

Improving Waste Management: Used Ballast and Track Excavation Waste

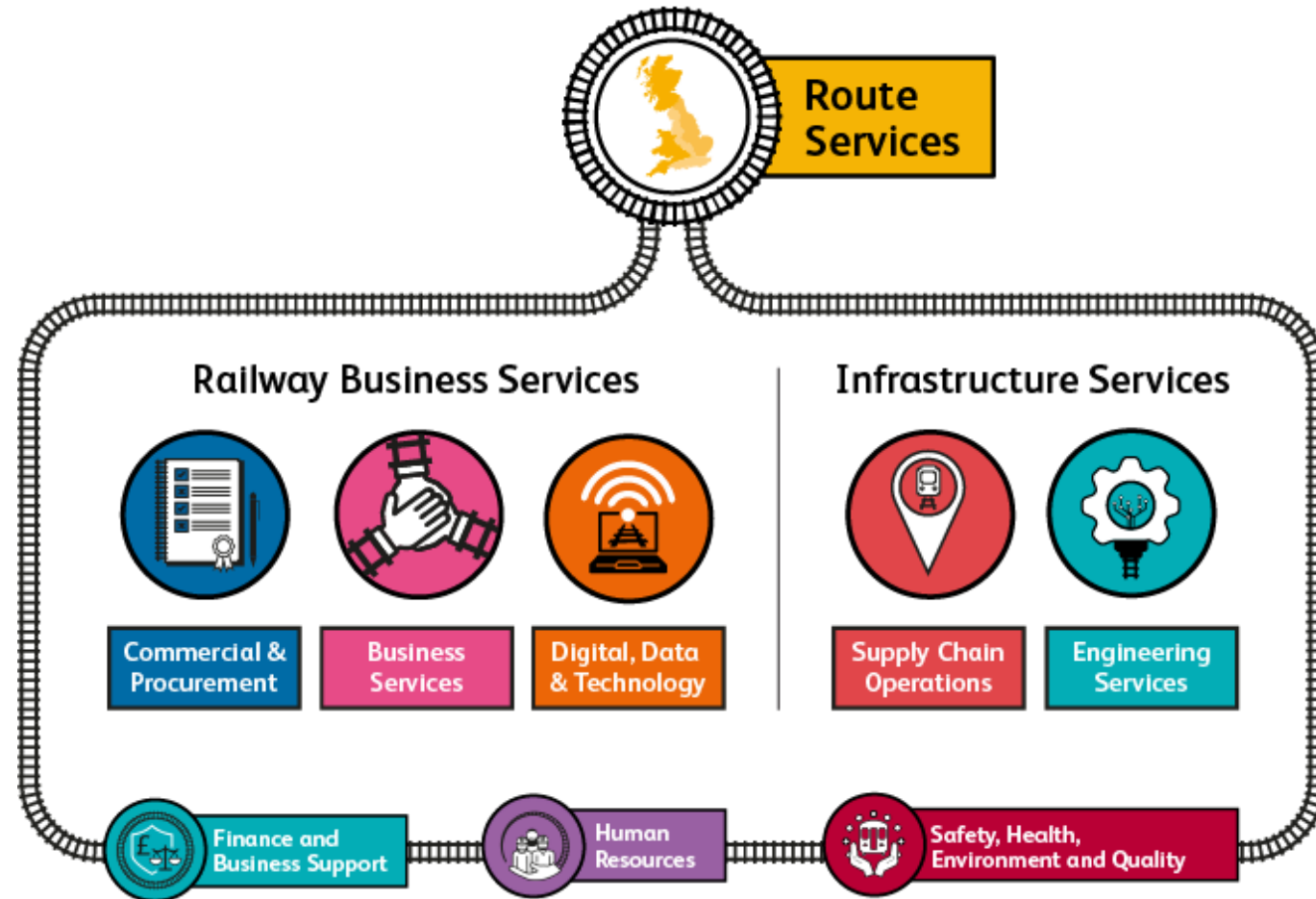
Debra Parker
Environment Manager
Supply Chain Operations

Simpler.
Better.
Greener.

Who are SCO Environment?

