WP5: Integrated Logistics

GIS Display & Overview

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GIS Display & Overview

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- GIS Model Integration
- GIS Tools Overview
- Model Format and Usability
- GIS Model Outputs

GIS Display & Overview

GIS Model Integration

- What is GIS? Geographical Information System
- The GIS tool & Deliverable 5.7 Holistic supply chain optimisation model
    - To display the data evaluated in deliverable 5
        - Quantities, Time frames, Flow rates
        - Warehouses, Manufactures, Plants, Suppliers and Ports
    - To display and utilise port databases and decision matrices compiled and evaluated by Hull and T5.3
    - To graphically display the optimised data outputs from the Portsmouth models and T5.5.

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GIS Tools Overview

- A database with geographical information for the display of WP 5 data and assigned attributes to each of these layers

- GIS LEANWIND Tool Kit developed in *QGIS*
  - Land Routing
  - Shipping
  - Port Selection
  - Traffic Flow
  - Rapid Estimation

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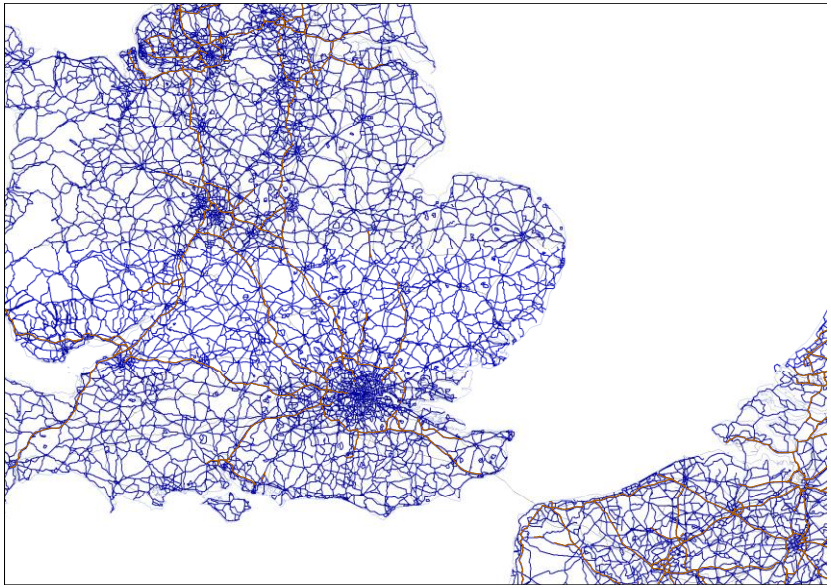
GIS Tools Overview

- Land Routing
  - Operates with a series of Routing Options: Rail, Road, Minor Road
  - Favourability for continuous routes and major road networks
  - Rail routing can also be selected
  - Start & end point Inputs



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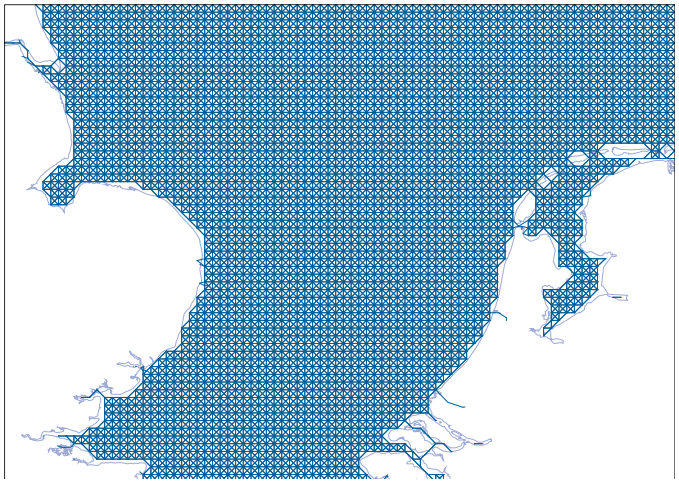
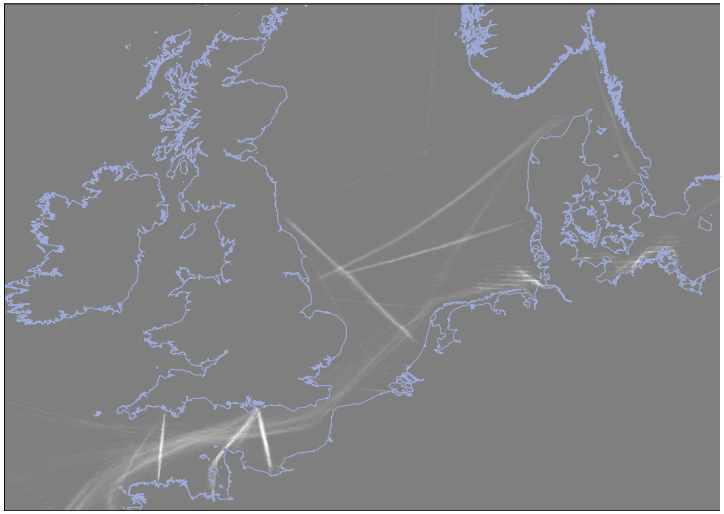
GIS Tools Overview

