Tees Tidelands

Rewilding the Tees Estuary

‘Greening an industrial Phoenix’

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Tees Estuary pre 1800

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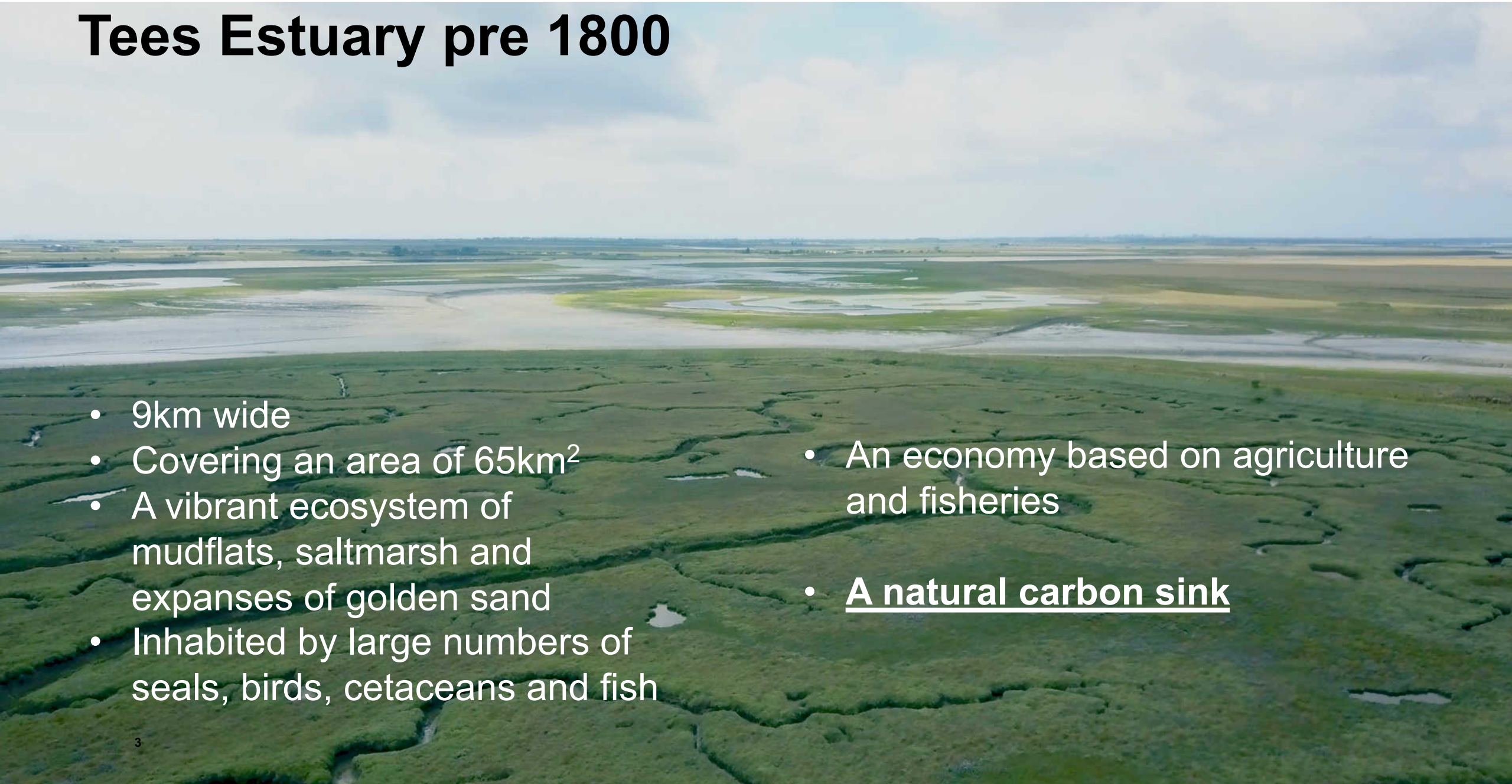
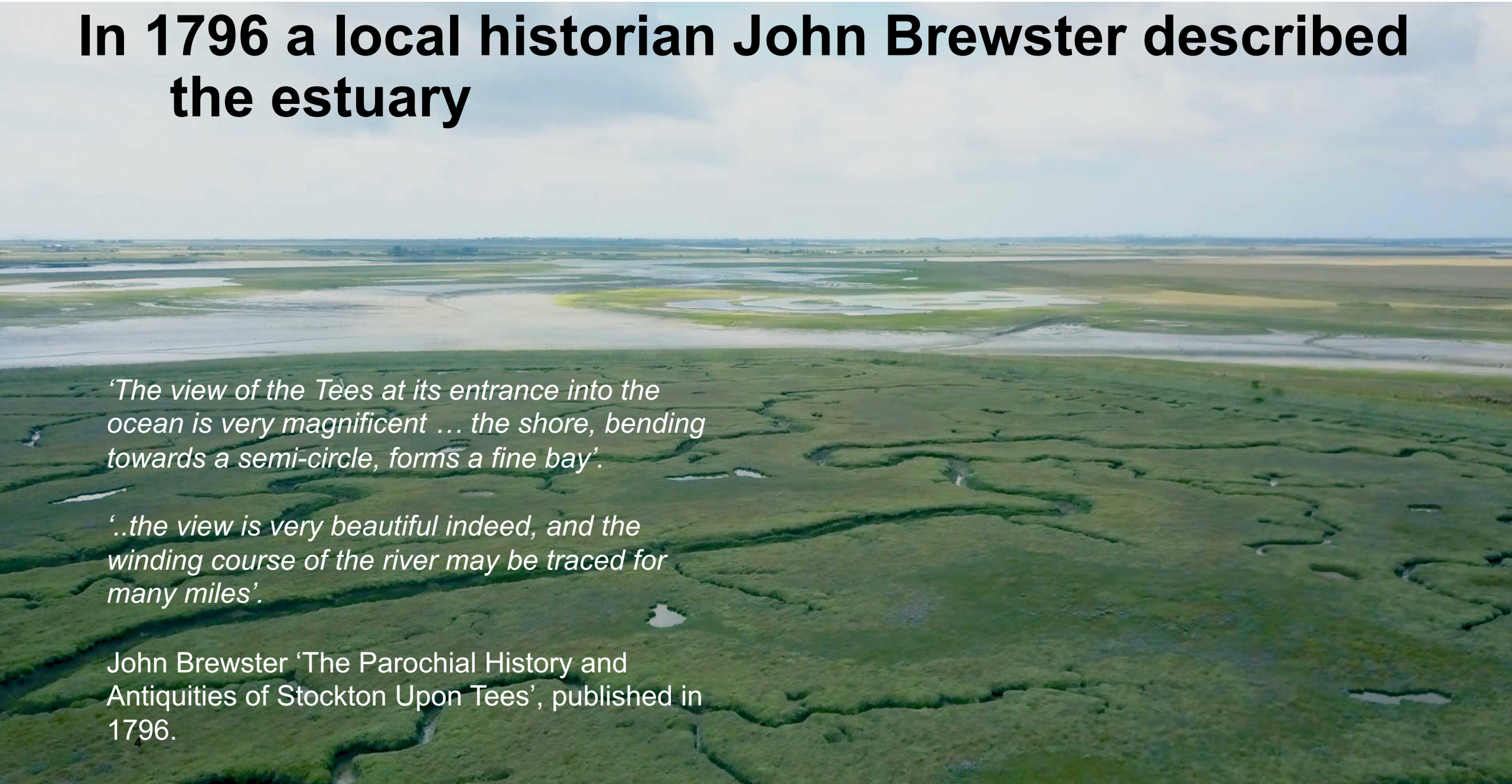


