national highways

# Logistics Category Profile

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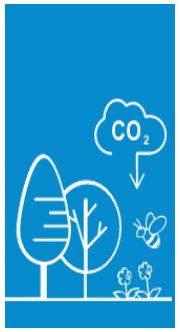
# Executive Summary

"Logistics is the flow of funds, goods and information between origin and usage. Logistics involves information, material handling, production, packaging, inventory, transportation, warehousing and often security“ **CIPS ‘Right materials at the right place at the right time’**

**Current Status:**

- Logistics has historically been delivered through Tier 1 main contractor arrangements, with an acknowledged lack of spend data, performance measurement and common metrics.
- Resistance to change - stakeholders cautious as perceived as major Industry step change and latent risk. Lack of Logistics understanding, Strategies, knowledge and empirical evidence required (M4 ‘pilot’ to M3 ‘proof of concept’) to assess, replicate and grow model organically.




## Challenges:

- **Safety:** Risk of Safety Alerts due to complexity of Road Safety Standards and lack of rigour and enforcement.
- **Implementation:** Lack of Spend data, evidence and current understanding of potential. Recognising quality, safety and customer impact are all factors.
- **Supply:** Opportunities not necessarily capitalised on and thinking as a collective (NH and supply chain) requires vision and development.
- **Demand:** Currently demand planning is weak offering little useful information to the business or our partners.
- **Carbon Targets:** Risk of not achieving targets unless proactive measures are prioritised, and significant influence for other Categories.
- **Early Engagement:** Early engagement project management & key stakeholders to endorse and promote.
- **Standardisation:** Standardisation is fundamental to transit from baseline understanding to latent scope.
- **Working together:** Establishing working groups across the existing sub-categories, eg Gantries, Pavements and into Major Projects and Operations.

## To fully address the challenges and to align with our imperatives, the strategy recommendations are as follows:

- Follow DfT Directive and **deliver Road Safety Standards** Matrix, to reduce WRRR. Improved Safety through strategic alliance between DfBB and Industry Road Safety Schemes.
- Drive **implementation** and prove potential through a Logistics ‘pilot’ scheme to Proof of Concept (PoC) Project, aligned with Innovation ReApplied.
- Work with Industry **Suppliers** to capitalise on latent capability of effective Logistics, LEAN, JIT, through synergy of objectives.
- Effective **demand** planning to unlock market opportunities and plan programmatically, to benefit all investment programmes.
- Increased focus on introducing low **carbon** technology, SIP P3 Carbon Reduction Working Group and other Category dependencies.
- Early **engagement** and development of PoC with Tier1s, and internal/external expertise Logistics expertise.
- **Standardisation** of data, metrics, definitions and methodology, that National Highways would own. Based on MMC and CLPs.
- Collaborative **working** together with Industry expertise to drive and realise efficiencies.

# Key Aims of the Strategy

**Alignment** in Safety and Risk Reduction (DfBB & CLOCs), and Industry best practice. Reduce Work Related Road Risk.

**Improve Innovation** by optimising Modern Methods of Construction (MMC), and Construction Logistics Plans (CLPs), capturing asset storage, final mile delivery (Just in Time), compliance, consolidation and optimal vehicle utilisation – projects delivered in shorter timeframes.

**Roadmap to Carbon Net Zero** aligned to strategy implementation and supplier targets. Reducing CO2 and carbon footprint, year on year, with aligned reduction in environmental impact, noise pollution and an improvement in air quality.

**Create Value** through programmatic approach to scheme delivery and reduction in delay risk. Drive efficiencies through productivity, cost savings and reduced timescales - aligned to our Customer Maturity Strategy, Strategic Delivery Plan etc.

**Standardisation** through the Digital Products Catalogue and Innovation Reapplied. Gather intelligence including data, metrics, definitions and methodology - complements our digital transformation ambitions.

**Shape the Market** through an Industry step change, allowing National Highways to pioneer Safety enhancements, increased productivity, reduced programme risk and improved cost planning/management.

