

# An adaptation pathway in action: the Thames Estuary 2100 Plan



# Introduction



Photo Credit: National Police Air Service







City of London

Shoeburyness

Sheerness

Teddington

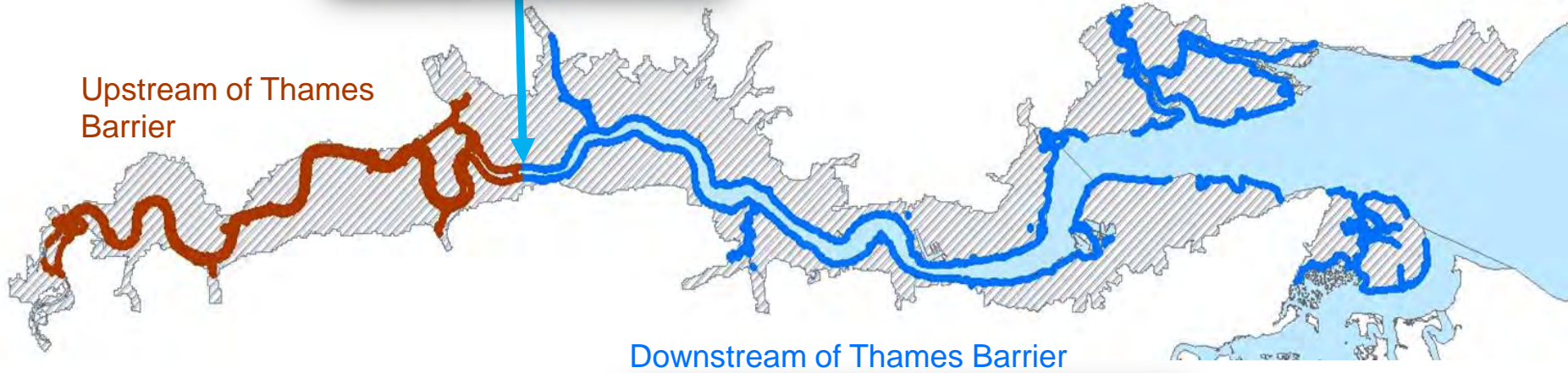




The Thames Barrier



Upstream of Thames Barrier



Downstream of Thames Barrier

River wall at the South Bank, Central London



River wall beside the 'Lobster Smack', Essex