- 9km wide
- Covering an area of 65km^2
- A vibrant ecosystem of mudflats, saltmarsh and expanses of golden sand
- Inhabited by large numbers of seals, birds, cetaceans and fish

- An economy based on agriculture and fisheries

- **A natural carbon sink**

In 1796 a local historian John Brewster described the estuary

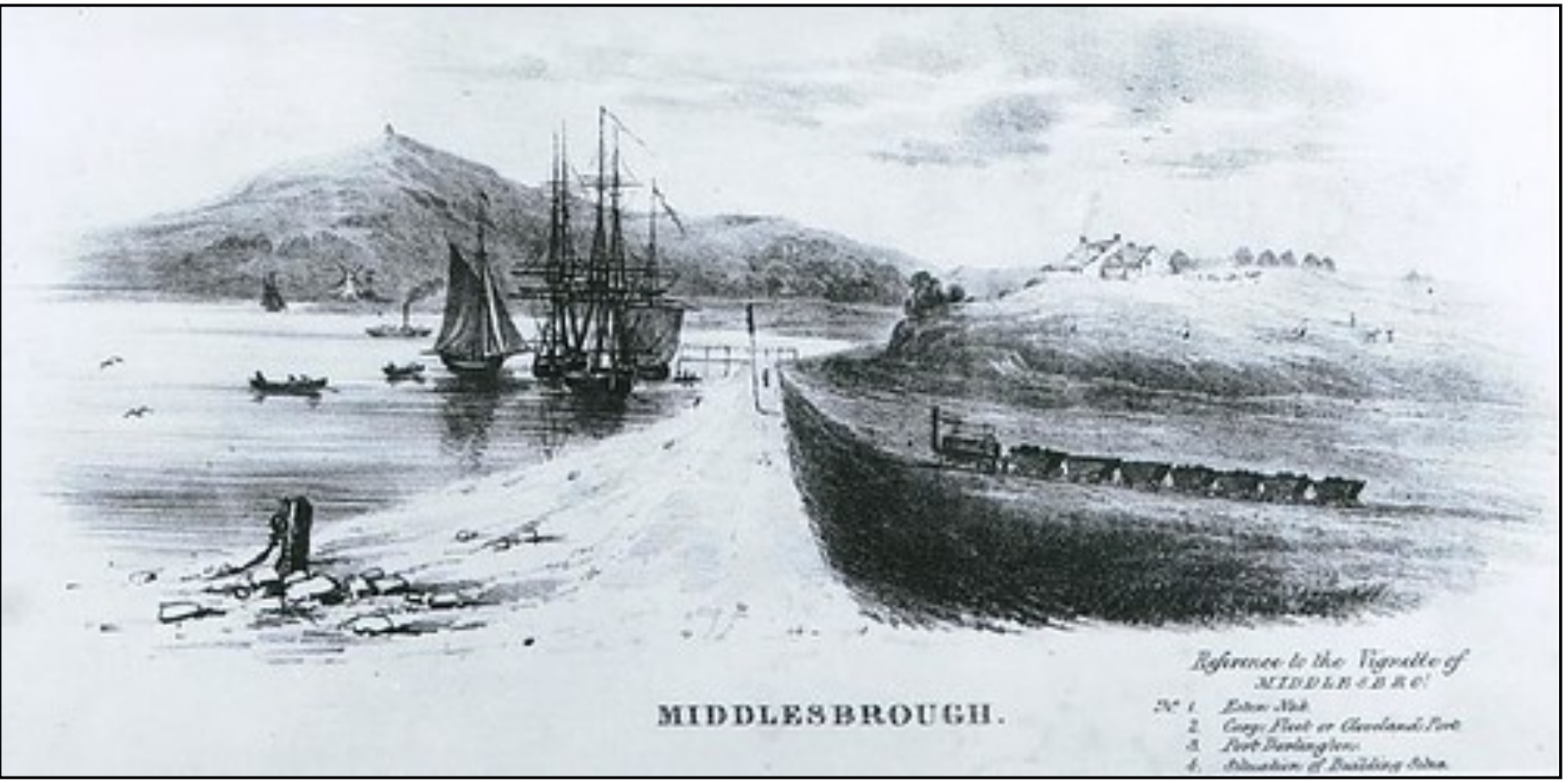


‘The view of the Tees at its entrance into the ocean is very magnificent … the shore, bending towards a semi-circle, forms a fine bay’.