**Proposal** is to pursue these themes through exploration of Preferred Logistics (PL) suppliers, engaged by Delivery Partners or within Joint Ventures. Market leading Logistical experts providing solutions to Tier 1 & 2 Construction provider *Or, promote, engage, recruit T1 in-house expertise to take ownership of Logistics as a major facilitator.* To counter perceived Risk, strategy will identify a pilot project, to assess viability, risks and potential.

# How will this deliver to the Business Objectives…

The problem statements/challenges addressed within the Logistics Strategy can be summarised in the National Highways core values;
**Safety** - to reduce Work Related Road Risk/Safety Alerts and align with Government Road Safety Standards.
**Customer Service** - increase customer satisfaction through reduced road closure time, less noise, better air quality, and a lower carbon footprint.
**Deliver Efficiencies** - better VfM through Modern Methods of Construction and Construction Logistics Plans providing platforms for programmatic planning, to proactively introduce effective Logistics through programme accuracy/stability, enhanced quality, capturing asset storage, final mile delivery (JIT), compliance, consolidation and optimal vehicle utilisation eradication of malpractices.

| Directorate | Benefit/Objectives | Short | Medium | Long term |
|---|---|---|---|---|
| **SES** | ▪ *Reduce WRRR and Safety Alerts, LTI & KSIs*<br>▪ *Align with DfT Road Safety Standards matrix, including FORs & CLOCs for Industry parity*<br>▪ *Deliver to carbon target, through reduction in Logistical activity and associated efficiencies (technology, alternative fuels, programmatic planning)* | ▪ *SES engagement with DfT to lead on Road Safety Standards, with pan-Government collaboration*<br>▪ *Identify NVA activities, reduce and measure carbon reduction* | ▪ *Promote matrix to reduce WRRR and associated Safety Alerts*<br>▪ *Ensure Industry compliance through rigour*<br>▪ *Contribute to SIP P3 Carbon Reduction process* | ▪ *Maximise Safety awareness and minimise Road safety risk*<br>▪ *Engage and lead Industry on Carbon reduction* |
| **Major Projects** | ▪ *Deliver to efficiency targets through MMC & CLP to ensure better VfM*<br>▪ *Promote Programmatic Planning (Control Tower concept) to optimise JIT/LEAN principles, reducing NVA activity and waste*<br>▪ *Increased data sharing to enable National Highways to become a more intelligent client*<br>▪ *Standardisation through the Digital Products Catalogue and Innovation Reapplied. Gather intelligence including metrics, definitions and methodology* | ▪ *Progress from Logistics 'pilot' to 'Proof of Concept' within SMPA, to assess viability, risks and potential*<br>▪ *Develop working group with key stakeholders to ensure buy-in*<br>▪ *Align with HELMA to establish baseline and scope*<br>▪ *Raise profile and understanding of PoC through Innovation ReApplied* | ▪ *Cross Category collaboration to understand Logistics synergy and scope (PID 74)*<br>▪ *Share best practice from PoC, to enable Project leads to consider latent potential*<br>▪ *Gather evidence of efficiencies, including; cost, time, safety, carbon*<br>▪ *Promotion with wider Industry, Tier1 & 2s* | ▪ *Replicate areas of best practice across RIP/CIP & LTC*<br>▪ *Continually promote and pioneer Logistics engagement and planning as fundamental platform for efficiencies*<br>▪ *Maximise cross Category potential for driving change*<br>▪ *Consider 3 or 4 PL options for entire projects* |
| **Operations** | ▪ *Deliver to efficiency targets through Preferred Logistics options to ensure better VfM* | ▪ *Provide PoC evidence for consideration in contract phasing & renewal* | ▪ *Share best practice to ensure intelligence gained enables informed decisions* | ▪ *Work more collaboratively* |

