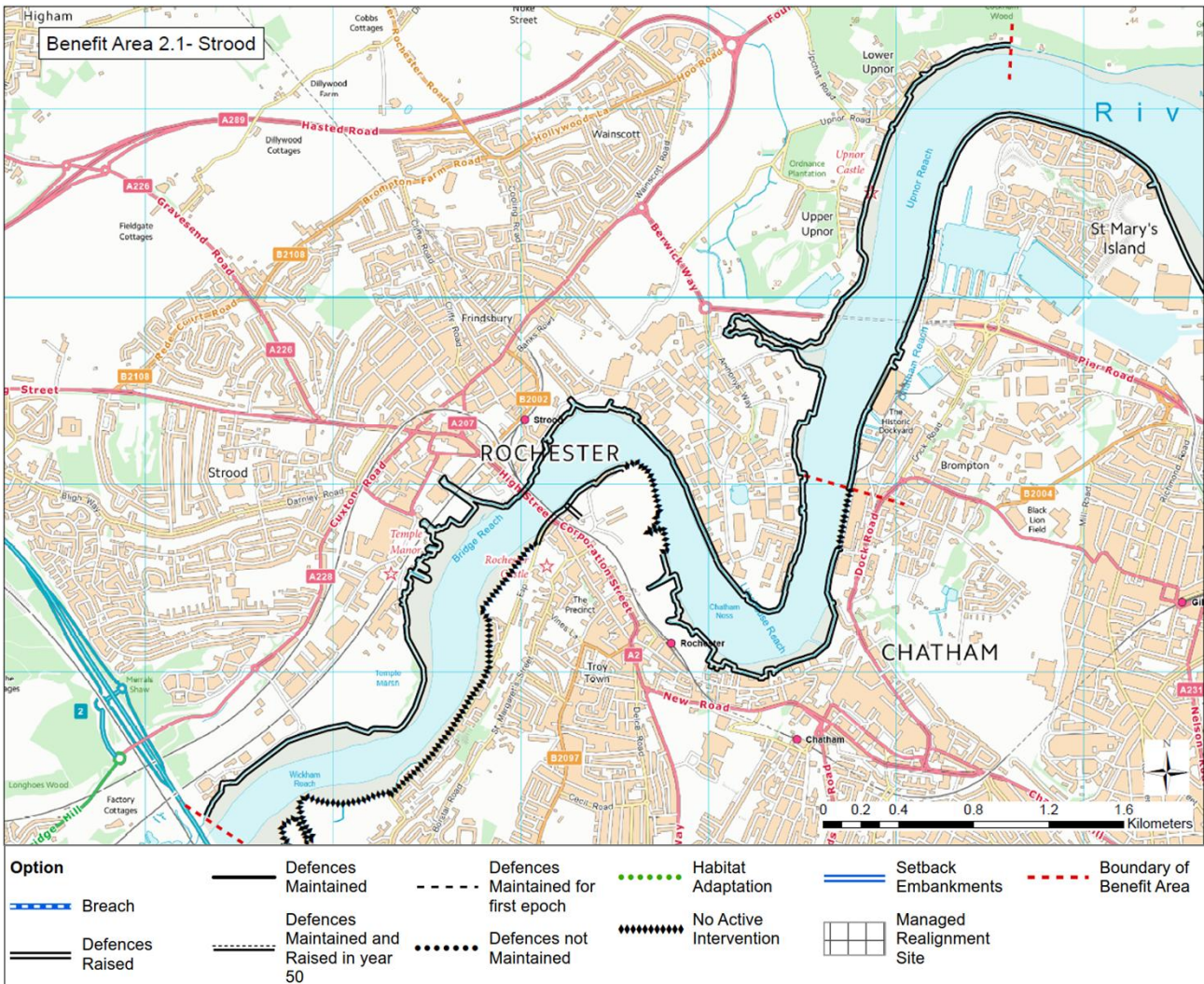
Figure 1: River Medway at Strood



Figure 2: St Mary's Island

BA2.1: Strood

Now – 2038	2038-2068	2068-2118
HTL Sustain	HTL Sustain	HTL Sustain



Preferred Option

Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the current SoP provided by the defences to 1% AEP SoP with sea level rise; in year 3 to 5.1m AOD and then in year 50 to 6.2m AOD to continue to provide protection in line with sea level rise.