We support:

- The SCO Regional Delivery Teams
- SCO operational delivery teams including our depot operations
- Track Engineering Team in ES



We provide:

- Advice and guidance on developing legal compliance and best practice
- Technical support for operations
- Risk and Assurance Management

Improving waste management: What's in it for you?



maximum recycling
minimum cost



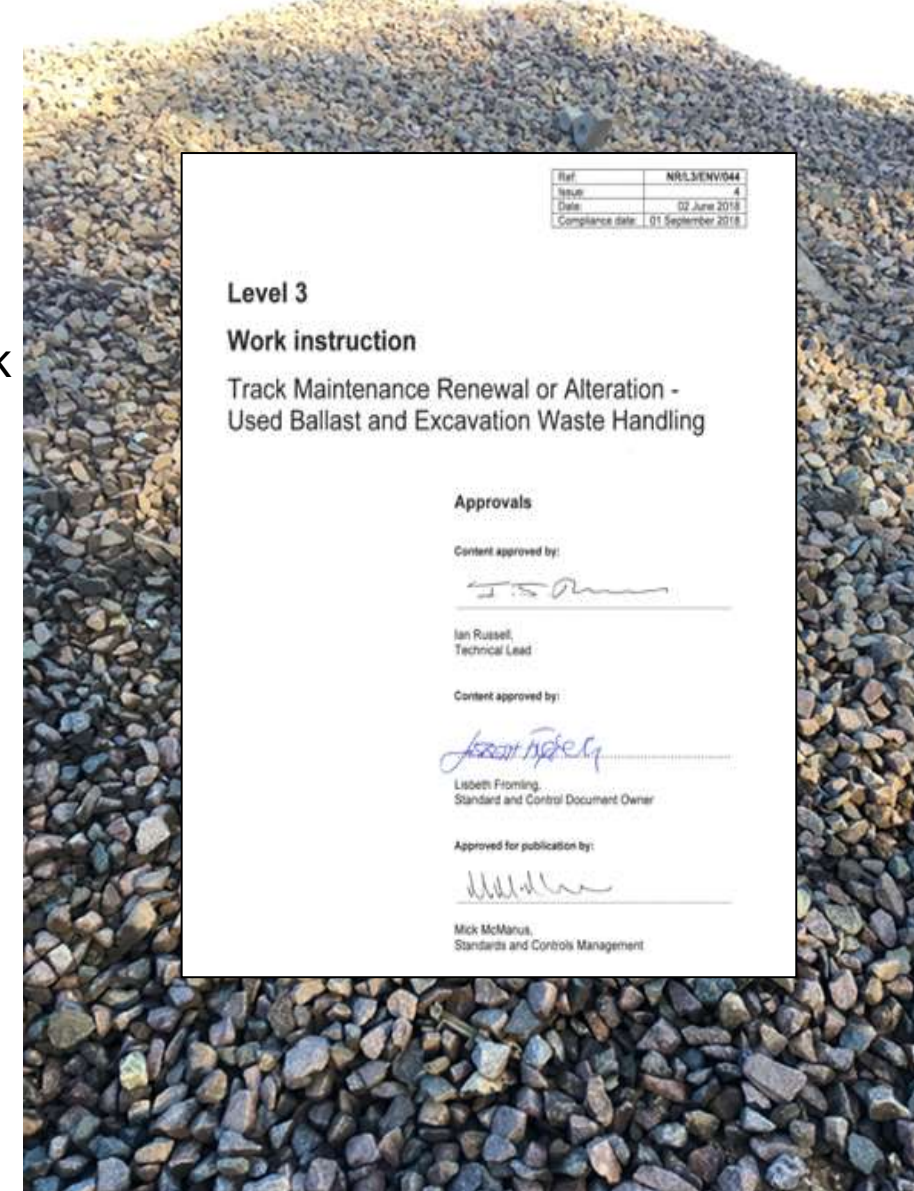
Used Track Ballast and Track Excavation Waste



Key outputs:

1. Reducing waste to landfill
2. Identify options that add value and manage risk
3. Plan for wastes and assure legal compliance
4. Improve wagon unloading and turnaround time
5. Identify cost and time efficiencies
6. Risk based approach
7. Simpler Better Greener