# Snapshot on the future vision

**Short-Medium Term**

Combine Safety with Logistical Efficiencies

impacts

## Shaping the market

- Pioneer **DfT direction to improve Road Safety** through standards matrix, for adoption by Industry. Reduce H&S Logistics related incidents (RTAs, LTI & KSIs) and improve Work Related Road Risk standards. Achieve and promote formal Strategic mutual recognition of DfBB and Industry standards (eg CLOCs/FORs).
- Promote MMC and CLPs, encompassing innovation, standardisation, installation solutions and the sharing of Best Practice.
- Efficient Logistics 'deliver' improved Project timescales, scheme delay risk reduction, enhanced Customer satisfaction and a reduction in CO2.

**Medium-Long Term**

Change NH Procurement Approach

impacts

## Shaping the future

- National Highways to lead on Road Safety, working within pan-Government on initiatives, approach and adoption of rigour. Promoting and championing Best Practise, with a resultant reduction in Safety Alerts.
- Engage Industry expertise through promotion of PL partners. Reduce dependence on Supply Chain and become and Intelligent client, growing competency and capability.
- Evolve the PL model to optimise efficiencies, ensure regulation and understanding to offset risk perception. Grow the model and scale of impact., whilst supporting National Highways initiatives for Net Zero Carbon, innovation and supply chain resilience.

*Different aspects developed further with stakeholders across all solutions as the implementation plan progresses.*

# Phased high-level implementation plan to deliver key aims

Responds to DfT Direction and deliver Road Safety Standards Matrix, to reduce WRRR

## Short-term
(RP2 Year 2)

- Establish Strategy Goals
- Safety focus on Strategic Relationships
- Complete PL Pilot Project and Assess Scope and Risk

From base-line start, develop Logistics category through Industry step change, increasing productivity and reduced risk to programmes. Be an Intelligent client and develop pilot project to Proof of Concept to allay Stakeholder trepidation.

## Mid-term
(RP2, Years 2-3)

**Phase 1:**

Progress DfT actions through DfBB & CLOCs/FORs and deliver enhanced Safety

**Phase 2:**

Complete PoC and assess Rollout options, including SMP/RDP/LTC

Move away from outsourcing Logistics to greater Industry engagement, and use of subject matter expertise, based on innovation and programmatic planning & delivery. PoC to be evidence template for model growth. Efficiencies and Risks assessed (optimised and reduced).

## Long-term
(beyond RP2, Years 4-5+)

- Champion Best Practice in the Construction Industry
- Follow Construction Playbook, implement MMC & CLPs, with scope for 4PL partner(s)
- Increase Customer Satisfaction and focus on Carbon Net Zero targets

Continued implementation for business as usual in RP3. High performing suppliers monitored and measured for effectiveness. Options for further consolidation (4PL's) considered based on opportunity and merit. Cost benefits and Risk reduction realised.

# Definition of Logistics;

"Logistics is the flow of funds, goods and information between origin and consumption. Logistics involves information, material handling, production, packaging, inventory, transportation, warehousing and often security“ **CIPS**

Logistics

| | Delivery | Safety | Customer/sustainability |
|---|---|---|---|
| Define | Programmatic planning to optimise movement “resources, materials, plant, etc”<br>reduce/eliminate waste “nVA” | Material Fit for Purpose<br>Work Related Risk Reduction RIDDOR (Road Risk,AFR/LTIs) | Anyone impacted by the project: National Highways, contractor, suppliers etc & Public |
| **Inbound**<br>(Hub/site)<br>Mobilisation<br>Efficient use of skilled workers | Source to site i.e. gantry<br>JIT “right time, quantity, location”<br>Control tower/Ops room<br>Proactive risk management<br>Clear roles/responsibilities<br>Resource optimisation | Deconflict work streams/ efficient collaboration<br>Effective scheduling<br>Robust control gate<br>Proactive risk management<br>Safe work environment | Reduction of road closure time<br>Utilising hubs to reduce deliveries<br>Consideration of public impact “when/where” |
| **Outbound**<br>Demobilisation<br>Waste removal | Landfill opportunities<br>Waste management<br>Recycling/ reuse of surplus material | Robust control gate<br>Proactive risk management<br>Conducive/safe work environment | Continuous customer feedback<br>Snag free/phase |
| Enablers | Programme stability,<br>Accurate/timely data, Live feed/comms | | |