‘..the view is very beautiful indeed, and the winding course of the river may be traced for many miles’.

John Brewster ‘The Parochial History and Antiquities of Stockton Upon Tees’, published in 1796.

After 1830



- 1830 – railway completed to small farm of Middlesbrough (population abt 25)
- Better location to export coal
- Population increase
- 1860 20,000
- 1870 40,000
- 1900 90,000

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Within a couple of generations the area was transformed into one of the UK's main industrial centres

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An industrial phoenix

- Boom and bust – rapid industrial growth followed by collapse

- Following decline and the death of some industries the area has always recovered – new industries rising from the ashes of previous ones

- Coal exporting
- Iron and steel
- Ship building
- Petrochemicals

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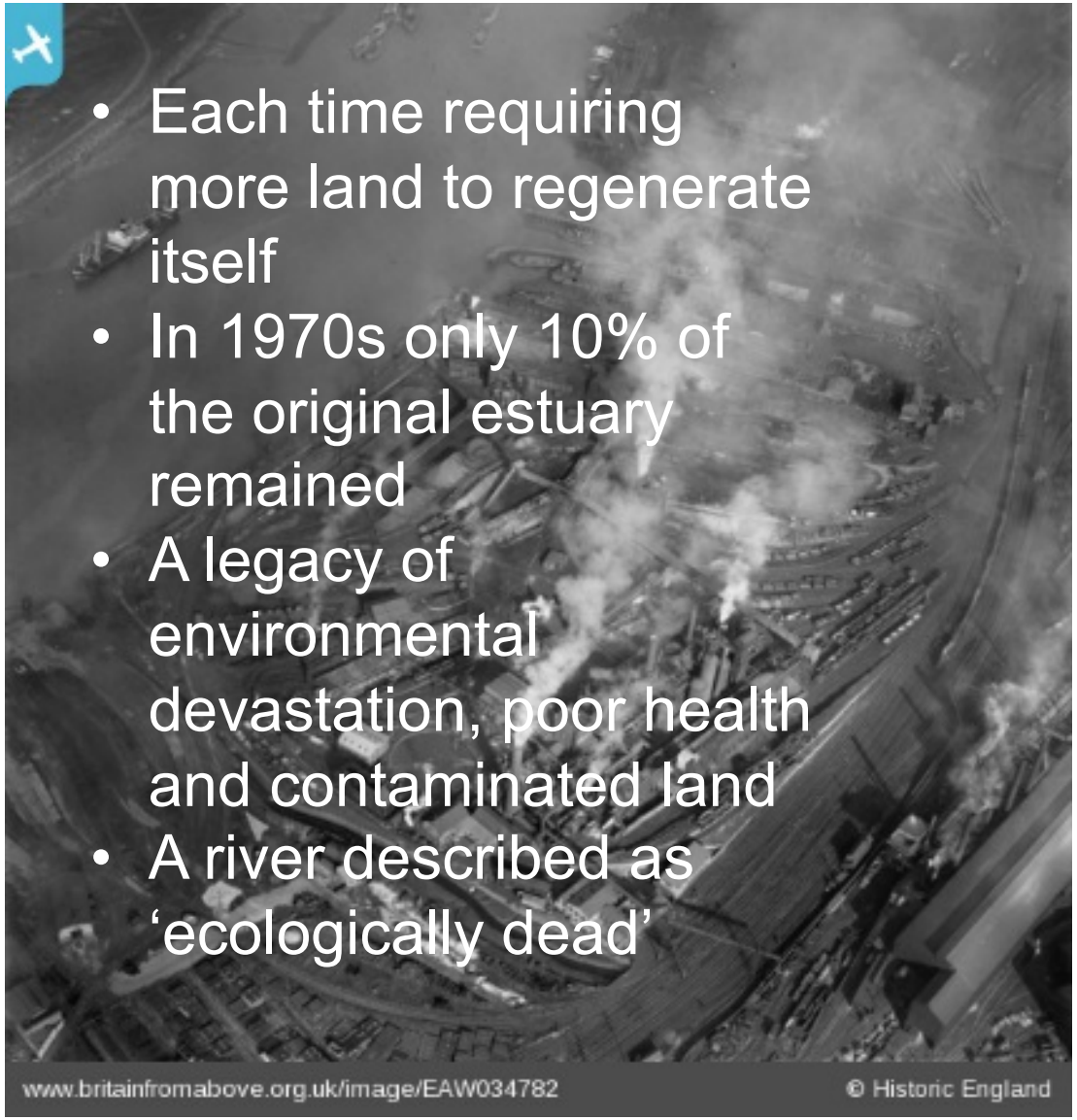