Canvey Island - flood defence wall





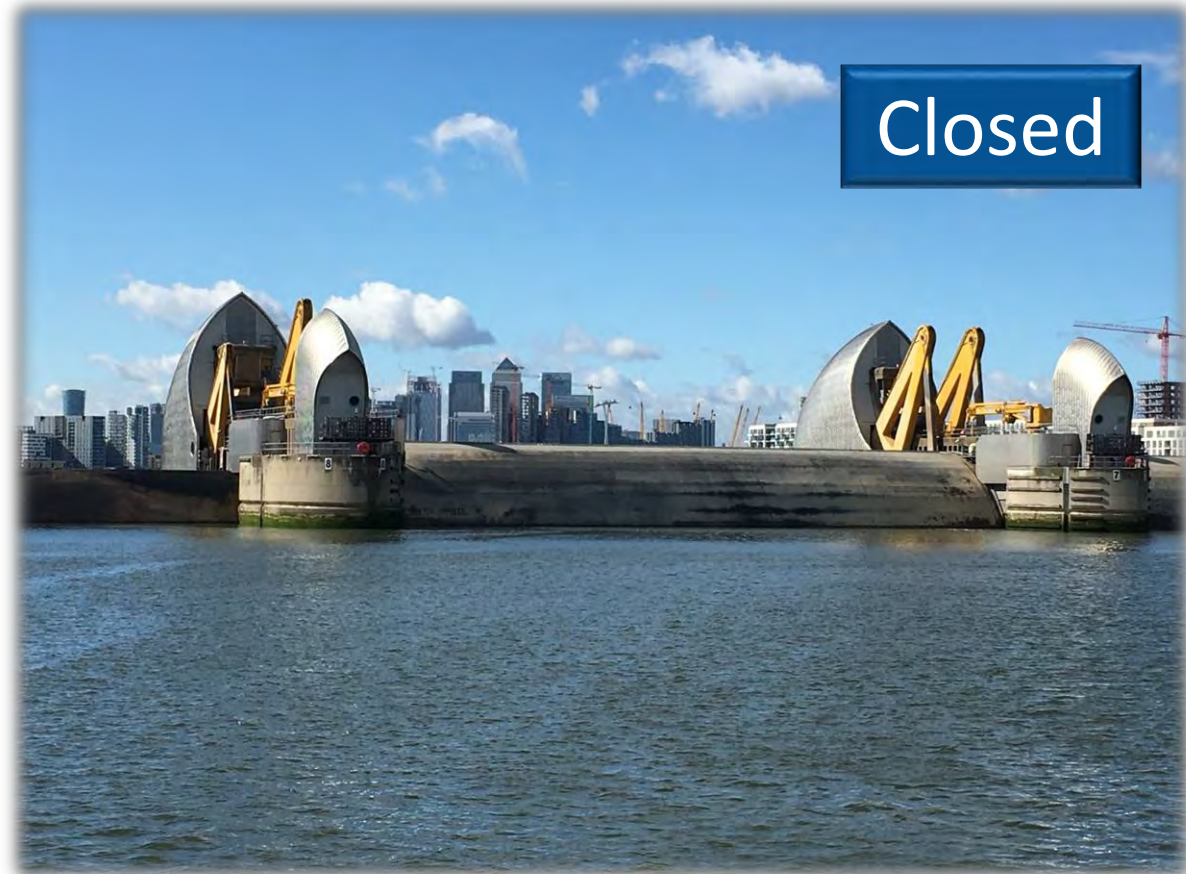


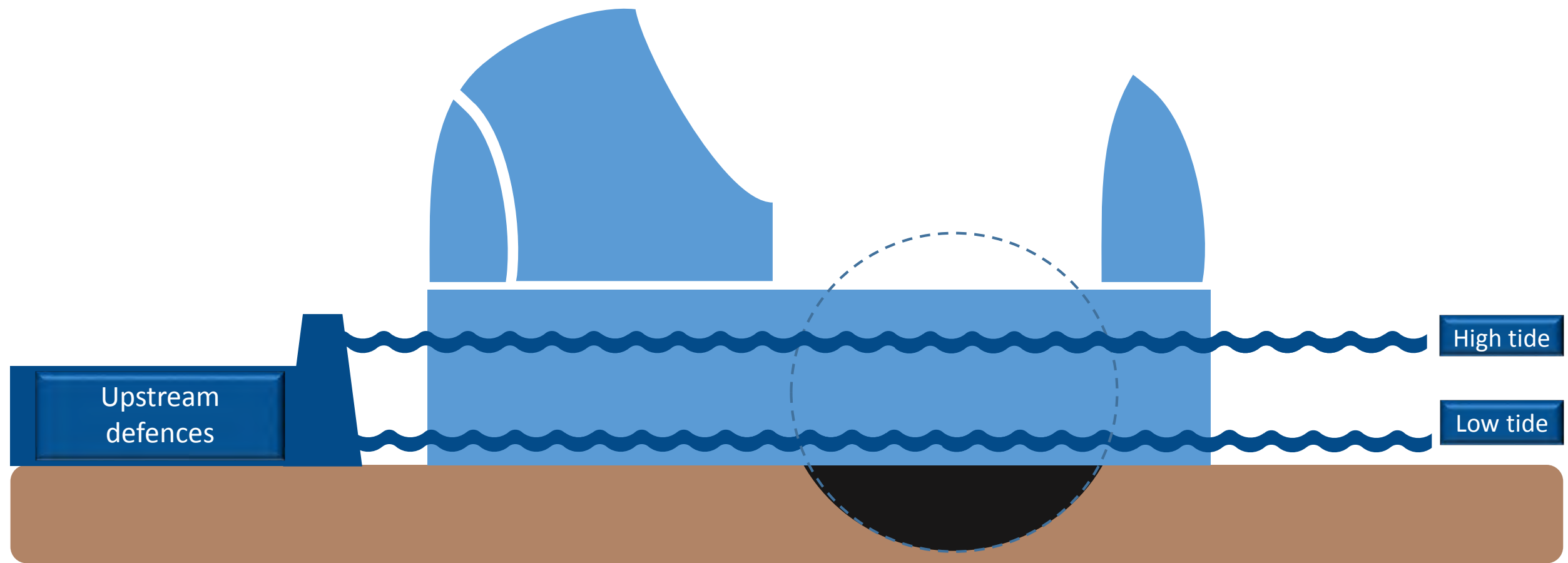


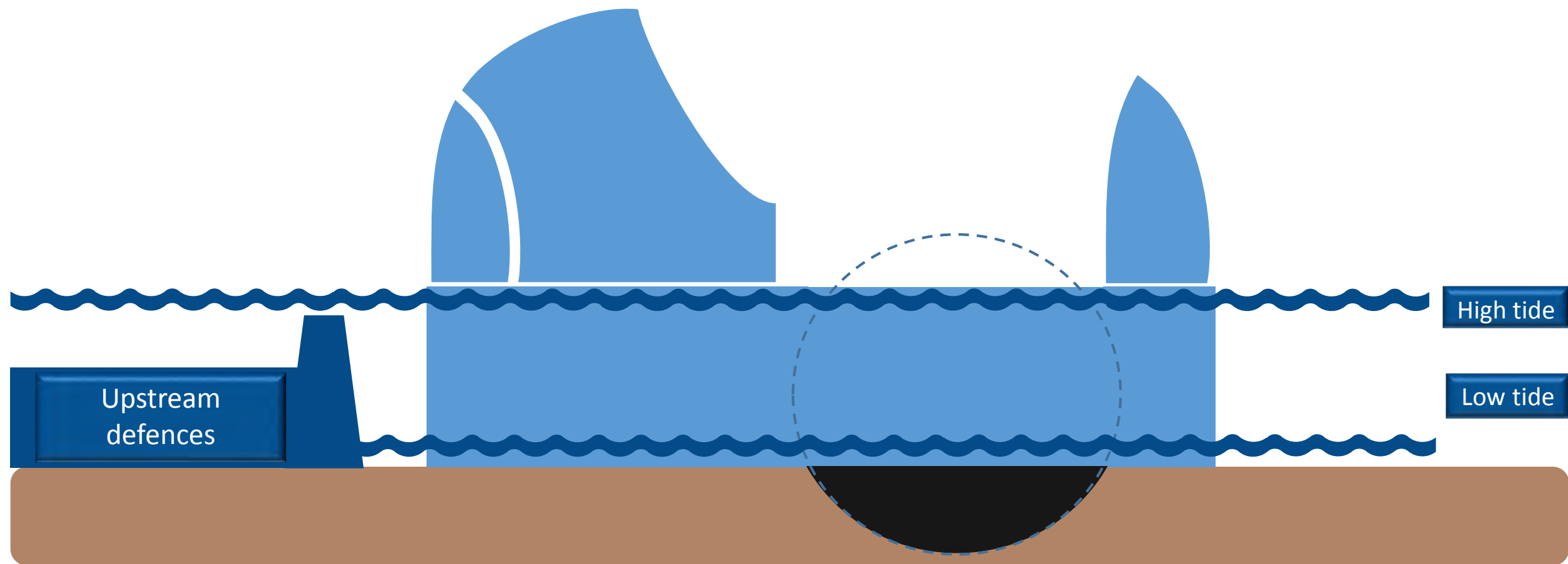
Open



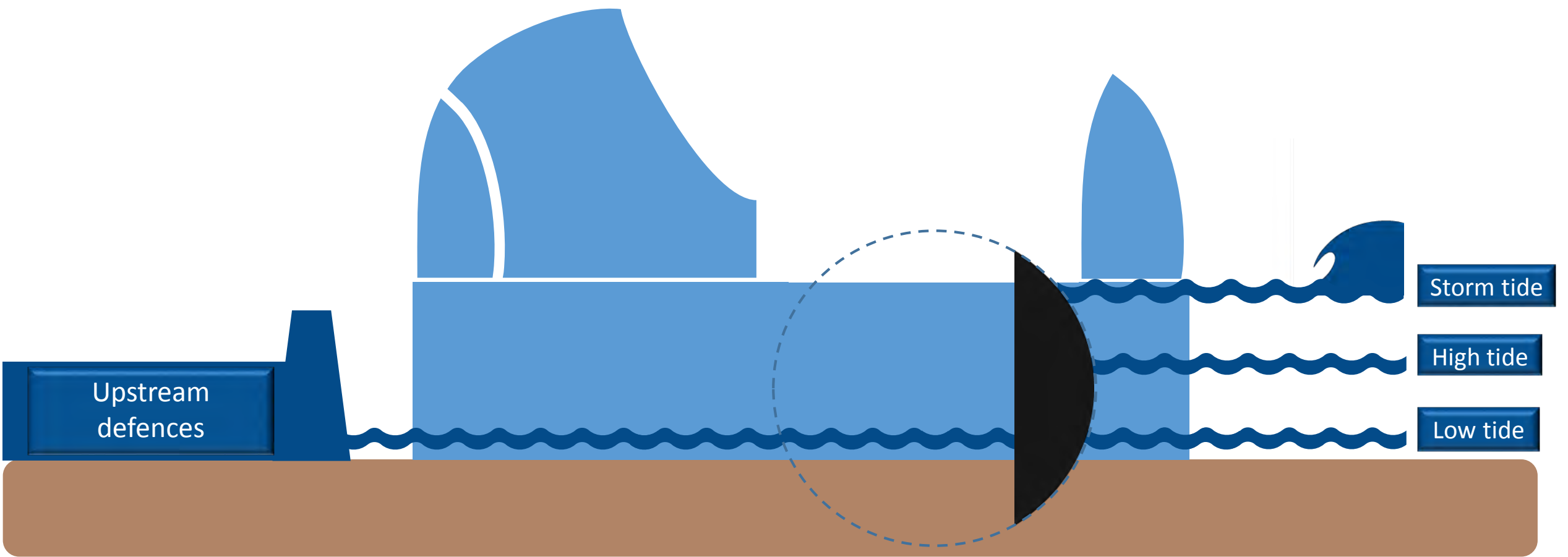
Closed













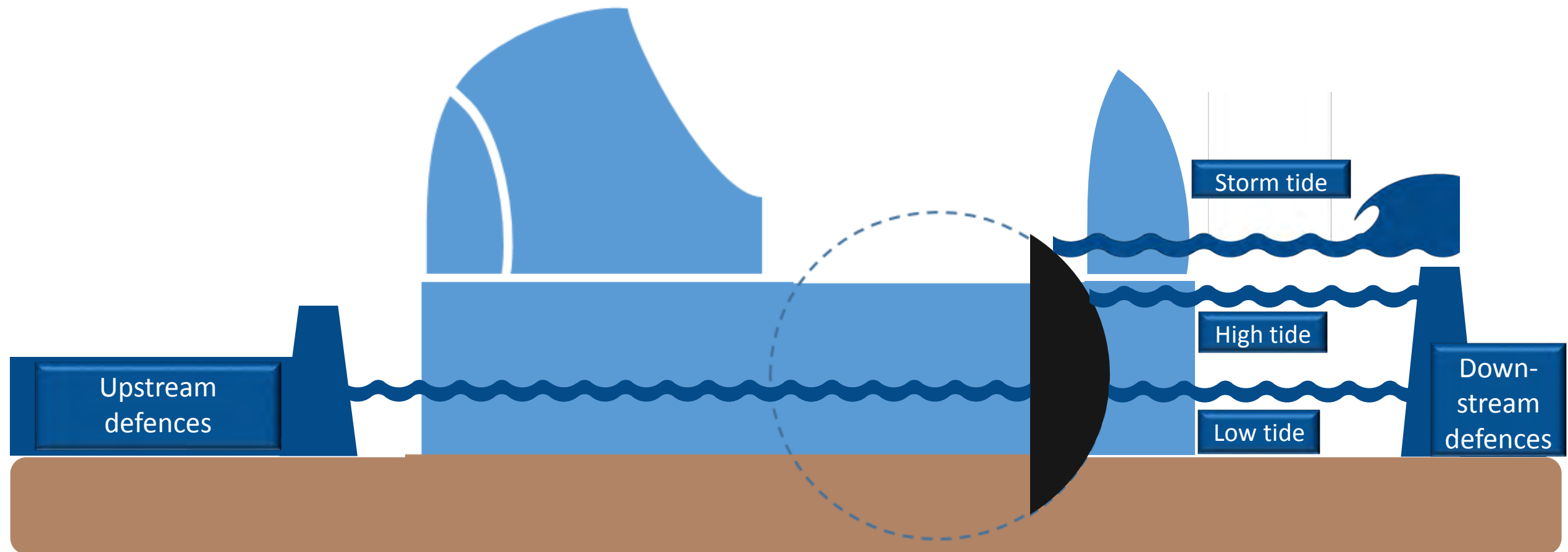
The diagram illustrates a cross-section of a river with various features. On the left, a dark blue rectangular block is labeled 