# Rollout of short-medium term solutions

| | | |
|---|---|---|
| **Safety** | **Reduce WRRR**<br>• Synergy with DfT, (eg through RSSB for DfBB & CLOCs.)<br>• Support development of Road Safety Standards matrix. | • **Cost Avoidance: £tbc Other benefits:** Safer SRN, reduced H&S Logistics related incidents, Lost Time Through Injury, RTAs & KSIs. Pioneer and champion Safety in Industry. |
| **Customer Service** | **Reduce Road Closure Time**<br>• Complete Projects quicker.<br>• Lessen Carbon Footprint. | • **Monetary Benefit: £tbc**<br>• **Other benefits:** Decreased HGV/LGV traffic, with diminished impact on local population and environment (noise/air quality). |
| **Deliver Efficiencies** | **Increased Productivity**<br>• Implement MMC/CLP efficiencies.<br>• Programmatic approach to capture LEAN and JIT principles. | • **Monetary Benefit: £tbcm**<br>• **Other benefits:** Improved strategic approach allowing National Highways to become a more intelligent client, gather intelligence, data metrics and enable leverage of suppliers'. |

# Rollout of medium-long term solutions

| | | |
|---|---|---|
| **Safety** | **Reduce WRRR**<br>• Synergy with DfT, through RSSB led Road Safety matrix.<br>• Option for fabricators to buy, store, call-off on National Highways behalf. | • **Cost Avoidance: £tbcm**<br>• **Other benefits:** National Highways to pioneer Safety standards and lead by example. Reduce Safety Alerts and LTI. |
| **Customer Service** | **Reduce Road Closure Time**<br>• MMC & CLPs to become standard working norm and sharing of Best Practice.<br>• Reduction in programme delay risk. | • **Monetary Benefit: £tbc**<br>• **Other benefits:** Reduce impact on Public and environment, with a decrease in Carbon footprint. |
| **Deliver Efficiencies** | **Increased Productivity**<br>• Pilot Project (with Logistics expertise) to lead to Proof of Concept, to SMPA.<br>• Grow organically through MP, by Tier1 lead or project or geography. | • **Monetary Benefit: £tbcm**<br>• **Other benefits:** Synergy with Innovation Re-Applied, Intelligence gathering and Cost reduction identification. |

# Category strategy – Carbon zero template

| Key drivers of carbon emissions in category | Corporate emission | Maintenance & construction emission | Road user emission | Carbon emissions per year associated with key driver [tons of CO2] |
|---|---|---|---|---|
| 1. Construction Material/Asset Logistics | x | | | 15% of total (Tons tbc) |
| 2. Source to site | | x | | tbc |
| 3. HGV/LGV/Plant usage | | | x | tbc |

| Identified measures to address key drivers in category | Expected impact / CO2 reductions [tons of CO2] | Timescale [by MM/YYYY] | What is needed to implement measure (investment/support, etc)? |
|---|---|---|---|
| 1. MMC/CLP promotion | >20% | | Directly reduces vehicle usage and movements |
| 2. Programmatic planning (Control Tower concept) | >20% | Start Oct 21 | Proof of Concept data, based on MMC/CLPs |
| 3. De-Carbonise HGV scope | >30% | | https://apply-for-innovation-funding.service.gov.uk/competition/884/overview |
| 4. Renewal of Fleet with lower emission usage | >10% | Rolling programme | Challenge is HGV's – Construction 'norm' is 44T, yet battery power max is 29T. Hydrogen (Biofuels) or Electric Road System (Conductors) technology unlikely to be available before 2030. (source – HE Head of Energy) |