- Shipping
  - Operates on a two part system
    - Navigational grid
    - Naval shipping density data
  - Weighted % 50/50 for equal parts speed and established routes
  - Start & end point Inputs





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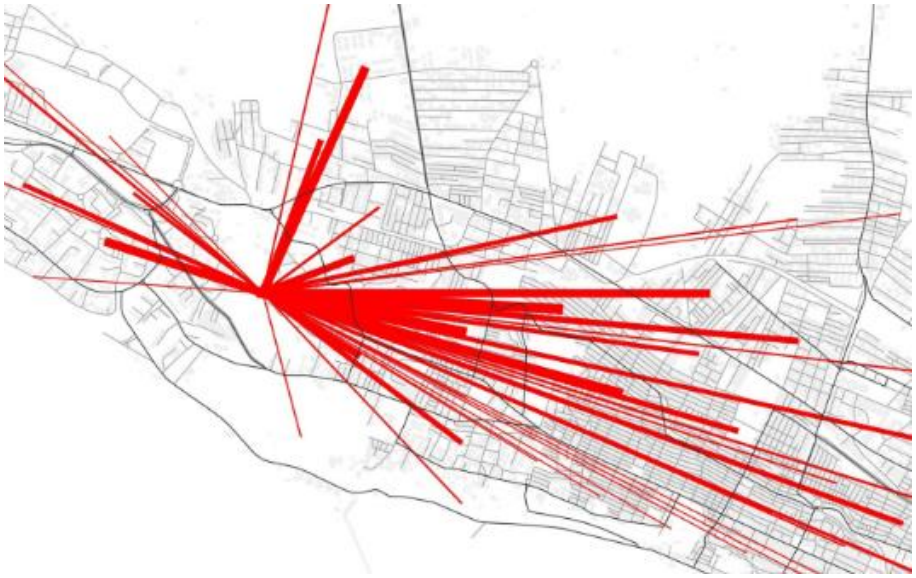
GIS Tools Overview

- Developed in QGIS
  - Developed to be User defined and friendly
  - GUI Click boxes
  - Accompanying Help how to guide
  - The integration of Flow Mapper tools to illustrate the flow and density of components flow traffic along routes



QGIS Flow Mapper (QGIS Model Example)

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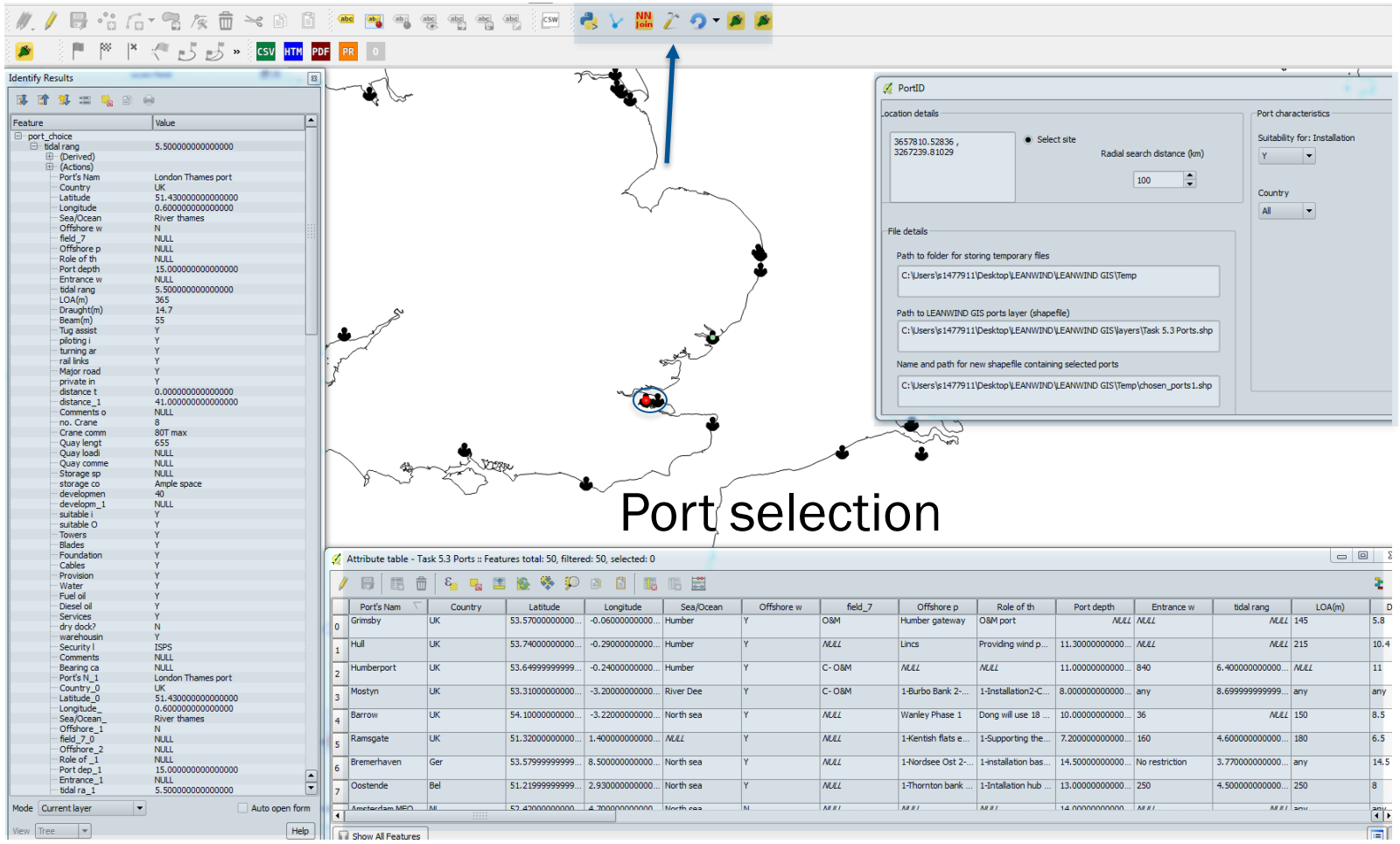
GIS Tools Overview



