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**Delivering Network Rail Enhancement
Schemes in the Severn Estuary Region**



Overview

- The Greater West (TGW) works overview
- Benefits of TGW Upgrade
- Environmental Assessment and Consent requirements
- Sustainability on TGW
- Biodiversity No Net Loss Commitment
- Summary

The Greater West Programme



Benefits of Electric v Diesel Trains



- Better for the environment
- More reliable
- Emit around 20+% less carbon per passenger
- Quieter
- 27% more standard seats and faster journeys
- Lower maintenance and energy costs.



Total Number of Station
33

GWRM | Great Western
Route Modernisation

Building a Legacy

STAD: (Severn Tunnel Autumn Disruption)

00:01hrs Monday 12 September to
23:59hrs Friday 21 October



**THE
GREATER
WEST**
PROGRAMME
A modern railway for a better connected West

Environmental Impact Assessment for Severn Tunnel Works



- Environmental Statements for each Local Authority (www.networkrail.co.uk)
- Flood Risk Assessment for Scheme
- Ecology surveys – bats, GCN
- Habitat Regulations Assessment – Severn Estuary European designated site (estuarine and wetland habitats and associated species)
- Outcome – no significant effects if proposed mitigation implemented.

Consent Requirements for Severn Tunnel Works

- No Environmental Permit - confirmed by Marine Management Organisation
- West Tunnel Portal is listed built 1873-1886
- Listed Building Consent (LBC) required
- Process - Consultation on design detail prior to LBC application submission
- Local Planning Authority determination period – six months



The Greater West Sustainability Strategy - Guiding Principles

1. Biodiversity No Net Loss
2. Carbon and Resource Efficiency
3. Socio-Economic Benefits



A measurable net positive contribution to biodiversity in the UK

Minimising Loss during Electrification

Turning this:



Into this:



And safely operate this:



To build this:



No Net Loss Strategy



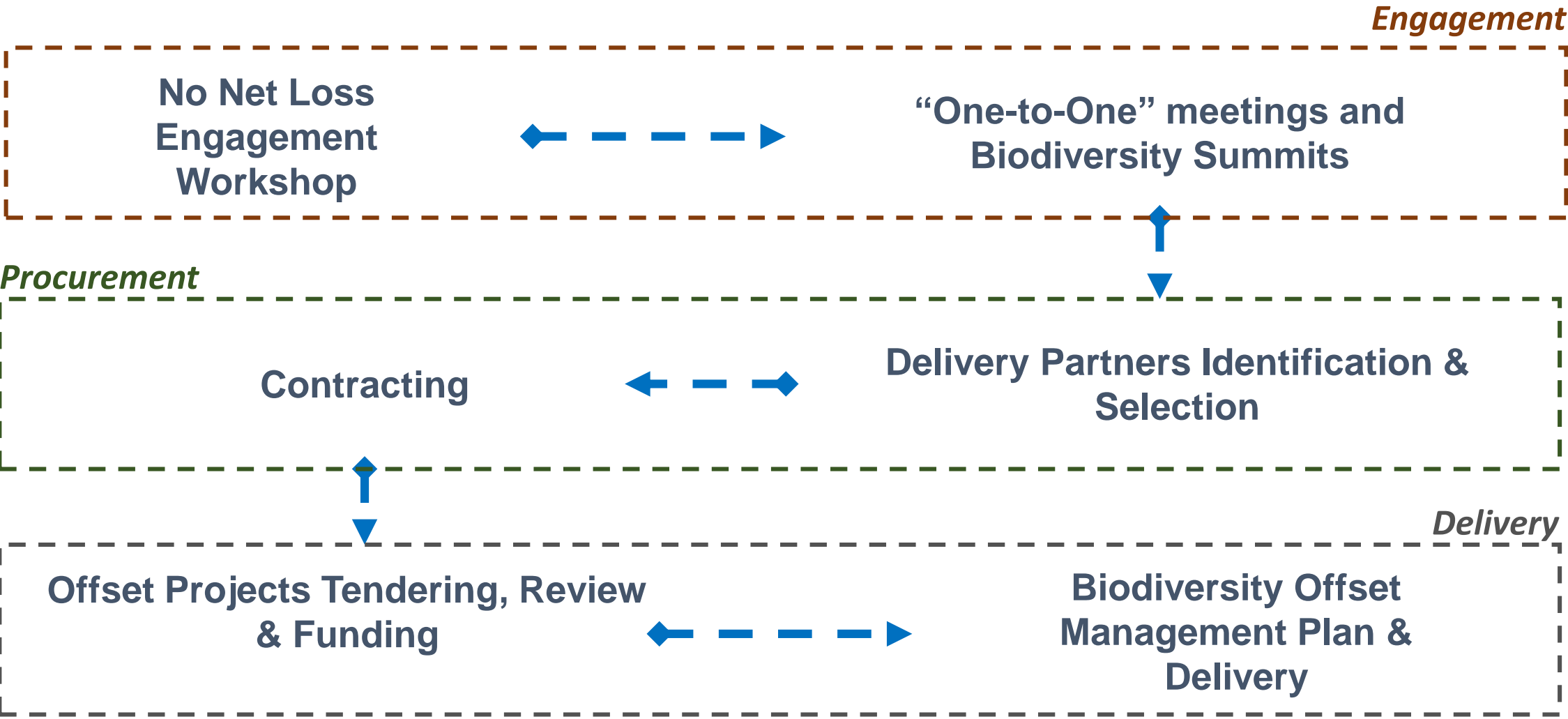
- Network Rail Infrastructure Projects (IP) voluntary commitment
- The Greater West as a Pilot project (Not to justify Vegetation Clearance)
- Mitigation Hierarchy (Avoid, Minimise, Restore & Offset as last resort)
- Step By Step approach:

1. Lineside Vegetation Clearance ahead of OLE construction (6.6m)
2. Lineside Vegetation Clearance post OLE construction (when necessary for the safe operation of the electrified railway)
3. Power & Distribution sites (Transformers)

Initial commitment for Electrification

4. Structure Clearance sites (Bridges & Stations)
5. Other sites (Compounds, Access roads, Track works)

Aspiration to include all works



Summary

- Great Western Mainline between Maidenhead and Cardiff electrified by 2019
- Electric Trains on the network from summer 2017
- Greater capacity and faster journey times
- Environmental Statements www.networkrail.co.uk
- Biodiversity No Net Loss Commitment - further info. email: claire.sweeney@networkrail.co.uk