

Drainage Carbon Net Zero Plan

Category: Drainage

Carbon NetZero Goals and Key Deliverables



Phase I: (2021 – Q1 2023)

Key goals: Standardised solutions, sustainable materials/products, onsite recycling facilities in factories
Key deliverables: Improve productivity through more offsite construction, reduce whole life embodied carbon, reduce waste in manufacturing process

Phase II: (2023 – 2025)

Key goals: Making optimum use of the most efficient standardised designs, product solutions and installation methods, sustainable fuels for plant/equipment/vehicles
Key deliverables: Efficient construction methods, reduce installation and maintenance time, reduce waste. Reduce whole life embodied carbon

Phase III: (2025 and beyond)

Key goals: Adopt programmatic approach across all programmes, smart drainage systems and virtual construction methods
Key deliverables: Whole life embodied carbon reduction, efficient asset delivery and management

National Highways is committed to achieve decarbonisation in line with the Government’s decarbonation ambitions. NH is developing a Digital Product Catalogue to achieve standardisation of products. More offsite construction will reduce time, equipment, labour required on site and increase productivity. We are introducing more incentivisation in our procurement approach to suppliers adopting more carbon reduction initiatives

Category: Drainage

Carbon Reduction Initiatives/Opportunities in Drainage

Carbon Reduction initiatives

Main Actions and next steps



Phase I:

(2022 – 2023)

- Encourage uptake of products made with recycled and/or recyclable materials manufactured with 'greener' techniques and zero waste and more uptake of filter drain recycling as part of assessment of whether to do that recycling on or offsite
- Standardise products to ensure most optimal are selected, encourage bulk purchase to reduce waste
- Review performance of current materials

- Set our requirements and incentivise suppliers through (Total Value of Ownership) TVO for carbon reduction (supported by data)
- Develop Digital Product Catalogue, approval required by SES. Adoption of programmatic approach across all programmes
- Programme of testing at Moreton-in-Marsh for performance and productivity, collate data from this to establish optimal solutions



Phase II:

(2023 – 2025)

- Installation of drainage to be undertaken using sustainable fuels for plant and equipment. Vehicle share around and between sites for workforce. Regionalisation of workforce, sharing labour/plant/equipment for sites near to each other
- Efficient use of materials to reduce embodied and whole life carbon. Encourage recycling facilities to be implemented within construction sites.

- Rollout of TVO across all programmes in NH
- Whole life carbon considered and demonstrated within Drainage design and delivery
- Adoption of modern methods of construction across all programmes. Efficient logistics required to reduce waste. Electric charging points for plant/equipment near sites. Increase uptake in alternate fuels HVO, electric and hybrid - plant and equipment



Phase III:

