

# BA01: North Medway

## What is in the Benefit Area

Benefit Area 1 extends from Stoke, past the power stations, Hoo Marina and through to Cockham Wood. The northern boundary of the Benefit Area is adjacent to the TEAM2100 Strategy which is currently being developed. The defences in the area mainly consist of earth embankments, with some sections of concrete walls and revetments, particularly around the industrial areas in BA1.2. The current average residual life of the defences in the area is 10-20 years, with a minimum Standard of Protection of 50%AEP. The main risk in the area is from coastal flooding, especially in BA1.2 and 1.3. In BA1.4 (Cockham Wood), the coastline is formed of cliffs, so the risk is from coastal erosion.

## What is at risk?

- Kingsnorth Power Station
- Damhead Creek Power Station
- Kingsnorth Industrial Estate
- Railway alongside A228
- Hoo Marina Park
- Hoo Sewage Works
- Cockham Wood Fort
- Residential and business properties

## Other Considerations

- Natural England Coastal Path (Saxon Shore Way)
- Medway Estuary and Marshes SPA and SSSI (seaward and landward)
- Tower Hill to Cockham Wood SSSI

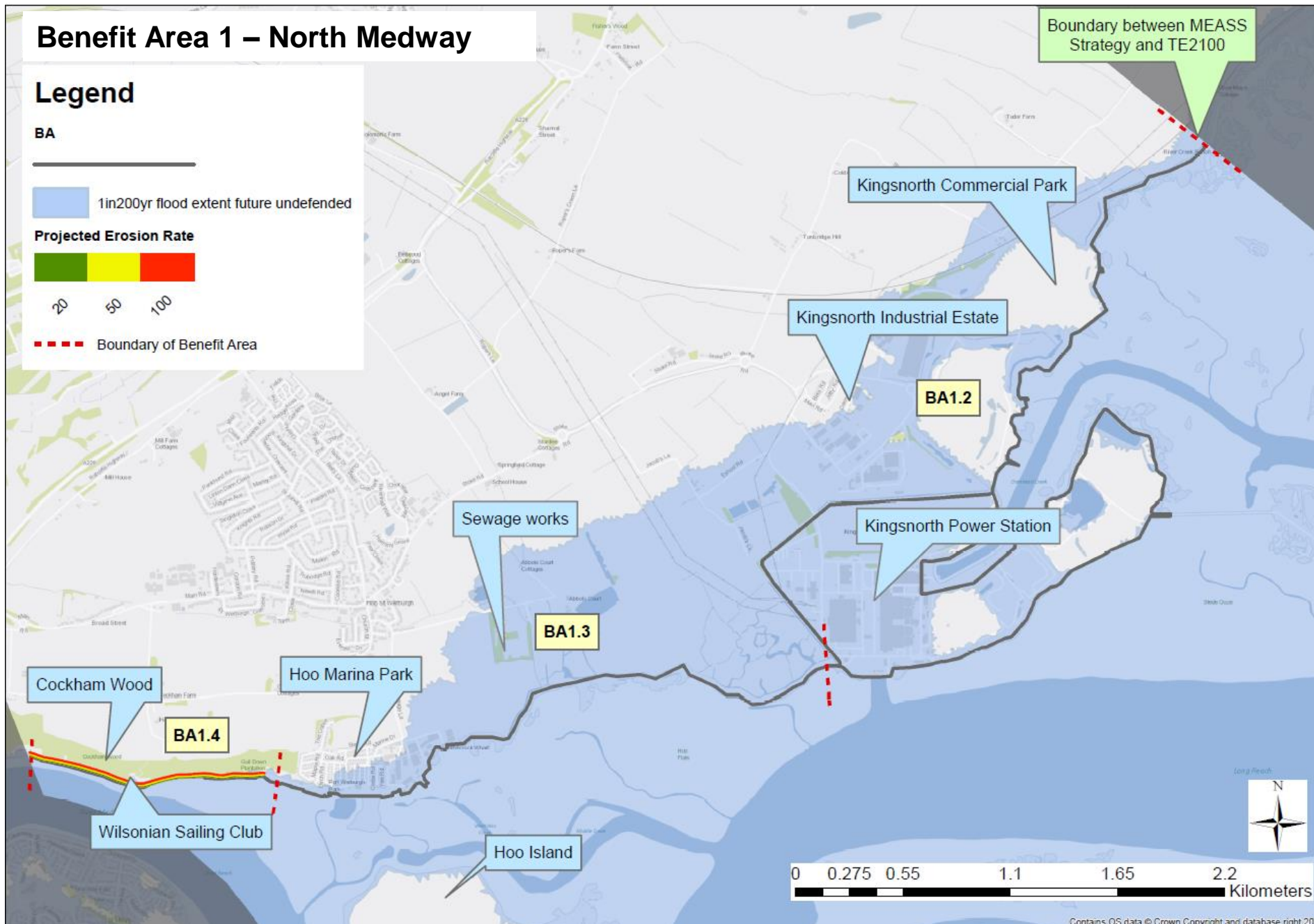


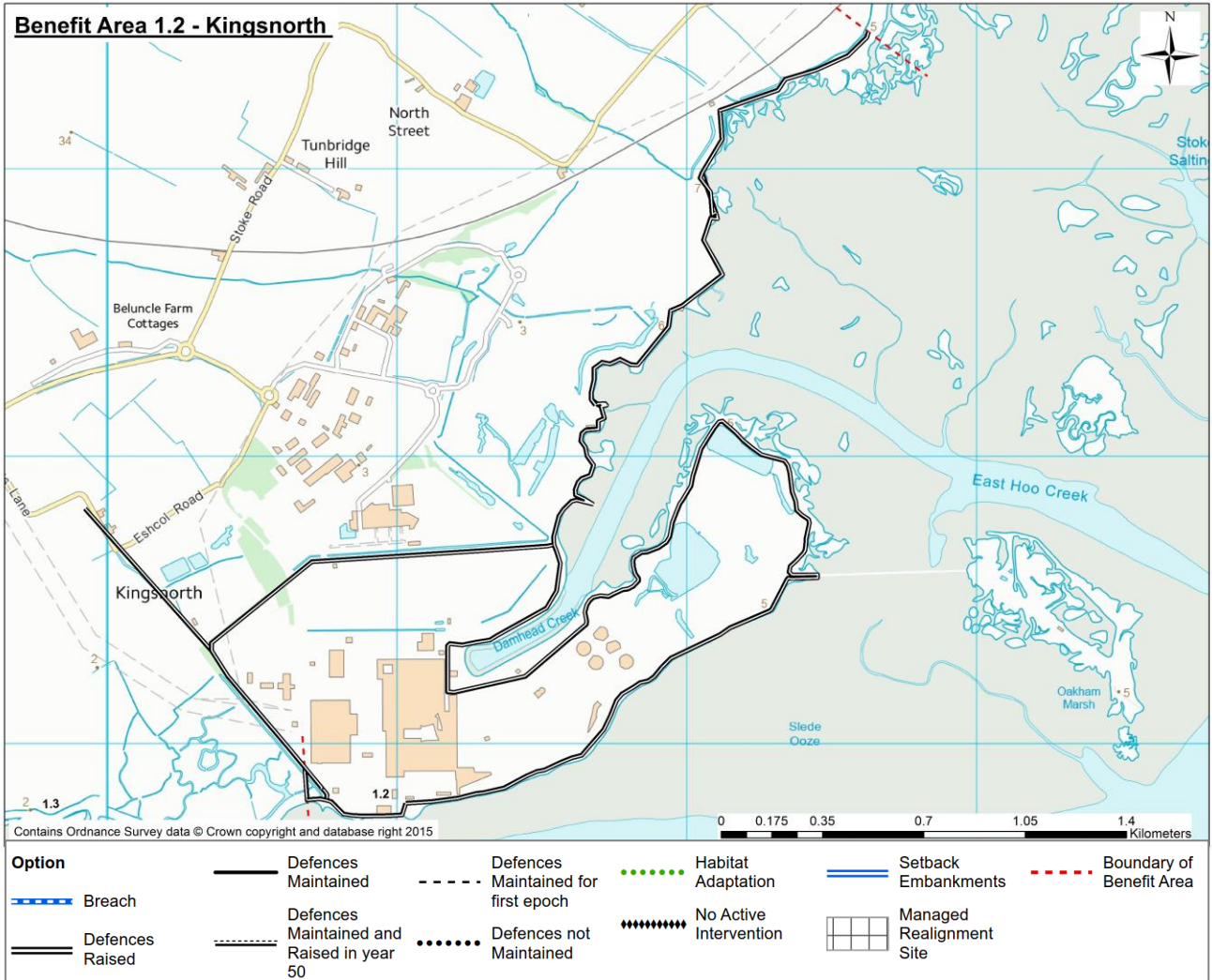
Figure 1: Kingsnorth Power Station



Figure 2: Hoo Marina

# BA1.2: Kingsnorth

Now – 2038	2038-2068	2068-2118
HTL Maintain until year 5 and then HTL Sustain	HTL Sustain	HTL Sustain



## Preferred Option

Maintenance of the current defences (embankment, seawall and rock revetment) for the first 5 years to a minimum of 50%AEP SoP (which is the current SoP offered). Following this the defences will be raised to 5.3m AOD and then raised again in year 50 to 6.6m AOD to ensure a 0.1% SoP in 100 years taking account of sea level rise.