Click here for [NR/L3/ENV/044](#) Standard



Using the NR/L3/ENV/044 Standard



- Used ballast handling (**NR/L3/ENV/044**) Standard should be followed.
- Project identify need for works and do a **track ballast risk assessment**. If no risk, waste is classified as non-hazardous.
- If risk of contaminants, sampling undertaken, and lab results sent to Track Engineering Team to classify. Will either be non-hazardous or hazardous.
- Requirements booked via NROL e.g. number and type of wagons to be carrying haz ballast, or non haz ballast – using the most appropriate code.
- For hazardous waste, SCO produce consignment notes (a legal requirement) that must be signed by person on worksite – ‘DocuSign’.
- Once loaded the waste is then sent to the correct Aggregate Handling Depot (AHD) for recycling.

Network Rail Track Maintenance, Renewal or Alteration - Used Ballast and Excavation Waste Handling
Risk Assessment Form (NR/L3/ENV/044/F01)

Worksite: _____
 Mileage: _____
 Possession Date: _____

Stage 1 Desk Top Study - to be undertaken ahead of works
 (Answer ALL Questions Q1. to Q8. (Circle YES/NO) to determine sampling requirements)

Q1. Did the worksite asbestos risk assessment required under the Control of Asbestos Regulations and Asbestos Management NR/L2/CIV/168 identify whether the proposed works are liable to disturb Asbestos Containing Material (ACM)? Note: The compliance date for this requirement is 30 September 2021

YES ☐ NO ☐

Q2. Is the worksite on a Train or Locomotive Maintenance Depot, Locomotive Stabling Point, Switches & Crossings (S&C) or a Station?

YES ☐ NO ☐

Q3. From local knowledge are there known contaminated area/s of ballast caused by leaks from Oil Filled Cables or Rail Greasers? (If 'Yes' enter location details)

YES ☐ NO ☐

Sampling Required
 *See Lineside Sampling Protocol [reference to 044] For sites <=80m take a minimum of 3 samples

An asbestos refurbishment and/or demolition survey is required. If ACMs are identified it is a requirement that they shall be removed prior to works using a Licenced Asbestos Removal Contractor (LARC)

Take used ballast samples at 40m intervals throughout the known contaminated area.

Q2. Location Name: _____ **ELR:** _____
Mileage: miles _____ **yards** _____ **to:** miles _____ **yards** _____
Line Affected and Track ID: _____

Q3. Location Name: _____ **ELR:** _____
Mileage: miles _____ **yards** _____ **to:** miles _____ **yards** _____
Line Affected and Track ID: _____

Q4. Location Name: _____ **ELR:** _____
Mileage: miles _____ **yards** _____ **to:** miles _____ **yards** _____
Line Affected and Track ID: _____