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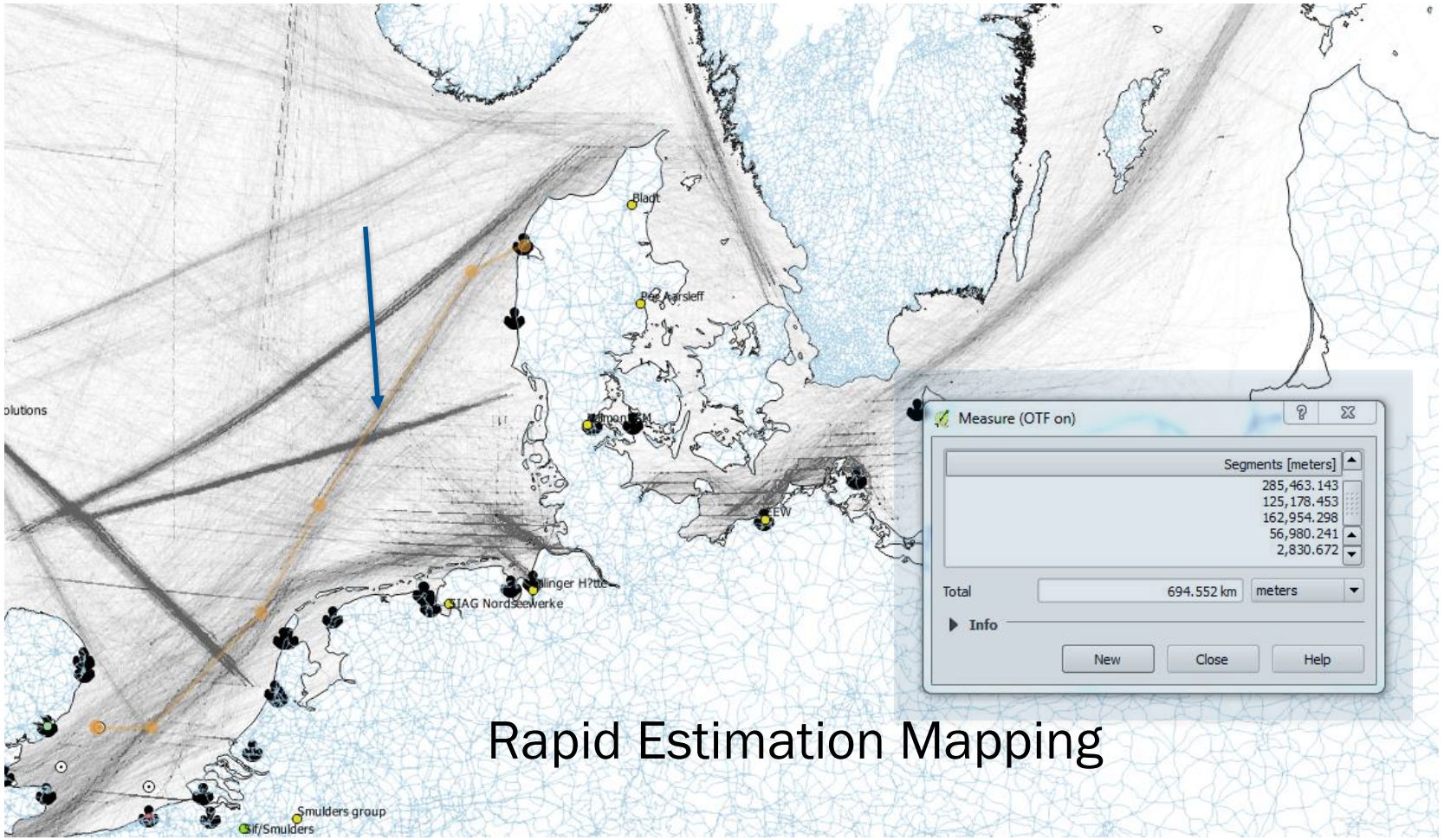