Justification

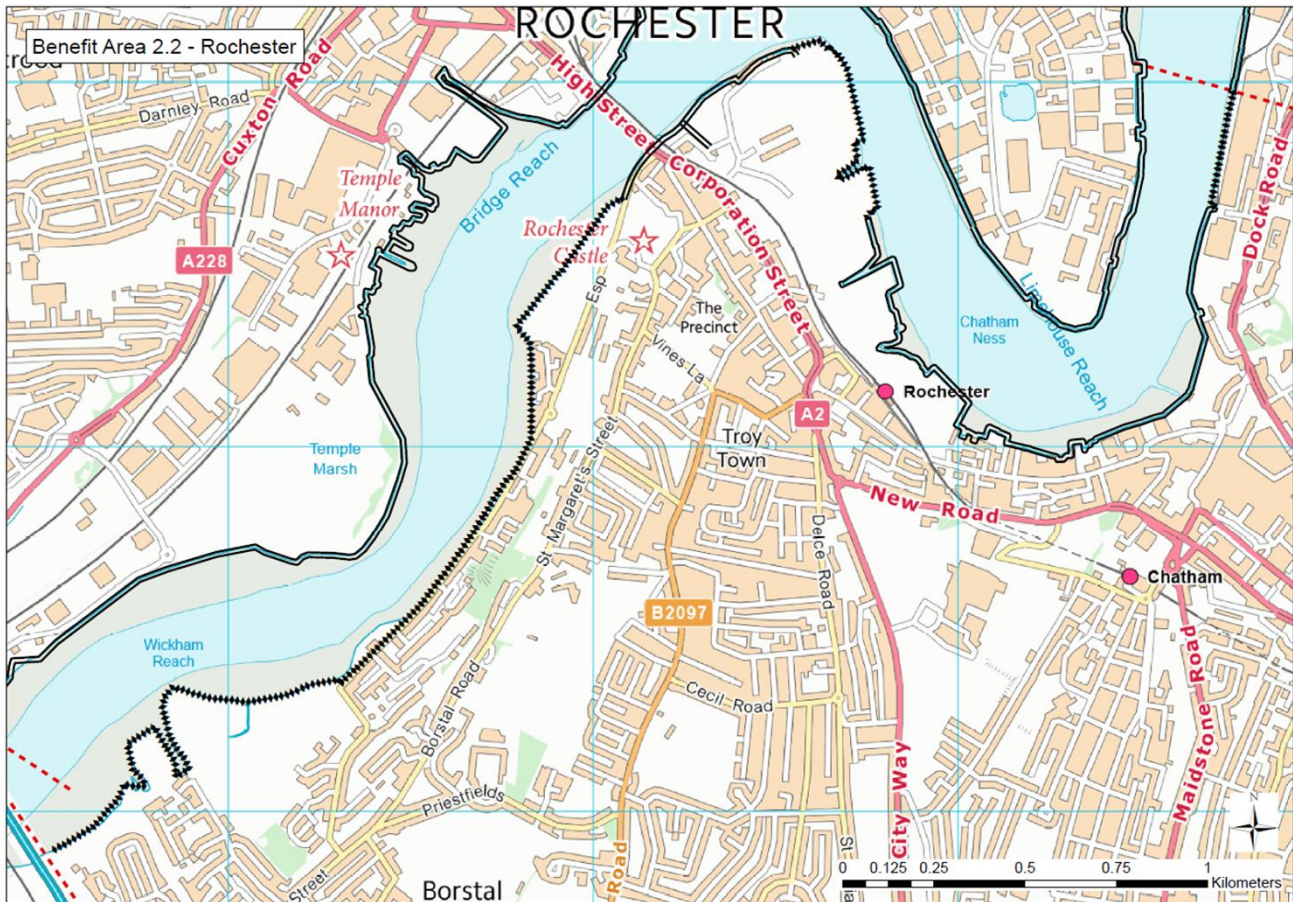
This option has the highest BCR, however there is still a significant amount of contributions that will be required to allow the scheme to progress. It has one of the highest environmental rankings from the short list of options. There is a higher economic justification for raising the defences in the short term rather than waiting for defences to reach their residual life to provide increased flood risk in the short term.

Preferred Option Costs

Costs	Benefits	BCR	PF Score
£19,385k	£38,820k	2.0	15%

BA2.2: Rochester

Now – 2038	2038-2068	2068-2118
HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI



Option	Defences Maintained	Defences Maintained for first epoch	Habitat Adaptation	Setback Embankments	Boundary of Benefit Area
Breach	Defences Maintained	Defences Maintained for first epoch	Habitat Adaptation	Setback Embankments	Boundary of Benefit Area
Defences Raised	Defences Maintained and Raised in year 50	Defences not Maintained	No Active Intervention	Managed Realignment Site	

Preferred Option

Raise (sustain) embankments, walls, flood gates and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The localised defences will be raised in year 3 to 5.4m AOD and then in year 50 to 6.8m AOD to continue to provide protection in line with sea level rise. The rest of the BA will have a NAI approach and management will cease on the defences.

