

## **METROTIDAL THAMES ORBITAL**

### **ADVANTAGES OF THE FLOOD DEFENCES OVER LOCATIONS FURTHER WEST**

The integrated infrastructure Metrotidal Thames Orbital flood defences across Sea Reach between the high ground at Southend-on-Sea in Essex and Allhallows-on-Sea in Kent have the following advantages over landward locations further west across the estuary: -

#### **1 Best flood defence system**

- shortest flood defence line
- lowest flood defence datum
- greatest landward area of flood protection
- highest flood resilience for the longest duration (TE2200)

#### **2 Best rail orbitals**

- a 22.6km link completes the 132km Thames Orbital and 454km London R25 Orbital
- best distribution of orbital stations
- best orbital to radial route connectivity around the estuary and Greater London
- serves current plans for 100,000 new homes beyond the M25 in Essex and Kent
- serves recreational areas of Southend, the Hoo Peninsula and the Medway Towns
- serves the Thamesport and Southend Airport
- makes most use of existing and former railway lines

#### **3 Generates green-growth**

- low-carbon transport led by rail and micro-mobility connectivity
- floating solar array generates energy for 100,000 new homes
- tidal cooling for efficient data storage
- rail wayleaves for FTTP data distribution

#### **4 Most economic benefits**

- integrated infrastructure reduces costs
- best cost/benefit ratio
- widest connectivity and agglomeration benefits
- protects more existing assets
- lowest carbon audit

#### **5 Least environmental impact**

- protects the largest area of estuary habitat from rising sea levels
- least new railway lines required inland
- least terrestrial impacts
- least third-party property impacts

#### **6 Contributes to the Medway Orbital system**

- completes the rail line across the Hoo Peninsula for the Medway Orbital system
- contributes to the Metrotidal Coastal route between Colchester and Canterbury