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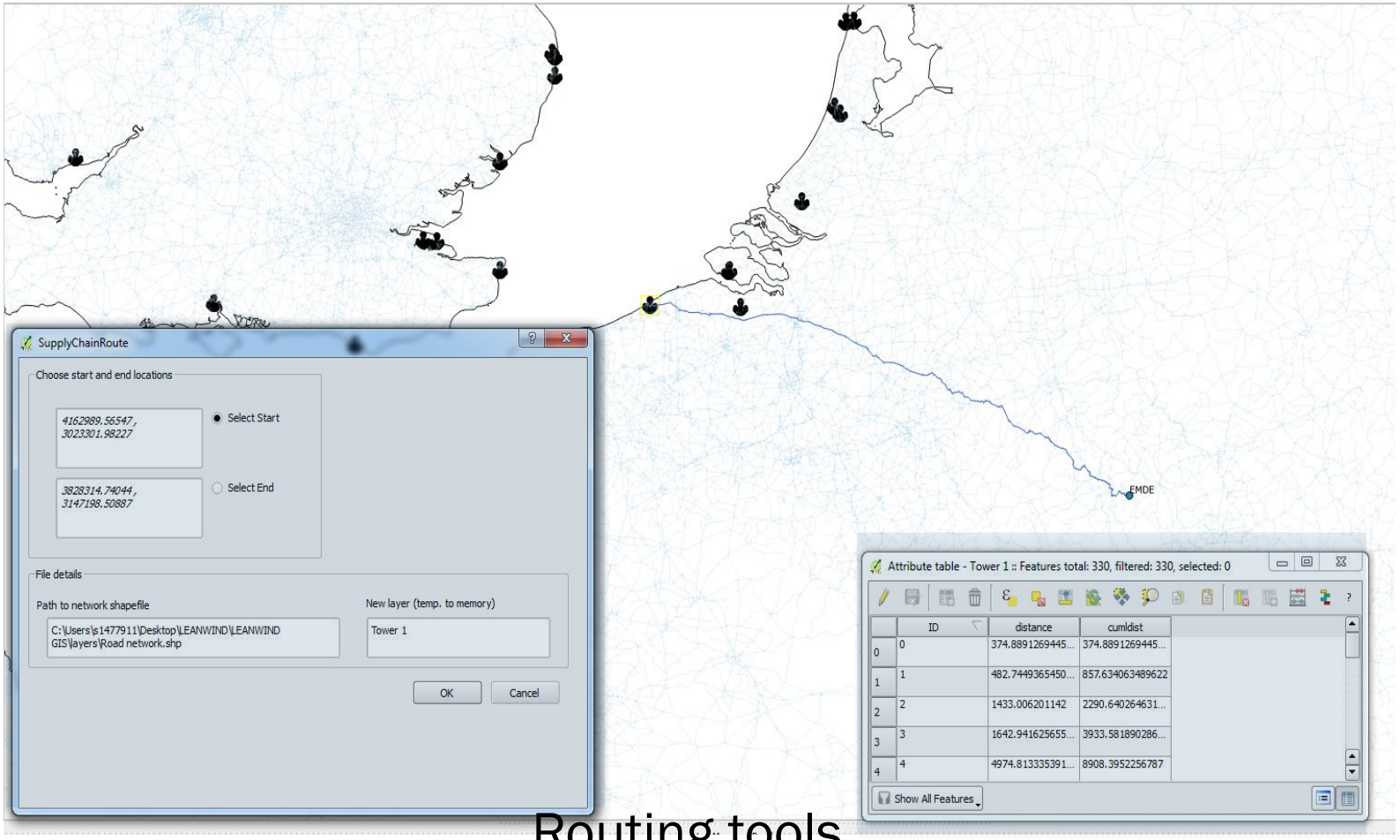

Routing tools

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GIS Model Outputs

The following displays have been loaded with some of the data outputs provided for several cases with the West Gabbard LEANWIND Site.