Land take and industrial development

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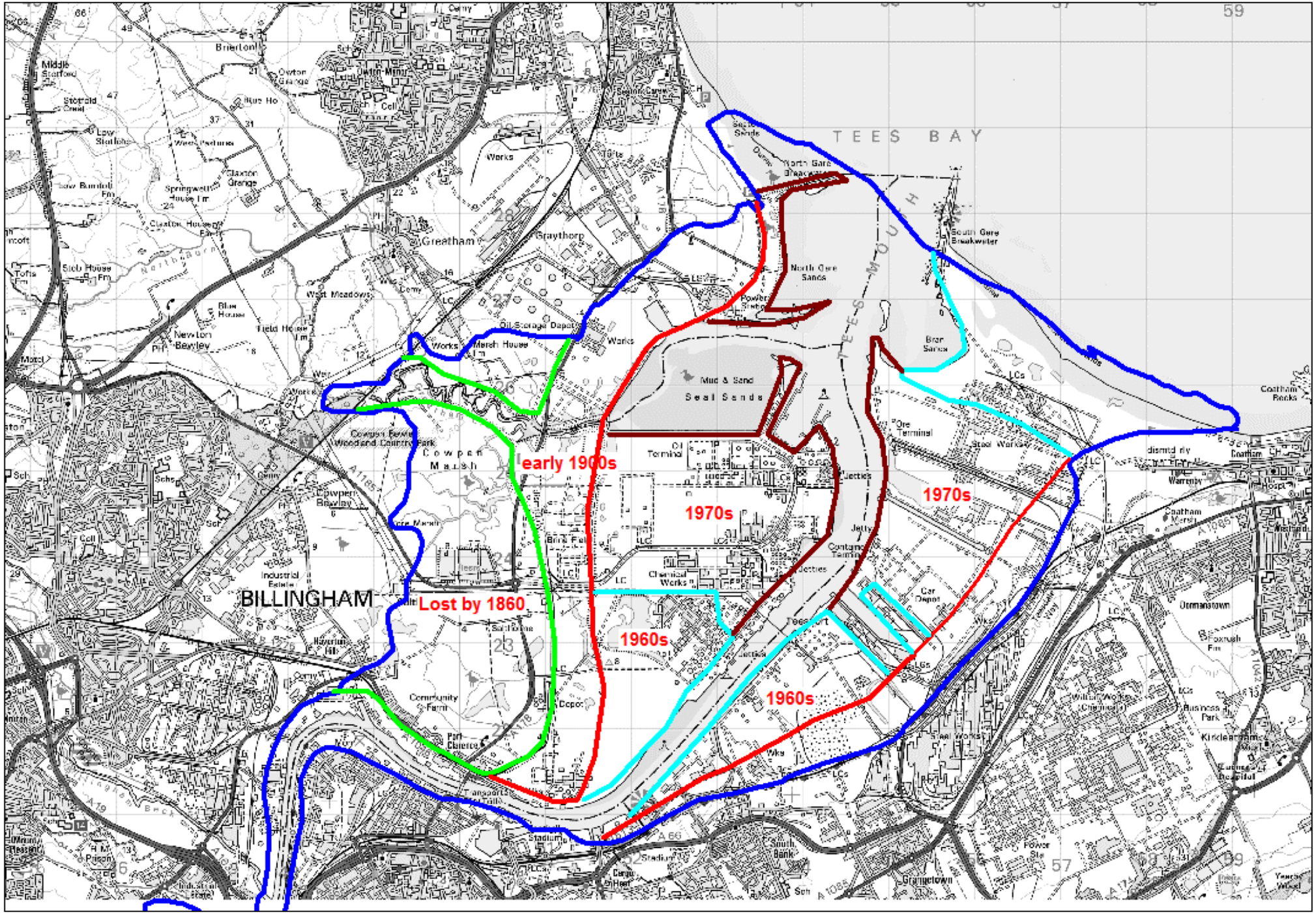