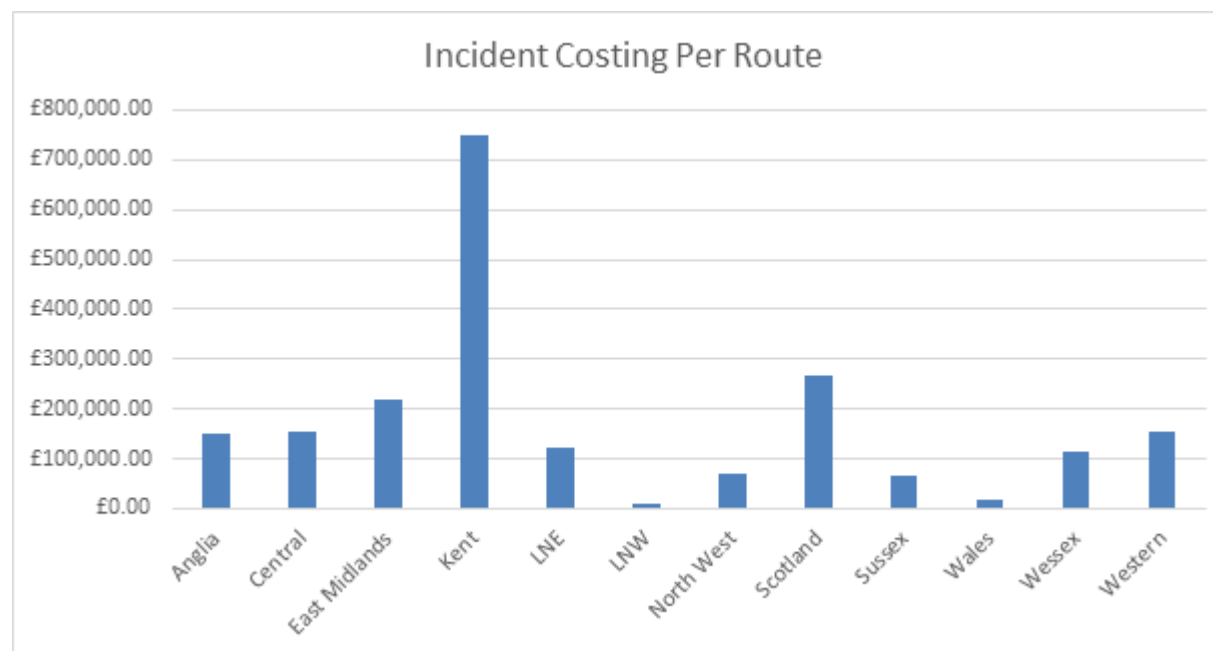
Desk Top Study | Worksite Walkover | Second Desk Top Study | Second Worksite Walkover | Table 1 | Table 2



The Challenge: unexpected wastes



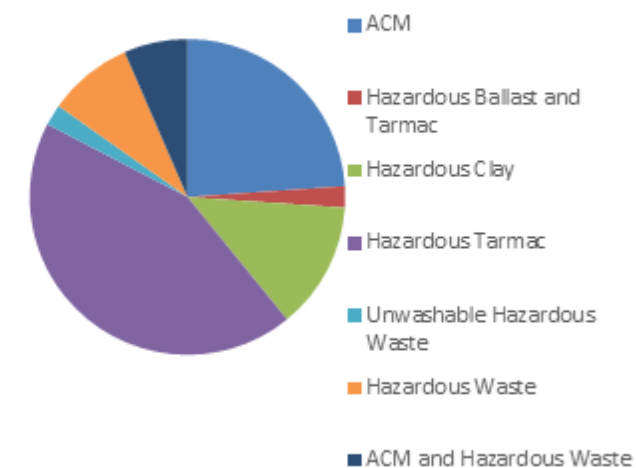
The Challenge: Unexpected costs



These incidents were 'unexpected' waste requiring disposal, but....

2019/20

Over £8million on 'expected' wastes disposal



Pre-Works Planning: We can help!



- Following the NR/L3/ENV/044 standard
- Identifying possible problem wastes – ACM, asbestos fibres, invasive species, tarmac etc.
- Developing options for waste management based on the site specifics – risk-based approach
- Rail or road options available
- **SCO Regional Delivery Team are your start point**



Case Studies:



Case Study 1:

Week 15/16 (July 2020) track renewal for CDM2, Bleeding Wolf, Hale (North West and Central)

Himalayan Balsam was identified within the worksite area, instead of taking the usual blanket approach of waste disposal, we were able to work with the worksite, SCO waste team and SCO AHD team to risk assess the waste and implement a process to manage the waste internally. This resulted in 300 tonnes of waste not going to landfill but instead being recycled, and a cost saving to the project of nearly £50,000. As it was all planned in advance, the wagons were able to be planned onto a network service, and the AHD ready to unload as soon as they arrived.



Case Studies:



Case Study 2:

Re-signalling at Trafford Park (Weeks 19/20) (August 2020) (North West and Central)

Japanese Knotweed was identified in the vicinity of the signalling works. The project engaged with the SCO waste team, who asked for our support to deliver a solution for the customer. We were able to work with the project's environmental manager to identify that the works could be safely undertaken with a smaller excavation area, and without disposal off site of the contaminated waste. Therefore, removing the need for approx. 2,000 tonnes of waste to go to landfill, and saving the project around £350,000.