- Installation, Harwich & Oostende
- Operations & Maintenance
- Decommissioning

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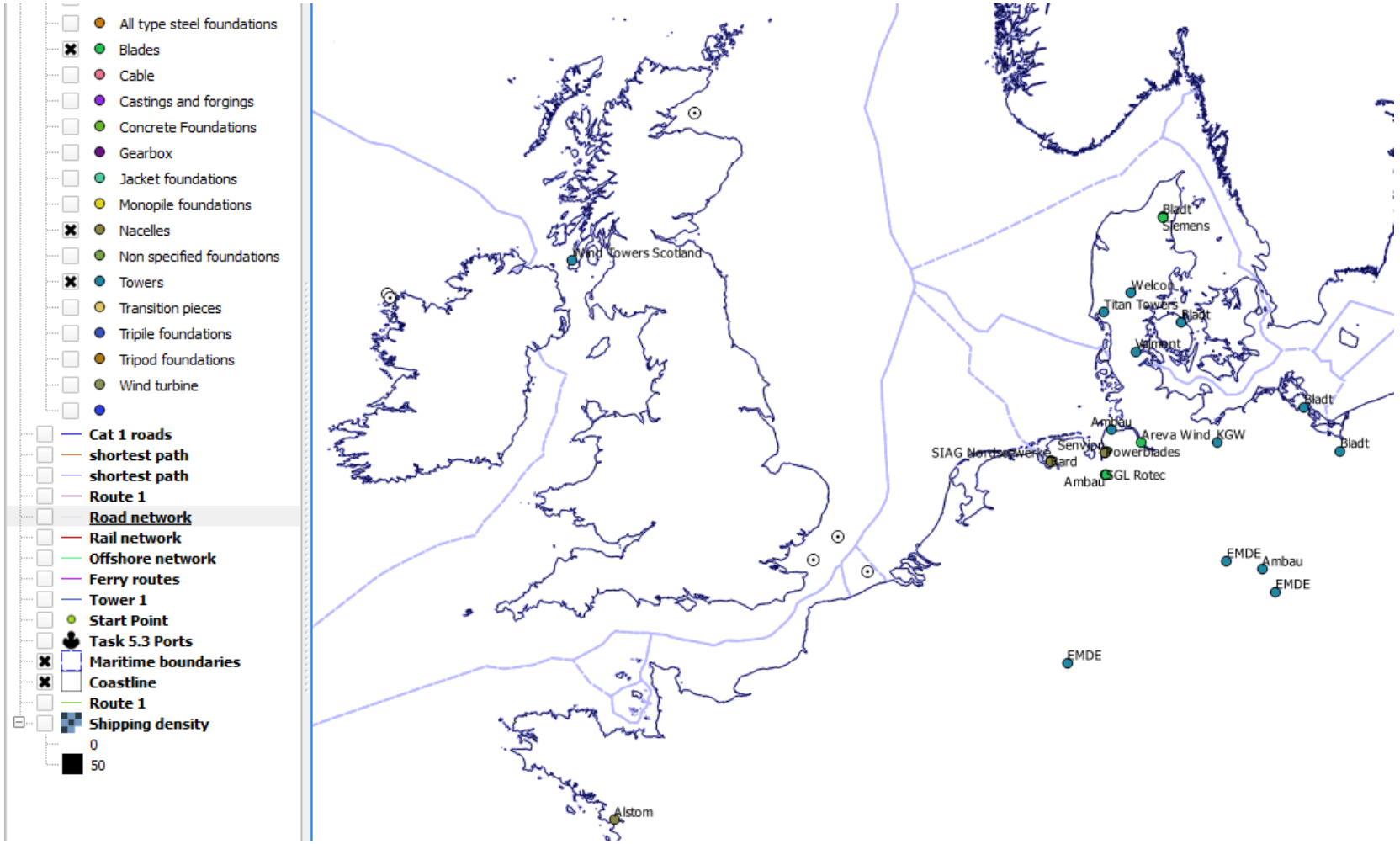
LEANWIND Sites and Sample components