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UK's 3rd largest port

58% of the UK's chemicals industry

contributes £2.5 billion to the UK economy each year.

more than 1,400 companies in the North East directly involved or in the supply chain of these industries

employing 190,000 people.

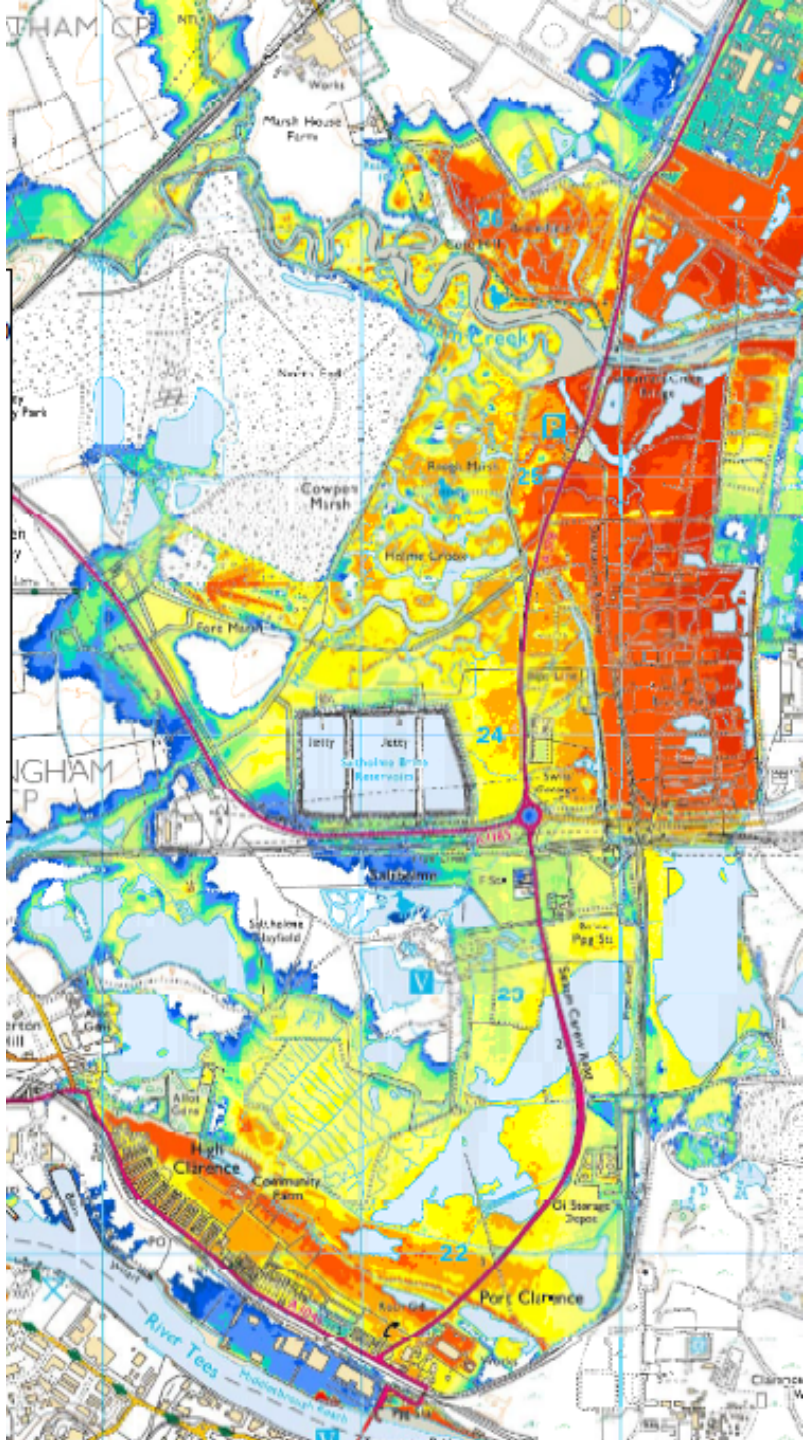
- Source – Teesside Collective

What next?