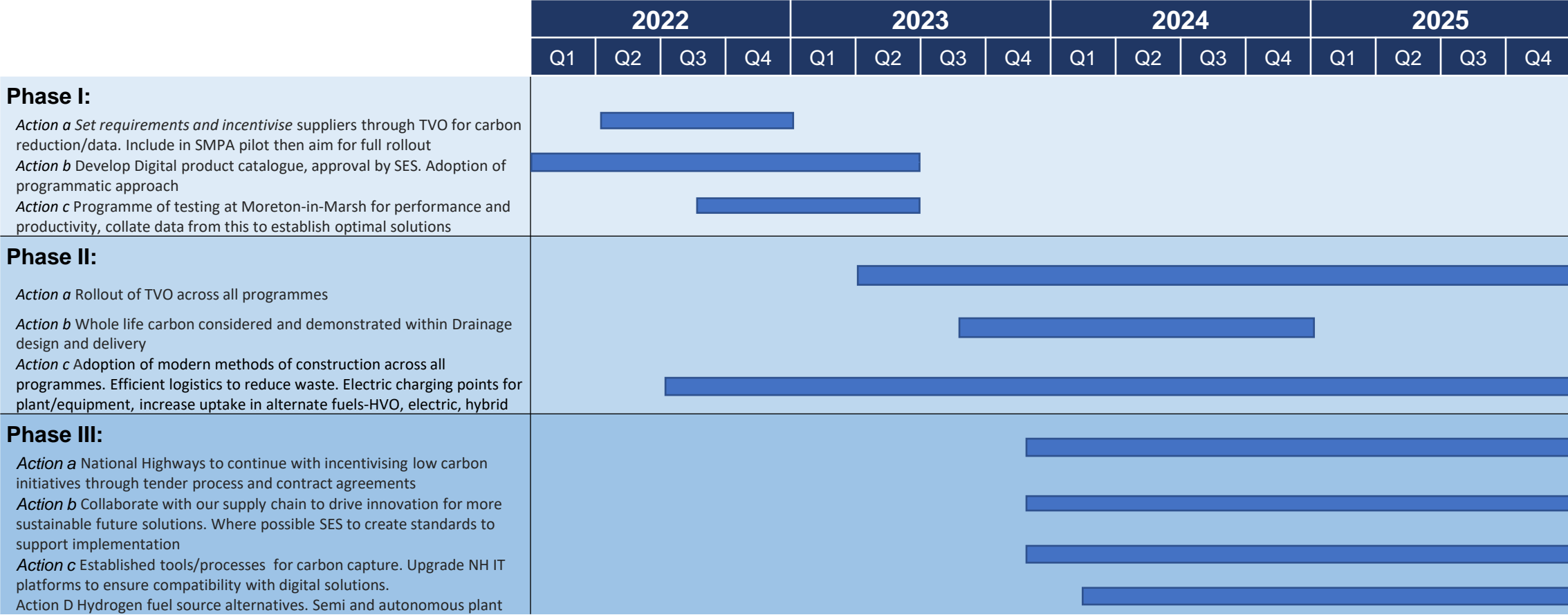
2025 and beyond

- Zero waste in manufacturing and installation of drainage. Default position is use of sustainable materials and products from DPC. Smart technology in drainage solutions
- Industry wide collaboration and engagement with working groups to increase uptake and realise carbon reductions
- Virtual construction/installation of drainage. Plant/equipment and vehicles using sustainable fuels only

- NH to continue with incentivising low carbon initiatives through tender process and including commitments into agreements. Embed operational requirements and maintenance standards into these
- Collaborate with our supply chain to drive innovation for more sustainable future solutions that consider maintenance too. Where possible SES to create standards to support implementation of these
- Established tools/processes for carbon capture. Upgrade NH IT platforms to ensure compatibility with digital solutions

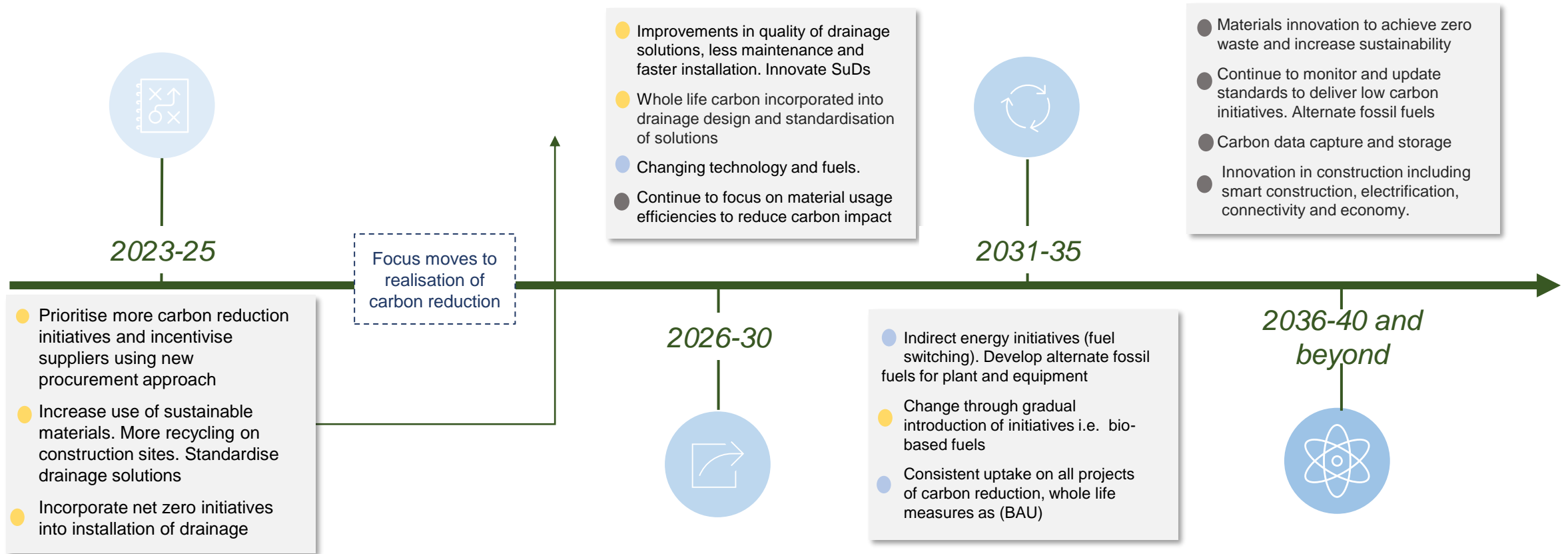
Category: Drainage

Detailed Timing Plan



Category: Drainage

Carbon Net Zero Initiatives Plan



It is key for National Highways to collaborate with the supply chain and wider industry bodies to achieve net zero by 2040. Trialling new and current drainage solutions on the SRN between 2023-2025 to gain knowledge of most optimal products and installation techniques. New technologies, fuel changes, a whole life carbon approach to design, delivery and materials will be key to meeting our ambitions.

Legend:

- Higher Impact
- Lower Impact
- Unknown Impact