'Upstream defences'. To its right is a trapezoidal embankment. Further right is a large blue structure with a curved top and a white line, possibly a dam or a large building. In the center, a dashed blue semi-circle is positioned over the riverbed. To the right of this is a tall, narrow blue structure. Further right is a smaller blue structure with a curved top. On the far right, a dark blue rectangular block is labeled 'Downstream defences'. The river is represented by blue wavy lines. The ground is a solid brown color. At the bottom right, there is a silhouette of a city skyline with various buildings, a bridge, and a crane.

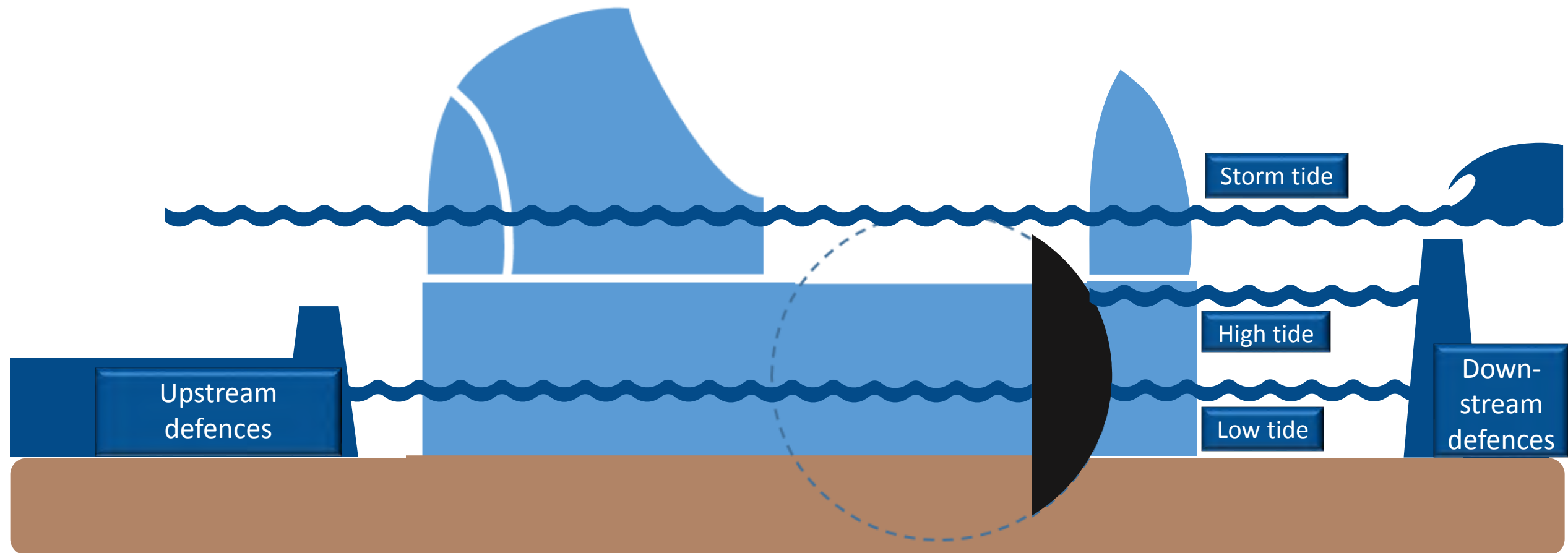
Upstream  
defences

Down-  
stream  
defences



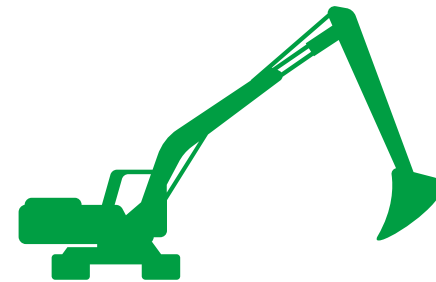
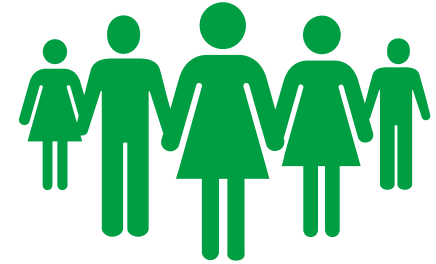








