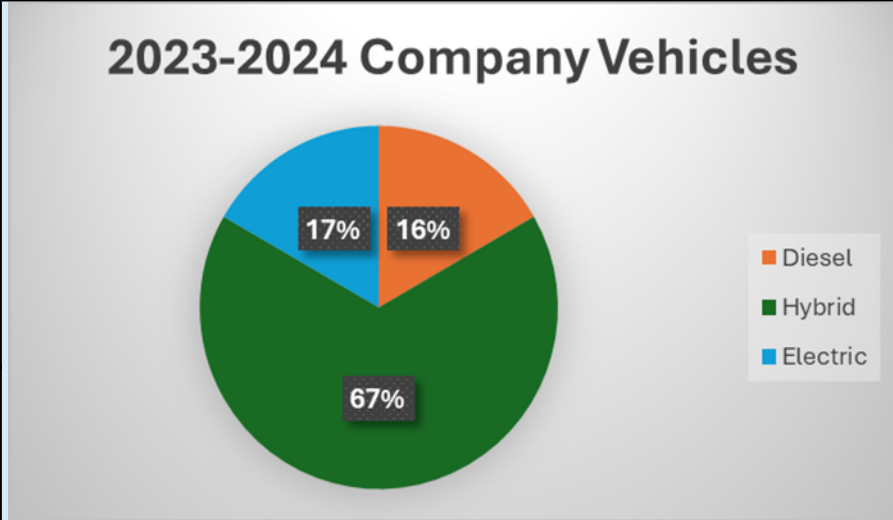
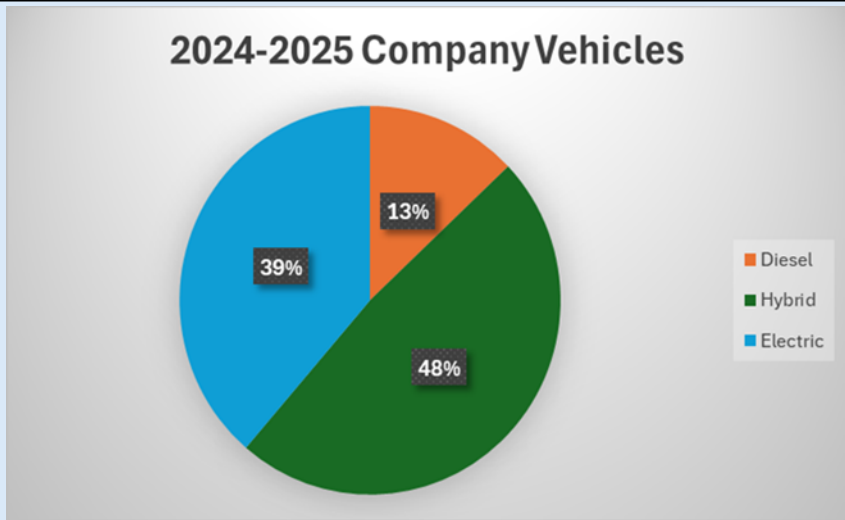


Achieving Net Zero In The Construction Industry																		
The costs and practical implications from a Main Contractors Perspective...																		
Introduction	Analysis & Results																	
The UK construction industry is under increasing pressure to achieve net zero carbon emissions by 2050. However, despite strong policy direction and sustainability commitments, there remains a significant gap between strategic targets and operational delivery on construction projects. Main contractors are required to balance environmental objectives with cost, programme certainty, and buildability constraints. This dissertation explores the practical and commercial implications of achieving net zero within this context, with a particular focus on Quantity Surveying and main contractor decision-making.	2023-2024 Company Vehicles <table><tr><th>Vehicle Type</th><th>Percentage</th></tr><tr><td>Diesel</td><td>16%</td></tr><tr><td>Hybrid</td><td>67%</td></tr><tr><td>Electric</td><td>17%</td></tr></table> 2024-2025 Company Vehicles <table><tr><th>Vehicle Type</th><th>Percentage</th></tr><tr><td>Diesel</td><td>13%</td></tr><tr><td>Hybrid</td><td>48%</td></tr><tr><td>Electric</td><td>39%</td></tr></table> ✓ Fleet electrification data identified a significant increase in electric company cars from 3 vehicles in 2023-2024 to 12 vehicles in 2024-2025. ✓ Results in average emissions reducing from 110.5g/km to 49.9g/km		Vehicle Type	Percentage	Diesel	16%	Hybrid	67%	Electric	17%	Vehicle Type	Percentage	Diesel	13%	Hybrid	48%	Electric	39%
	Vehicle Type	Percentage																
	Diesel	16%																
Hybrid	67%																	
Electric	17%																	
Vehicle Type	Percentage																	
Diesel	13%																	
Hybrid	48%																	
Electric	39%																	
Aims & Objectives																		
- Operational Barriers to Net Zero Implementation - Integration of Net Zero in procurement and quantity surveying practices - Competitive advantage of Net Zero commitment																		
Research Methodology																		
Qualitative Research was adopted to explore professional perspectives within the construction industry. Primary Data was collected through semi-structured interviews with five construction professionals part of the sample. Thematic analysis was used to identify key patterns across interview data, focusing on cost, procurement, sustainability integration and operational challenges.	•Cost certainty still dominates project decision-making •Integration appears role-dependent rather than company-wide •Competitive tendering discourages higher-cost sustainable options •Cost identified as strongest barrier across interviews •Sustainability specialists prioritise carbon targets more than operational teams																	
Literature Review	☐ Collaboration between designers, contractors and suppliers remains weak ☐ Net zero commitments can differentiate bids ☐ Carbon reduction targets increasingly weighted in scoring models  Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David  Scan me!																	
The integration of cost and carbon management is reshaping traditional Quantity Surveying responsibilities (RICS, 2024)	More Information can be found here:																	
- Supply Chain maturity significantly influences a contractor's ability to achieve net zero objectives (UKGBC, 2021) - Carbon reduction strategies require collaboration across the entire construction supply chain (BSI, 2016)	Conclusion Whilst the UK construction industry is making clear strategic progress towards achieving net zero, significant barriers limit the implementation by Main Contractors. The research found that electric plant, vehicles and low-carbon technologies remain constrained by limited market maturity, charging infrastructure, cost uncertainty and supply chain capability. Quantity surveying practices are evolving to include embodied carbon assessments, sustainability criteria and whole-life value considerations, particularly within public sector frameworks, however cost and programme certainty still dominate commercial decision-making. Overall, the dissertation concludes that achieving net zero will require more than policy reform alone, instead requiring greater supply chain standardisation, earlier stakeholder collaboration, improved carbon data consistency and a wider cultural shift away from traditional cost-led procurement towards long-term whole-life value thinking.																	
Operational reliability and charging infrastructure remain major barriers to electric plant adoption (ICE, 2023)	Acknowledgements Steve Tindall, Deborah Hughes and all UWTSd Lectures; Edy Jones, Wendy Jones, Lewis Hyatt, Marc Thomas, Shaun Davies and Andrew Scott Ltd																	
References:																		
British Standards Institution (BSI) (2016) PAS 2080: Carbon management in infrastructure. HM Government (2022) The construction playbook. London: Cabinet Office. Available at: The Construction Playbook – September 2022 Institution of Civil Engineers (2023) Decarbonising Construction Plant and Equipment RICS (2024) Whole life carbon assessment for the built environment. London: Royal Institution of Chartered Surveyors. UKGBC (2021) Net zero whole life carbon roadmap for the UK built environment.																		