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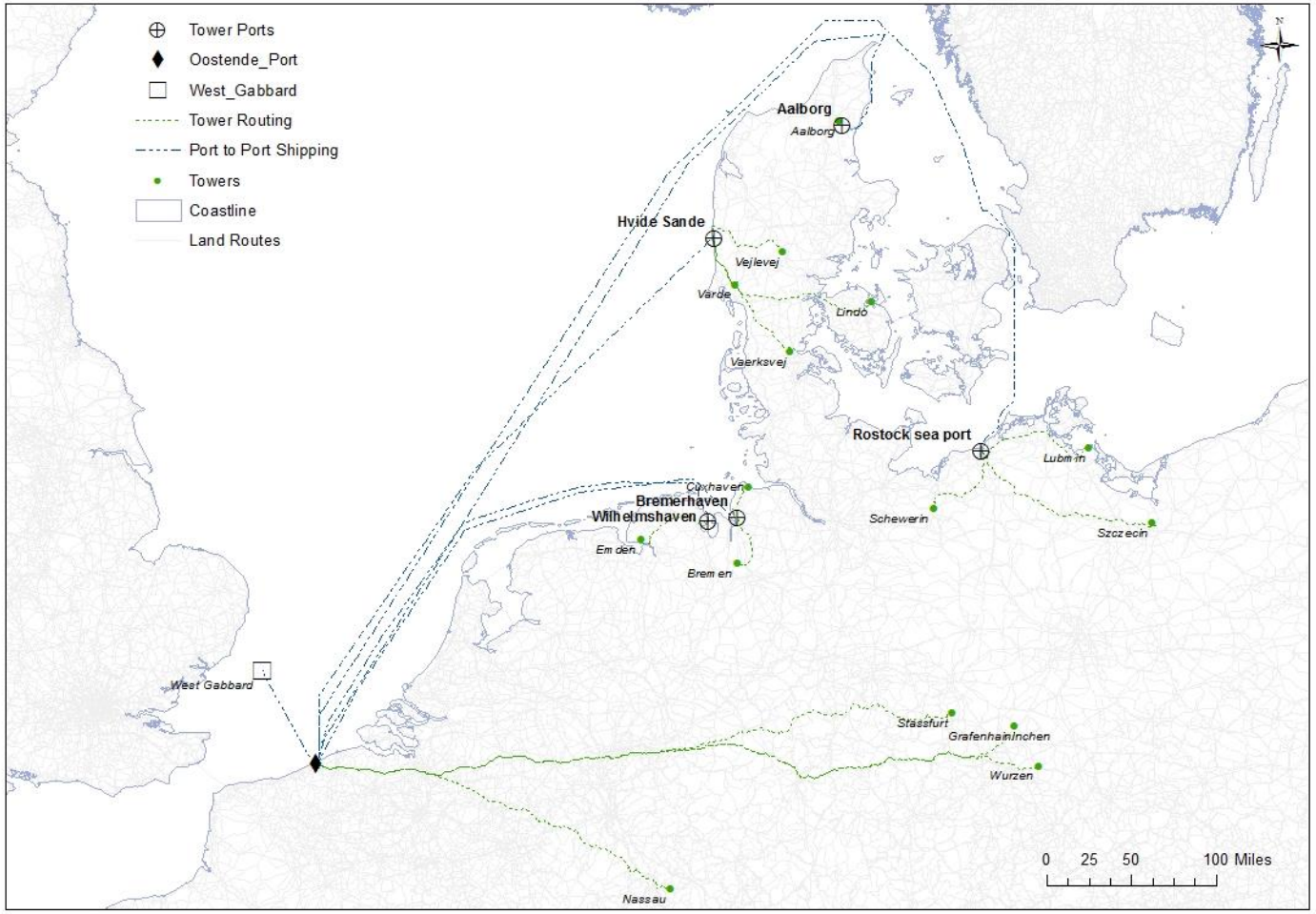
Installation Phase: Oostende – Tower Component Flow



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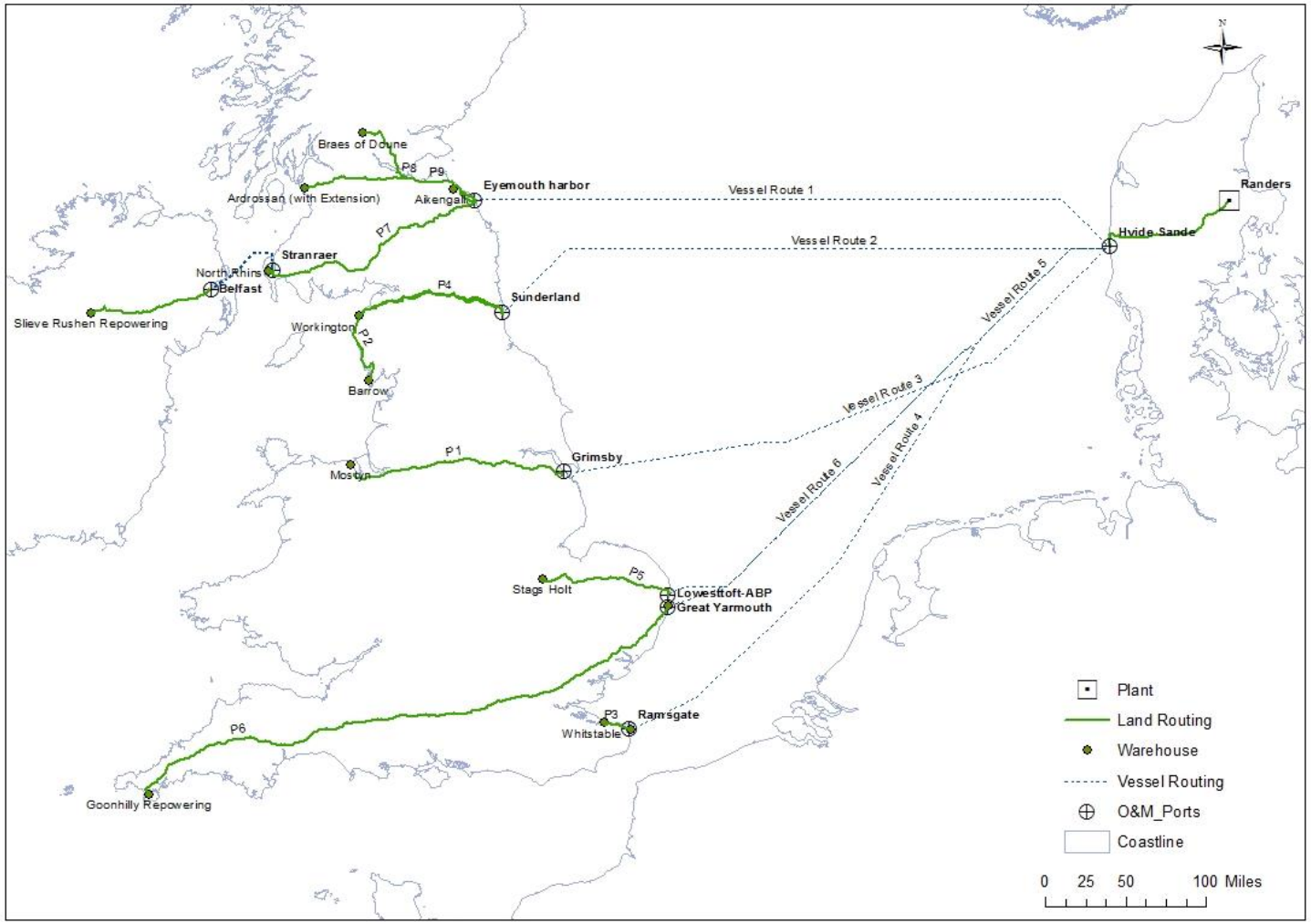
Operations & Maintenance: Plant to Warehouse