# Impact assessment



# The adaptation pathway

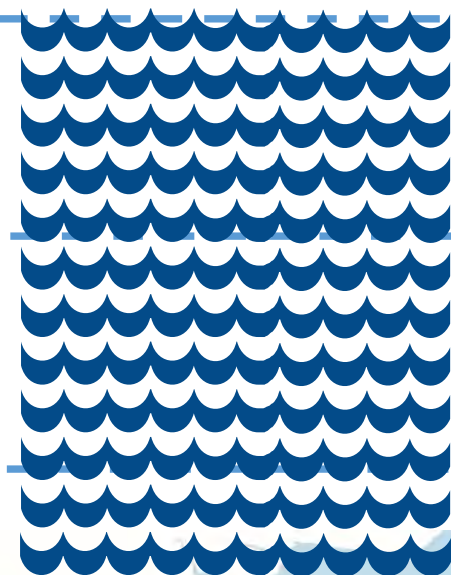


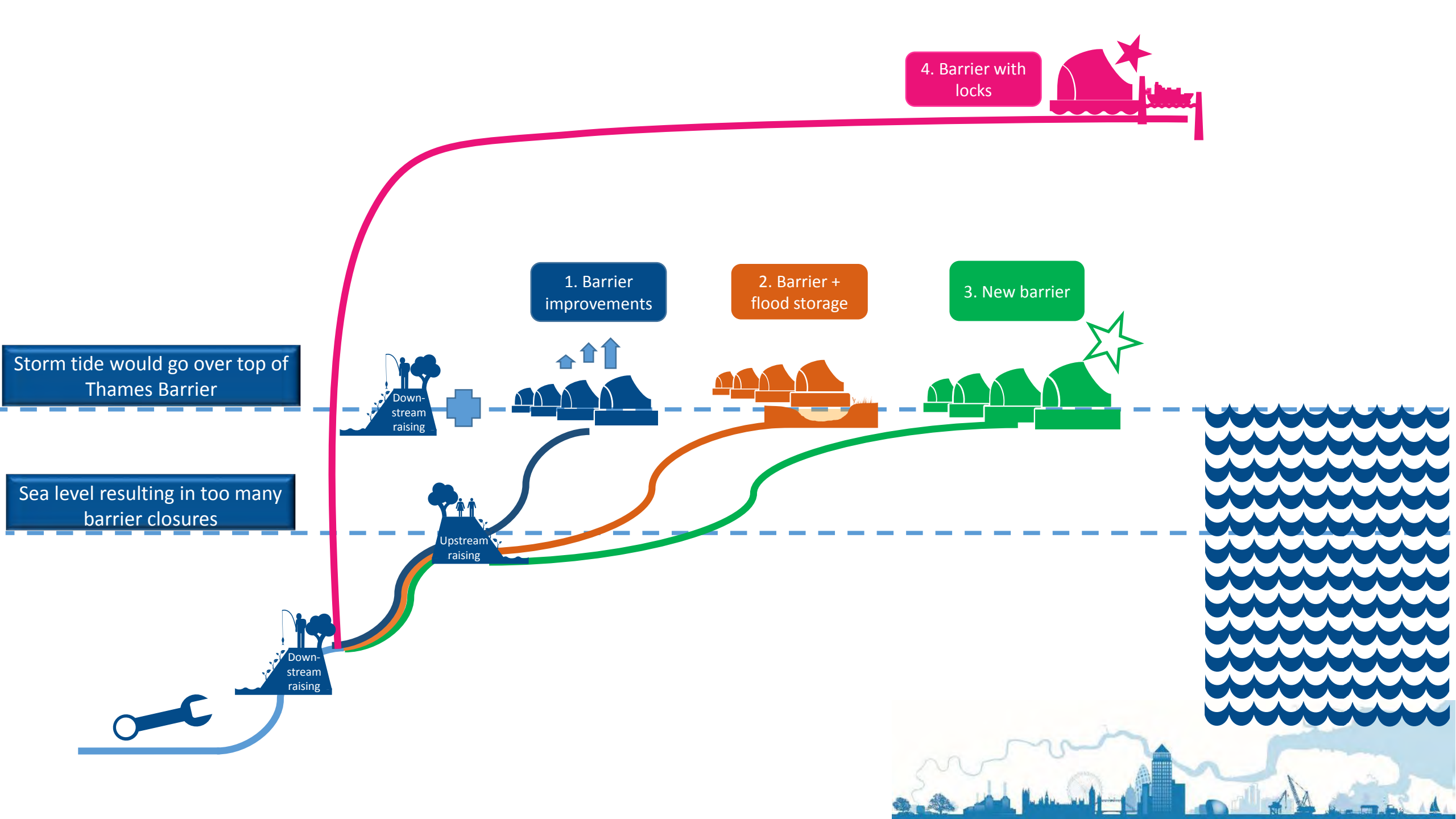


Storm tide would go over top of Thames Barrier

Sea level resulting in too many barrier closures

Storm tide would go over top of downstream defences





Sea level resulting in too many barrier closures after limit of defence raising reached