- Closure of major steel plant
- 25 year plan to regenerate the area
- Different to previous ‘rebirths’
- Concentrating on reusing derelict land, carbon capture and renewable energy

- Only possible if we control flood risk and safeguard the environment
- Current situation:
  - industrial expansion would result in further environmental impacts
  - but protection of the remaining habitats could constrain economic growth
- A balanced approach is required

Flood risk in the Tees Estuary



- Undefended 0.5% AEP event (current day)
- Flood depths up to 5m, typically between 1 and 3m
- Much of the land lies below mean sea level
- Naturally it would form mudflat and saltmarsh

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Flood defences

- Old defences of poor quality, too low and well beyond their design life
- Originally build in the 1800s using waste slag from the iron and steel industry

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- These defences have breached on numerous occasions
- During the 1953 East Coast surge

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- 2013 tidal event flooded large areas including industrial infrastructure and residential properties

Tees Tidelands Programme

- 3 main aims:
  - To manage flood risk by improving existing defences;
  - To restore intertidal habitat – realignment of defences and removal of tidal barrages
  - To reconnect local people to their estuary
- To do this using innovative funding sources such as Biodiversity Net Gain and Carbon credits

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Tees Tidelands - funding

- To date we have invested about £20m in capital schemes in the estuary
- Secured about £6.5m in contributions (from local industry)

- In next 6 years by working in a more collaborative way, delivering multiple benefits, we anticipate
- Investing over £30m and securing significant contributions
- £6m for Tees Tidelands Innovation Project secured
- Creation of habitat that will directly help us reach carbon net zero

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Biodiversity Net Gain (BNG)

- Environment Bill currently in its final stages
- Includes the concept of BNG where developments have to show a net gain in biodiversity
- Likely to be about a 10% uplift requirement
- Where uplift can’t be achieved on-site, off-site improvements acceptable
- Will lead to a BNG ‘market’ where off-site BNG units can be sold to developers

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The value of BNG units

- Commercial value still to be assessed
- Indications are they could be valued between £15 and £25k per unit

- The two sites we've assessed so far show a potential uplift of about 270 units (based mainly on creating intertidal habitat
- This could equate to a value of between £4m and £6.7m

South Tees Development - Teesworks

- Largest industrial re-development outside of London
- 25 year development plan based on green technologies and carbon capture
- Will result in habitat loss – ironically high value habitats that have formed on former industrial sites

- Could be compensated for by BNG units from Tees Tidelands sites

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Tees Tidelands Demonstrator Site

- £6m UK Government innovation funding for a demonstrator project
- Tees Tidelands demonstrator site to:
  - Improve the flood resilience of Port Clarence
  - Restore intertidal habitat that will provide BNG units to trade
  - Provide a mechanism to locally trade in BNG units
  - Provide a circular funding source where income from BNG is reinvested in further habitat restoration and creation
- Business case currently being prepared with construction expected in 2023/24

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- In 2030 it will be the 200 year anniversary of the birth of new Middlesbrough
- A period of huge change – rapid industrial expansion and economic growth at the expense of the environment
- Loss of 90% of the original estuary – disappearance of marine mammals, fish and many bird species
- An area that has contributed significantly to the global climate emergency we face today

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- No further loss since 1970s
- The seals have made a recovery with a breeding colony of over 100
- Salmon have returned to the river
- Intertidal habitat is being restored
- Future green industry

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Excavators working on the breach.

Improved floodbank along the southern bank of Greatham Creek.

Greatham Creek flowing into realignment area.

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