Justification

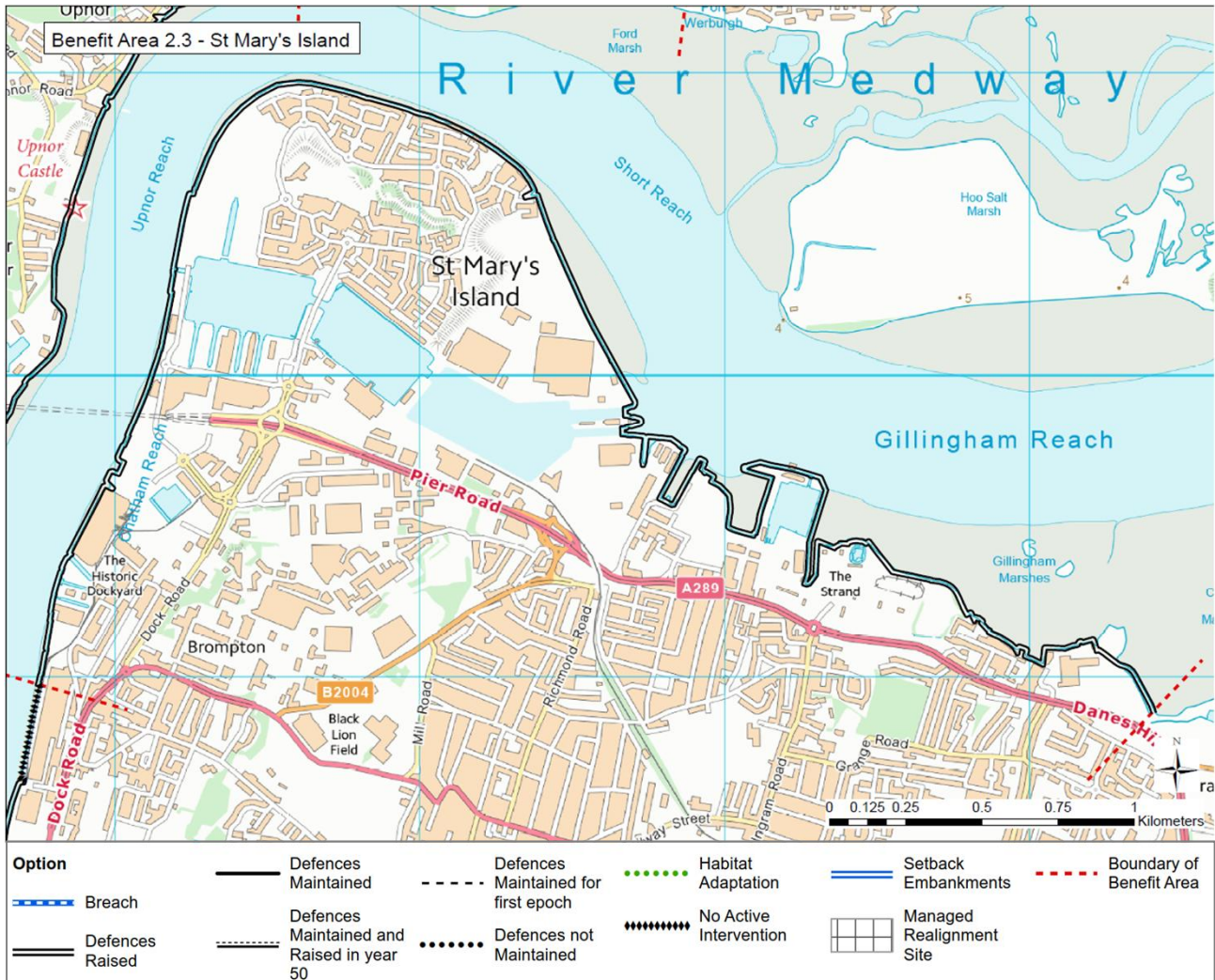
Localised HTL provides the highest BCR, and will provide protection to all residential properties at risk of flooding to at least a 1% AEP. In the NAI areas there are limited assets at risk due to the rising ground. There is a higher economic justification for raising the defences in the short term rather than waiting for defences to reach their residual life to provide increased flood risk in the short term.

Preferred Option Costs

Costs	Benefits	BCR	PF Score
£4,082k	£6,037k	1.5	24%

BA2.3: St Mary's Island

Now – 2038	2038-2068	2068-2118
HTL Sustain	HTL Sustain	HTL Sustain



Preferred Option

Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise; in year 3 to 5.1m AOD and then in year 50 to 6.3m AOD to continue to provide protection in line with sea level rise.

Justification

This option has the highest BCR and a significantly lower value of third party funding required. It should be noted that the Upgrade option also presents a BCR of greater than one and therefore the SoP could be increased at OBC stage depending on third party contributions available. There is a higher economic justification for raising the defences in the short term rather than waiting for defences to reach their residual life to provide increased flood risk in the short term.

Preferred Option Costs

Costs	Benefits	BCR	PF Score
£14,256k	£63,084k	4.4	37%