Sea level resulting in too many barrier closures

Storm tide would go over top of Thames Barrier

Sea level resulting in too many barrier closures

4. Barrier with locks

1. Barrier improvements

2. Barrier + flood storage

3. New barrier

Upstream raising

Down-stream raising

Upstream raising

Down-stream raising





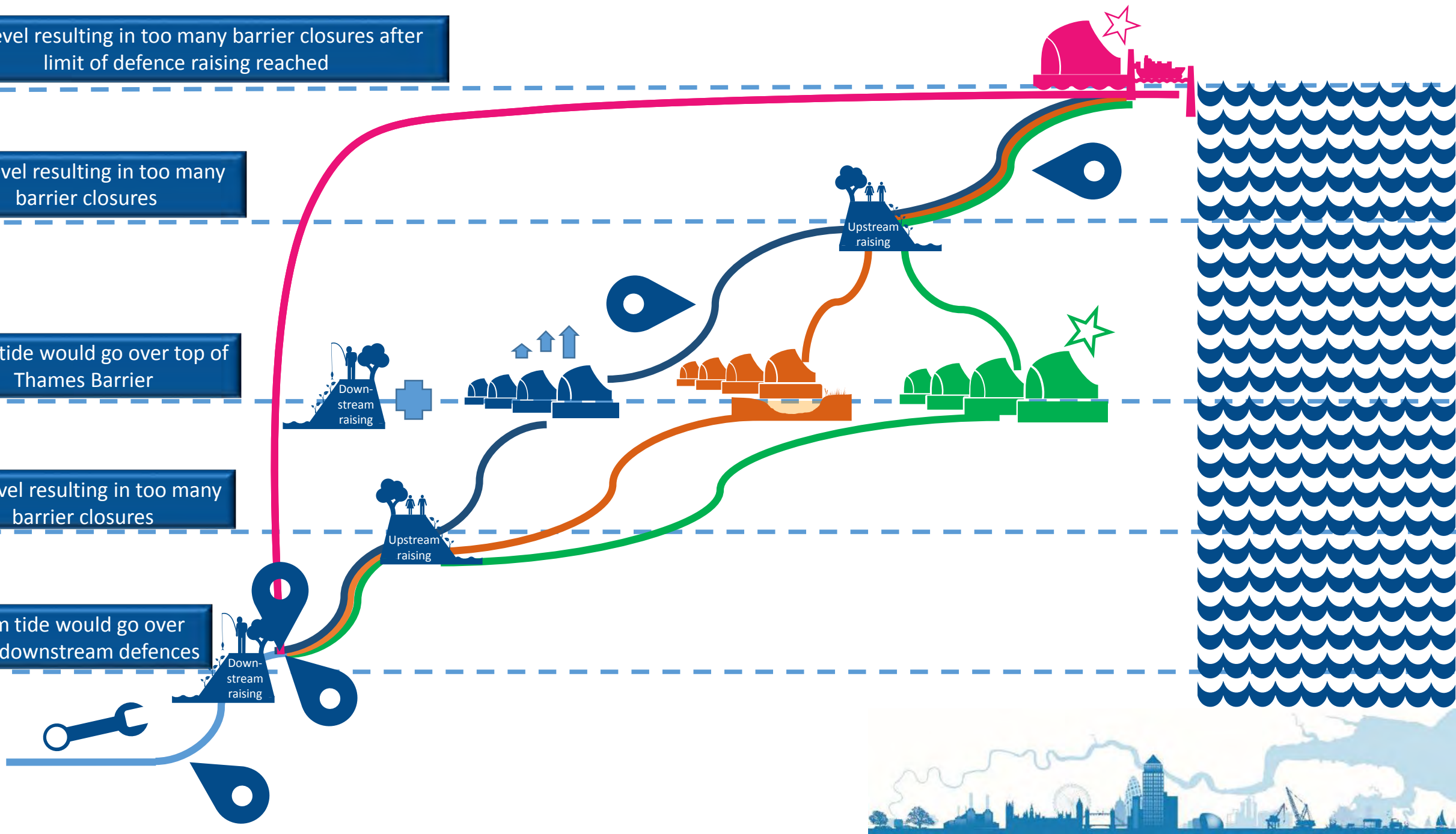
Sea level resulting in too many barrier closures after limit of defence raising reached