## Justification

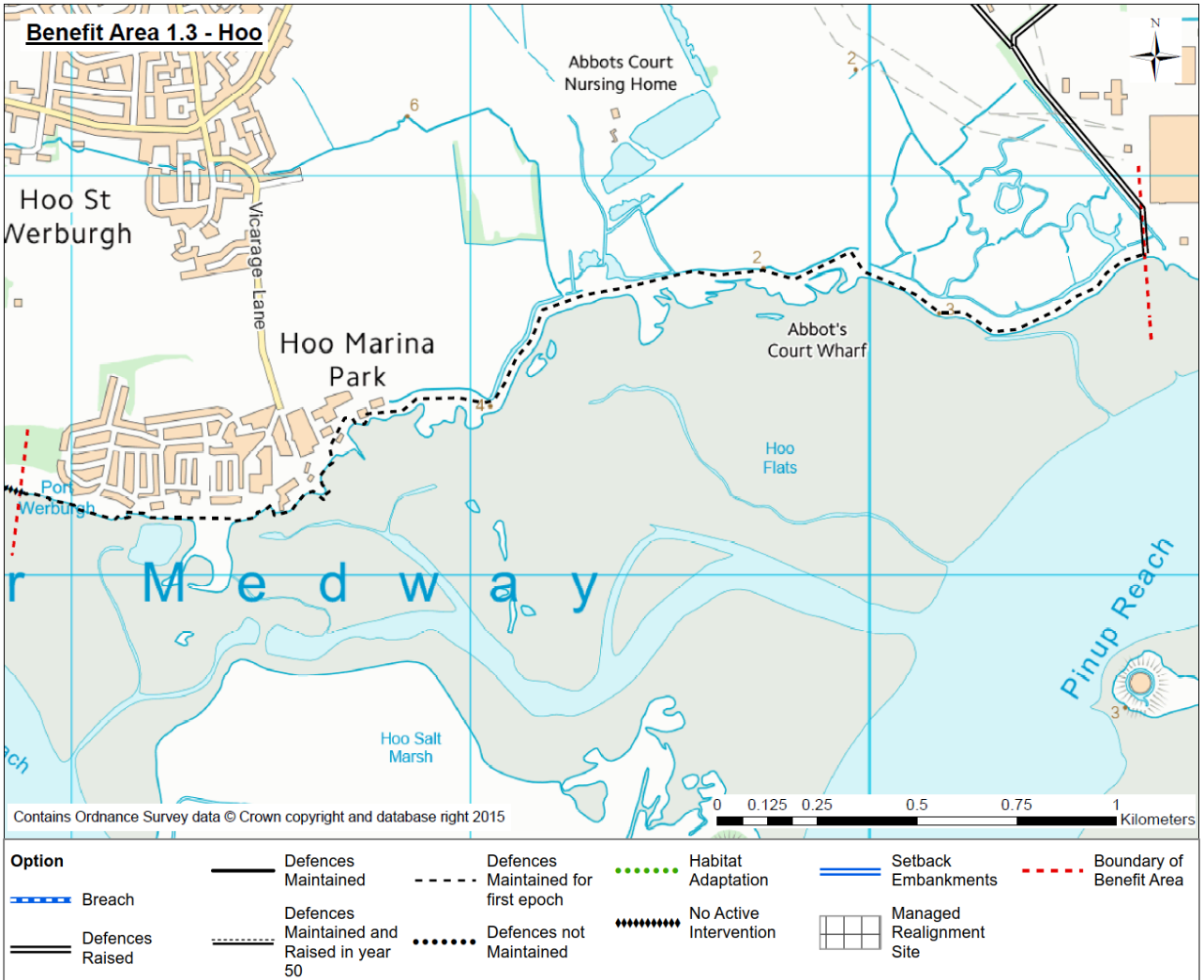
Delayed sustain option has highest BCR and better environmental scoring compared to the Maintain option. It is more cost effective to raise the defences in year 5 when the defences are near the end of their residual life, and then in year 50 to raise with sea level rather than raising all initially.

## Preferred Option Costs

Costs	Benefits	BCR	PF Score
£20,836k	£41,148k	2.0	11%

# BA1.3: Hoo

Now – 2038	2038-2068	2068-2118
HTL Maintain	NAI with freshwater habitat compensation	NAI with freshwater habitat compensation



## Preferred Option

Maintenance (patch and repair) of the current defences (earth embankments and rock revetment) for the first 25 years to a minimum of 50%AEP SoP (which is the current SoP offered). After this all maintenance will be ceased which will increase the risk of failure of the defences which would result in the inundation of the designated freshwater habitat. Therefore, compensatory freshwater habitat will need to be developed by year 20 to allow it to be in place prior to failure of the defences from year 25.