Case Studies:



Case Study 3:

Cradley Heath, Smethwick 2023

- Approx. 1000 tonnes of embankment regrading waste, some evidence of asbestos sheeting, and a very high iron reading that traditionally would have led to a hazardous waste removal cost.
- Area adjacent to old colliery and foundry works
- Road removal option
- Designed and delivered enhanced sampling plan
- Demonstrated natural source of iron due to ironstone present with coal seam
- Reduced cost by circa £60,000

Case Studies:



Case Study 4:

Canterbury East Station works (Week 16) (July 2019) (Southern)

Following works, the waste received at the SCO AHD was found to have ACM contamination. As it was unplanned and no prior information had been provided, 2,786 tonnes of track excavation waste had to be disposed of to landfill.

Cost to the project £368,974



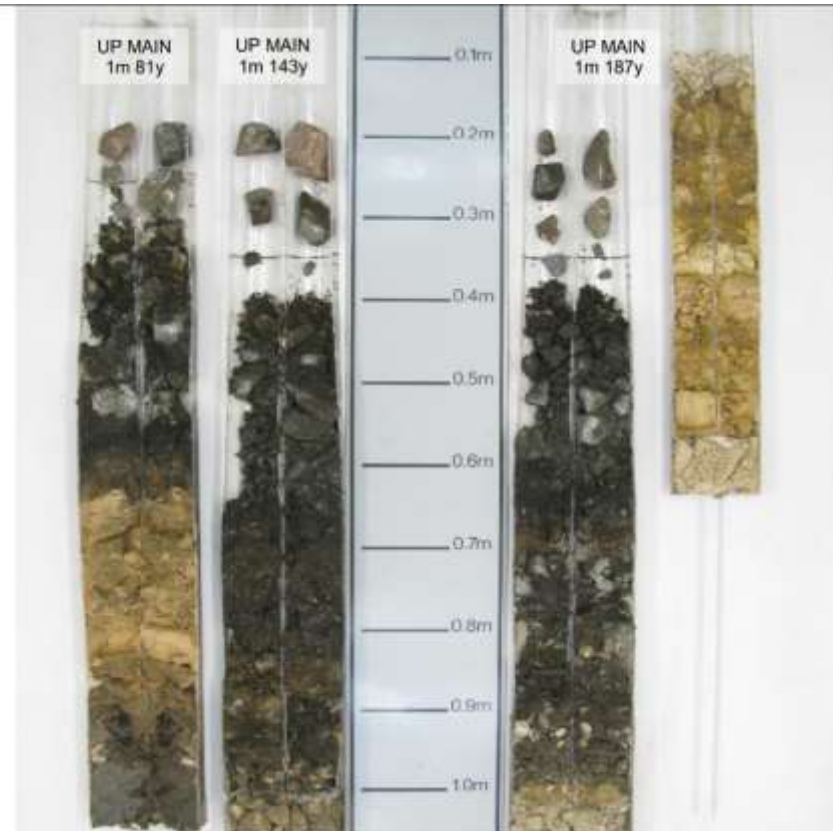
In following up with the project, the SCO environment team identified that the project team had not undertaken suitable risk assessment and hazard checks which would have identified a significant risk of ACM being present at the worksite.

Case Studies:

Case Study 5:

Barrow in Furness North, West & Central 2024

Making the most of the Track Bed Investigation report: A picture really does speak a thousand words with us! Cost avoidance circa £100,000



SCO Regional Delivery Teams

- **Eastern Regional Delivery Director**
Mark Palmer
- **NW&C Regional Delivery Director**
Rachel Furniss
- **Southern Regional Delivery Director**
Garry Moore
- **Western & Wales Regional Delivery Director**
James Comerford

Supply Chain Operations (SCO)

For links to the range of rail materials and logistics services that SCO offer, head to the 'How to Buy' page on sharepoint:

<https://networkrail.sharepoint.com/sites/myconnect/routeservices/Pages/How-to-buy.aspx>

For specific details on materials and waste recovery visit:

<https://networkrail.sharepoint.com/sites/myconnect/routeservices/Pages/Materials-recovery.aspx>