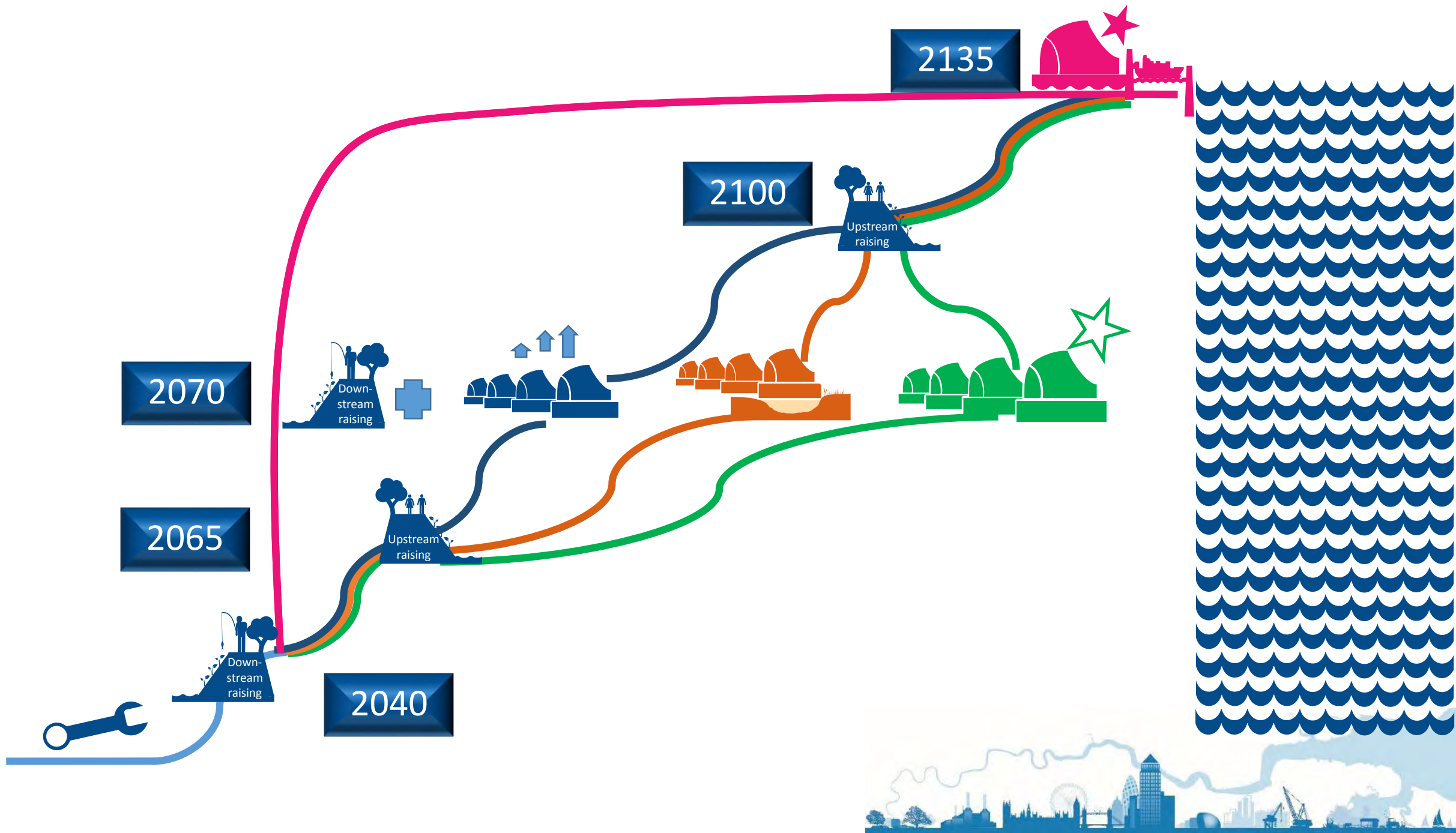
Sea level resulting in too many barrier closures

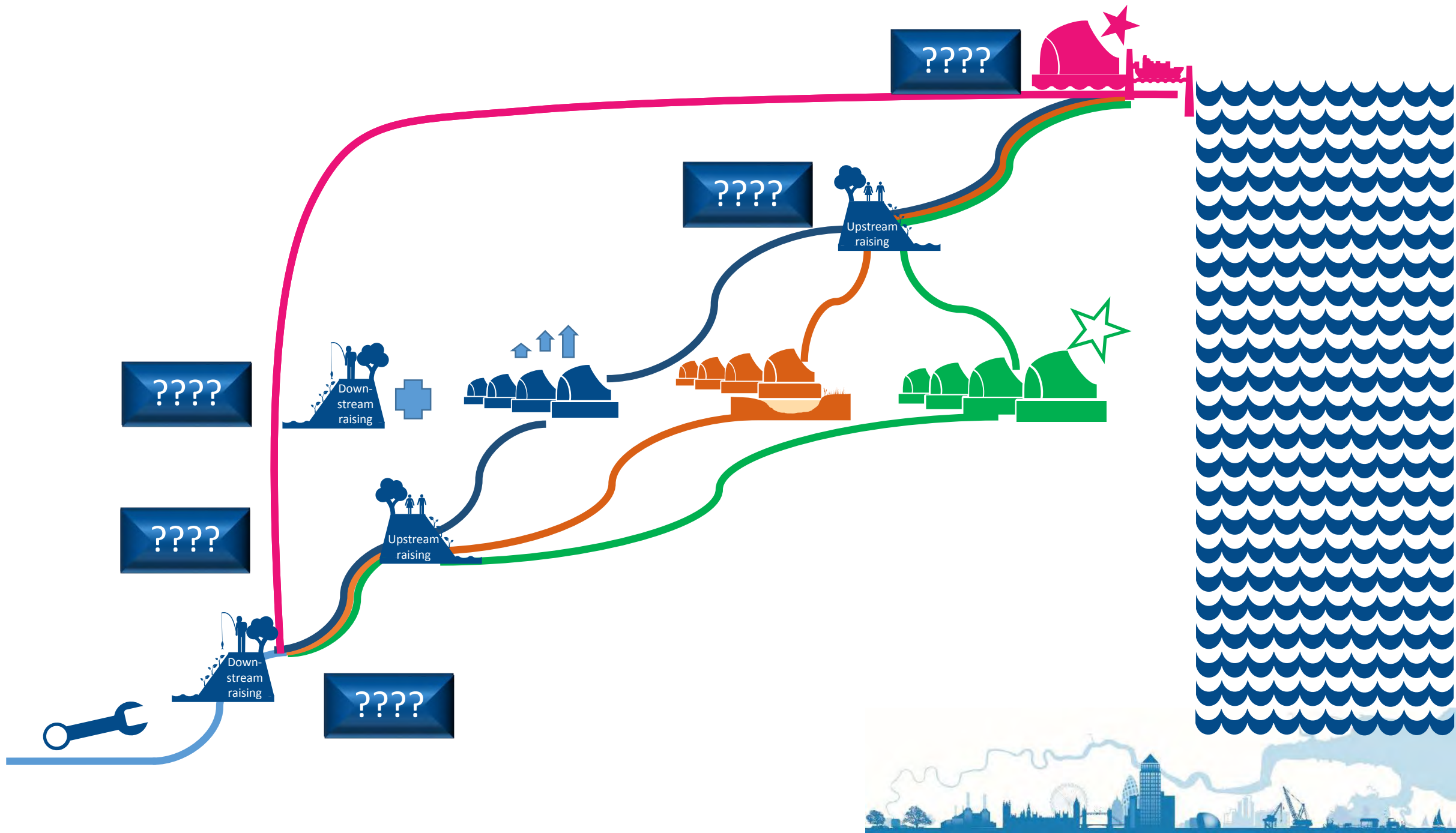
## Storm tide would go over top of Thames Barrier