## Justification

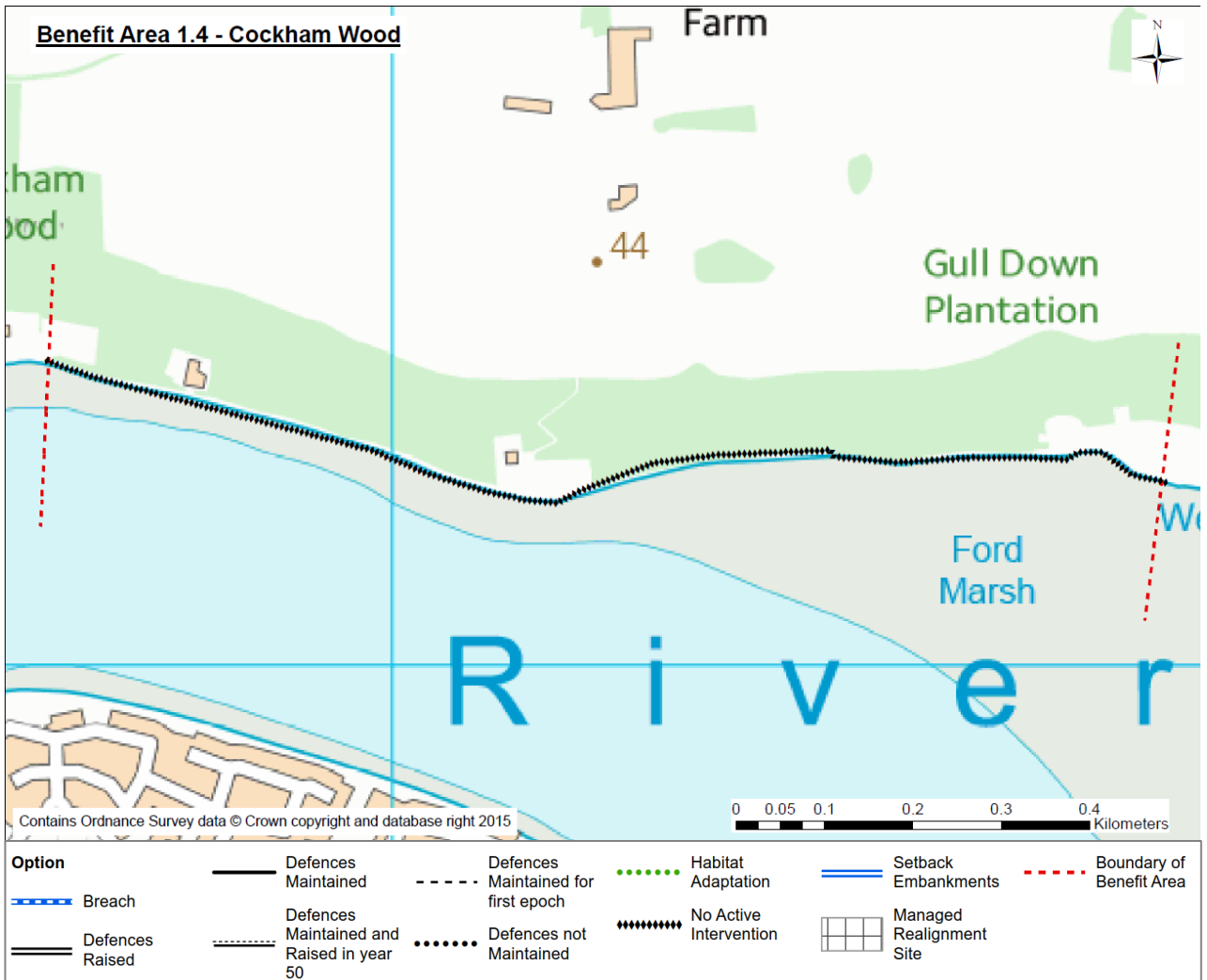
Due to the limited assets at risk in the area, there were no short listed options with BCRs above one. If patch repair continues, the current defences have a 25-year median residual life. They have a BCR above one if maintained until the end of their residual life, enabling HTL policy in the short term. The cost for habitat compensation reduces the BCR below one however is required by law due to the impacts the NAI option will have on the habitat.

## Preferred Option Costs

Costs	Benefits	BCR	PF Score
£1,394k	£331k	0.2	1%

# BA1.4: Cockham Wood

Now – 2038	2038-2068	2068-2118
NAI	NAI	NAI



## Preferred Option

No Active Intervention (NAI). All maintenance will be ceased and the current defences will not be maintained. Rate of cliff retreat will increase with sea level rise, but this will support the SSSI designation at the site.

## Justification

No short listed options were identified with BCRs above one which provided increased protection. NAI aligns with SMP policy and requirements of the SSSI.

## Preferred Option Costs

Costs	Benefits	BCR	PF Score
N/A	N/A	N/A	N/A