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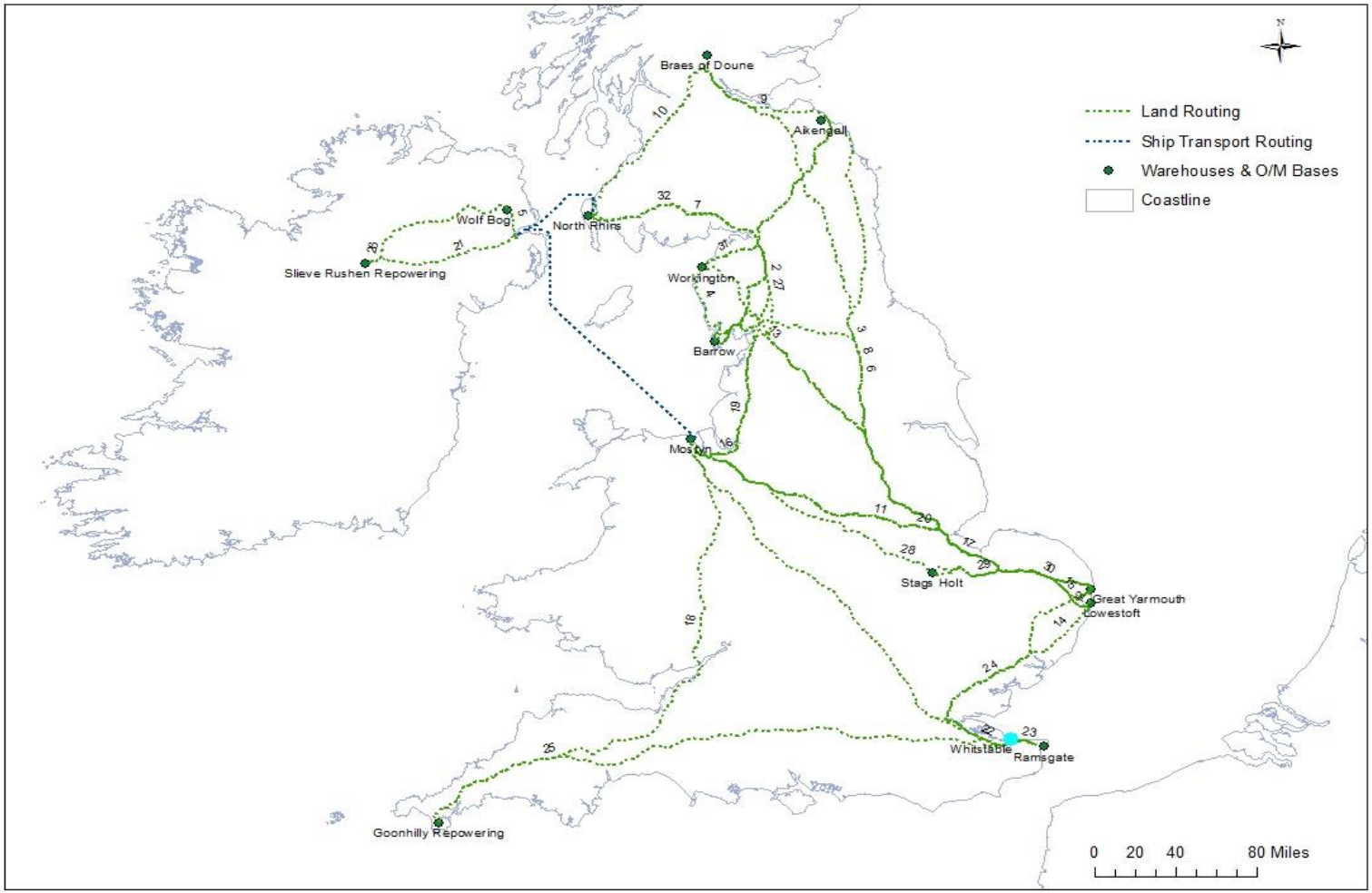
Operations & Maintenance: Warehouse to O & M Base