Sea level resulting in too many barrier closures

Storm tide would go over top of downstream defences

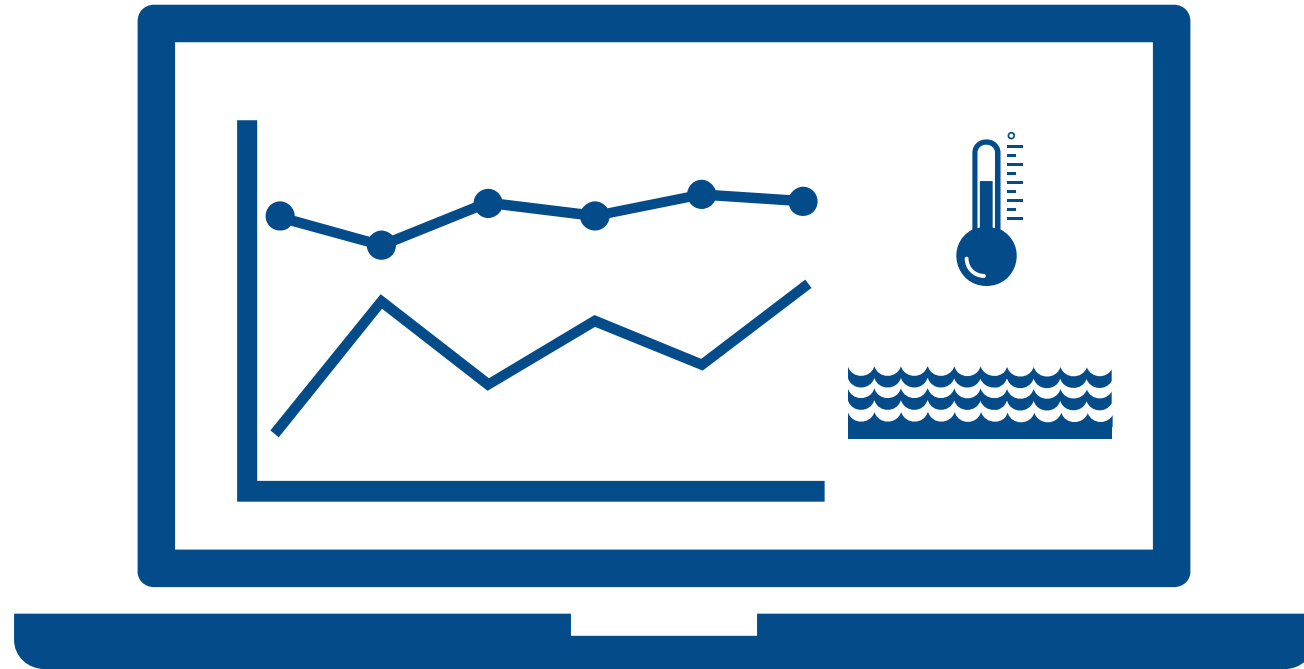








# Monitoring





**Sea level**



**Extreme water levels**



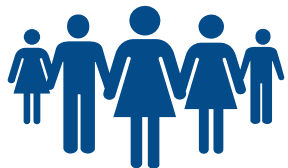
**River (fluvial) flows**



**Condition of flood defences**



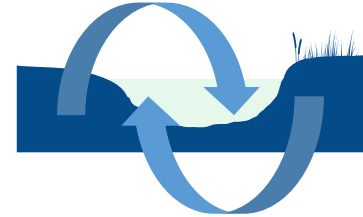
**Barrier operations**



**Public and institutional attitudes to flood risk**



**Habitat**



**Extent of erosion and deposition**



**Social, cultural and commercial value of the estuary**



**People, property, critical infrastructure and policy**



# Decision making in collaboration







Photo Credit: National Police Air Service



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