Green Transport Corridors NEWP 32

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Project Aims

Ecological connectivity and ecosystem services

Transport infrastructure resilience

Win win opportunities
Network Rail + Highways Agency Challenges
A Partnership Project Involving

Humberhead Levels
NIA Partnership

Morecambe Bay
Limestones & Wetlands
NIA Partnership

Network Rail
NIA Focus

- Strategic areas for piloting new approaches
- Mix of road, rail and waterway infrastructure, plus urban and rural mix
- Already a focus for activity around ecosystem services, biodiversity enhancement, climate change and natural capital
Project Phases

• **Phase 1: 2013-Dec 2014**
  - International literature review
  - Opportunity mapping methodology, consultation, management option development and opportunity map production

• **Phase 2: Jan 2015-2017**
  - Trial management
  - Impact on network resilience, biodiversity and ecosystem services
Phase 1: International Literature Review
Phase 1: Literature Review – Key Findings/Recommendations

• Potential win-wins for the natural environment, people and the economy

• Inter-dependent relationship between transport and the natural environment.

• Soft estate can mitigate transport impacts and provide other services.

• The benefits/challenges vary across ecosystems services and management should be informed by these.
Phase 1: Consultation + Opportunity Mapping

Aim:

To identify opportunity areas on the soft estate for trialling new management approaches in 2 Nature Improvement Areas (NIAs)

Novel Feature

The Importance of looking over the fence
Phase 1: Opportunity Mapping

- Identified all priority habitats and ecosystem services habitats within 200m buffer

- Each 100m section of road or track was scored for priority habitat and ecosystem services
Management Options

Grassland

Woodland/Scrub

Wetland
Grassland
# Grassland

<table>
<thead>
<tr>
<th>Biodiversity benefits</th>
<th>Ecosystem Service Benefits</th>
<th>Infrastructure resilience benefits</th>
<th>But consider...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectivity between grasslands</td>
<td>Pollination</td>
<td>Enhanced safety – reduced tree and leaf fall</td>
<td>Specific species eg bats, barn owls</td>
</tr>
<tr>
<td>Mosaic approach</td>
<td>Biomass/wood fuel</td>
<td>Cost effective – reduced line closure costs</td>
<td>Priority/ancient woodland</td>
</tr>
<tr>
<td>Grassland species</td>
<td>Cultural service – opens up views - reduced driver stress</td>
<td>Potential to reduce accidents due to wildlife</td>
<td>No net loss of woodland</td>
</tr>
</tbody>
</table>
Woodland/Scrub
## Woodland/Scrub

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</thead>
<tbody>
<tr>
<td>Woodland/scrub species</td>
<td>Air quality regulation</td>
<td>Bank stability in some locations</td>
<td>Tree and leaf fall</td>
</tr>
<tr>
<td>Buffering surrounding woodland</td>
<td>Carbon sequestration</td>
<td>Cooling/shading – service stations, railway stations</td>
<td></td>
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<tr>
<td>Mosaic approach with increasing vegetation height at increasing distance</td>
<td>Cultural services – noise and visual screening</td>
<td>Reduce trespass</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water regulation</td>
<td>Windbreak if at safe distance</td>
<td></td>
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</tbody>
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Wetland
## Wetland

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<tbody>
<tr>
<td>Wetland species</td>
<td>Water quality regulation</td>
<td>Reduced flood risk</td>
<td>Soft estate or adjacent land</td>
</tr>
<tr>
<td>Buffering/connectivity with other wetland habitats</td>
<td>Water management</td>
<td>Maintenance</td>
<td></td>
</tr>
<tr>
<td>Habitat creation</td>
<td>Carbon sequestration</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Win-Wins

Soft estate woodland management

Infrastructure resilience

Pollination

Biomass
ADAS UK Ltd.
NEW P Transport
Green Corridors
Appendix 7a

Strategic Mapping - Management Options
Humberhead Levels NIA
Network Rail

- **Management options for soft estate < 50% woodland**
  - **Option A**
    - Woodland buffer contains woodland PH and/or woodland ES habitats
  - **Option B**
    - Wetland buffer contains wetland PH and/or water management ES habitats
  - **Option C**
    - Grassland buffer contains grassland PH or non woodland/wetland PH and/or pollinating ES habitats

- **Management options for soft estate ≥ 50% woodland**
  - **Option D**
    - Wetland buffer contains wetland PH and/or water management ES habitats
  - **Option E**
    - Grassland buffer contains grassland/wetland PH or other wetland PH and/or pollinating ES habitats

Drawn by B. Hardinge 13/05/2014, Verified by M. Fraske 13/05/2014
Phase 1: Opportunity Areas Identified
Ecosystem Services focus

Holistic
Spatially integrated
Strategic
Collaborative
Phase 2: 2015-2017

- Trial management in up to 6 opportunity areas in each NIA to ground-truth

- Shape & refine decision-making and management tools for transport soft estate staff

- Inform roll-out of the approach across the wider transport soft estate network
Why Engage with NR/HA?
Why Engage With NIAs?
Project Impact to Date

- Secured £3-4m delivery commitments from Network Rail and Highways Agency in the 2 NIAs for 2015-2017

- Informed and influenced the Roads Investment Strategy £300million environment fund with NIAs identified as target areas for biodiversity interventions

- Attracting wider interest from environmental and transport sectors

‘This project will make these areas better than ever, helping our vital pollinators by providing a home and food for them to thrive, as well as improving the weather resilience of our transport infrastructure which will boost our economy’

SoS – Liz Truss Dec ‘14