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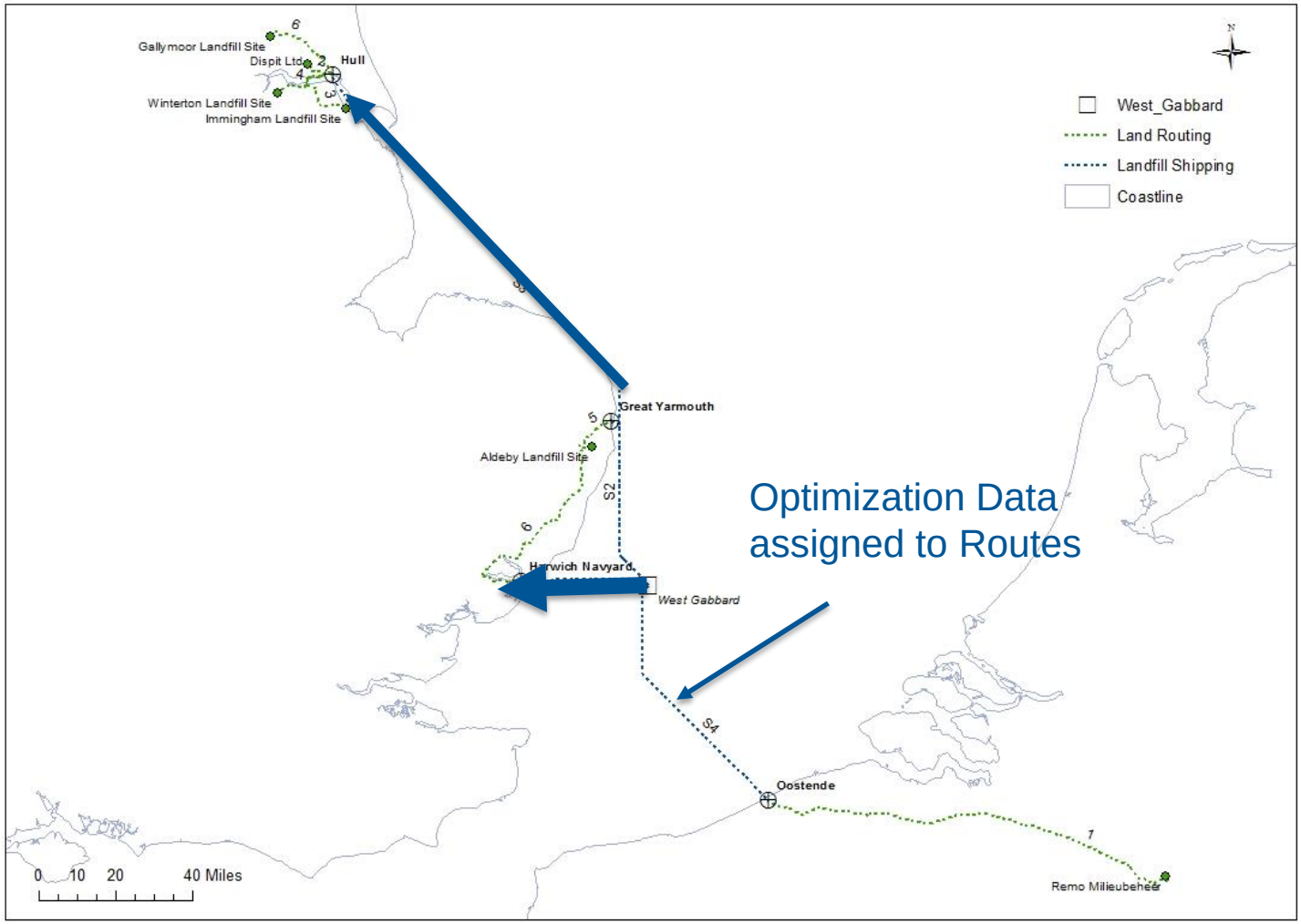
Decommissioning: Non recyclable components to landfill



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Any Questions..?

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Thank you very much
for your attention

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