

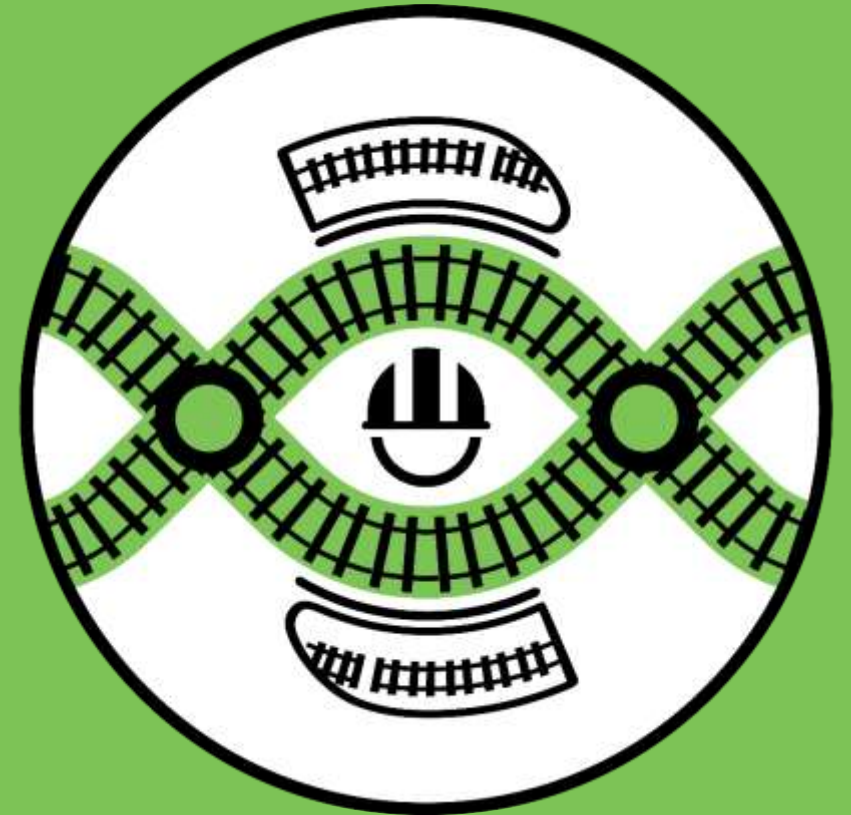
Track Renewals Insights and Outlook

John Edgley – Chief Track, Switches and Crossings Engineer,
Network Rail Technical Authority



Providing technical leadership

What would previous generations of track engineers make of how we deliver track renewals in 2023?



Providing technical leadership

1960s



**Technical
Authority**



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1960s



Rail heater at Bridgewater. (C. 36910)

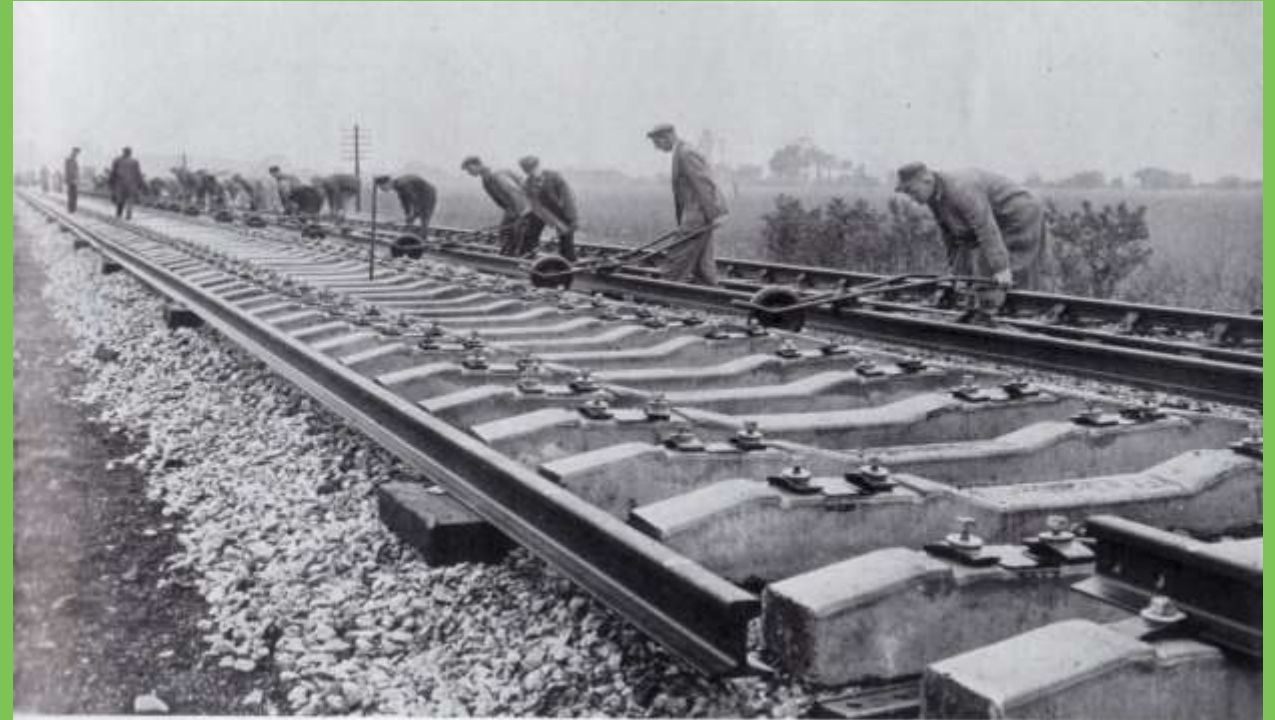


Fig. 7. Using Pannell barrows the 300 ft. rails are positioned. (C. 15961.)



**Technical
Authority**



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2000-2010



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Evolution of Equipment



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Today



[View chapter](#)



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Summary

Safety and Welfare – light years apart.

Methodology – similar but has evolved.

Quality – control significantly higher.



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Leadership

What does Network Rail Require from Engineers in 2023 ?

Excellence
Efficiency
Engagement
Endurance



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Efficiency

Best Outcomes

Challenge

Right Scope

OFFICIAL

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Level 2
Specification
Design and Construction of Track

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	CP3	CP4	CP5	CP6	CP7 SBP
	2004 to 2009	2009 to 2014	2014 to 2019	2019 to 2024	2024 to 2029
Track	6918	5407	5523	5645	4435
Signalling	3106	3588	4078	4795	4788
Level Crossings	176	203	351	718	549
Operational property	1895	2041	1175	1673	1755
Telecoms	1710	1667	450	848	1252
Structures	2476	2811	2531	2731	2343
Earthworks (exc drainage)	700	795	841	1475	1322
Electrical power and fixed plant	1433	1056	1205	1726	1880
Off-track / lineside	371	290	391	345	395
Drainage (track + earthworks)	168	131	421	497	667
Total Core Renewals	18952	17990	16966	20452	19386



Technical Authority



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Engagement



**Big Brains
Big Ears!**

**Be thorough,
understand the
consequences**

Curiosity

**Stick to the
mission**

Endurance



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The bottom line.....

Cost

Safety

Performance



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What next?

Best use of available technology

RD&I- outcome focused

Decision support- machine learning and AI

Develop next generation equipment

Whole Life Cost?