

V/T SIC PROGRAMME OF WORK

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Financial Year April 1 - March 31

High level objectives	Completed work	Cost	4 C's			Supporting workstreams	Financial Year 2010				Financial Year 2011				Financial Year 2012			
			Capacity	Carbon	Customer Satisfaction		FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4
<b>1 WHEEL/RAIL INTERFACE</b> Define the geometry condition of the wheel/rail interface. Set out permitted track geometry ie. Curve radius, installed cant, vertical curvature etc. Define the permitted track conditions for the type of track eg. Mainline. Identify the allowable wheelset parameters, such as gauge, conicity, profile, axle load for the trains that operate on the network. Supports: train performance, cost efficiency	Vehicle Track Access Charge (VTAC); wheel and rail rolling contact fatigue control (T613); noise; RCF studies; Class 142 wheel hunting	√				1.1 Mechatronics: perfectly steering bogie [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 3.1)	referred to TSAG											
		√				1.2 Stability issues [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 3.3)	PPG technical support on Class 395 ride issues											
		√				1.3 P12 [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 3.1 and 3.3)	Monitoring trials of P12 profile in support of VTAC											
		√				1.4 Primary yaw stiffness Hall bush [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 3.1 and 3.3)	Hall bush trial on Mk4 coach operating on ECML											
		√				1.5 Trials of rail types [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 3.2)												
					√	1.6 Noise [train performance, people] (V/T PPG Strategy Objectives workstream 1.1 and 2.1)	Investigation of noise initiated at the wheel/rail interface											
		√				1.7 Track friendly vehicles - improving train design Thermography - Track Monitoring [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 3.1 )	Incorporation of interface requirements into ITT for design of vehicles											
		√				1.8 Virtual test tracks (VTTs) [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 1.1 )	Assessment of use of NR VTT in future procurement of new trains											

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<b>2 WHEEL/RAIL INTERFACE CONDITION MONITORING</b> Utilistation of systems to monitor the condition at the wheel/rail interface. Data collected by these systems is to be analysed and distributed to the appropriate party for the monitoring of performance and programme rectification activities. Supports; train performance, cost efficiency		√				2.1 Vehicle track interaction strategic model (VTISM) [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 1.3 )	Develop wheel profile damage model incorporating VTISM (T792)											
		√				2.2 VTISM - Whole Life Rail Model [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 1.3 and 2.3)	Damage parameters software (T775)											
		√				2.3 VTISM - track quality [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 1.3 )	Investigating the whole life costs of ballasted track that is installed and maintained to different levels of geometric quality and look to validate the deterioration rate algorithms included in Network Rail's Track Strategic Planning Application (T-SPA) (T807)											
		√				2.4 Cont-Ex software to determine wheel/rail forces for any position of wheelset (lateral and yaw) [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 1.1 and 1.2 )	Analysis of Cont-Ex software in use with Mersey rail trial (see also 1.1)											
		√				2.5 Track monitoring - thermography [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 3.1 )	Development of a model on heating during creepage											

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		√				2.6 Automatic Wheel Lathe Data Acquisition and Analysis Software (AWLDAA) (T577) (V/T PPG Strategy Objectives workstream 2.2)	Next step decisions												
<b>3 MAINTENANCE</b> Maintaining the wheel/rail interface within the prescribed limits to ensure safety of the railway. The maintenance programme to implement processes to ensure sustainability of the railway. Ensure systems exist for seasonal maintenance activities and revised to account for seasonal variation. Supports: train performance, cost efficiency, quality of service, safety.		√			√	3.1 Friction modifiers [train performance, cost efficiency, quality of service] (V/T PPG Strategy Objectives workstream 3.1)	Examination of LUL application												
						3.2 Sanding [train performance, safety]	Monitoring work of Adhesion Working Group on adhesion issues												
		√				3.3 Development of sustainable operating limits (SOLs) [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 3.3 (1.2 and 2.2?))	Applicability of SOLs to routes (T613)												
		√				3.4 Track-Ex software tool [train performance, cost efficiency] (V/T PPG Strategy Objectives workstream 1.1 and 2.1)	Future development of Track-Ex and influence on standards												
		√				3.5 Influencing industry to adopt more effective maintenance track policies [train performance, cost efficiency] (V/T PPG Strategy Objective 4)	Continuing process												

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<b>4 ROLE OF THE SIC</b> Support and inform the industry's Rail Technical Strategy including consideration of long term vehicle/track interface strategies	Route maps in support of the Technical Strategy					5.1 Provide input to the work of TSAG	June: possible review of mid term review draft				January: initial input to RTS2; review route maps; annual report to TSAG				January: final review of RTS2; review of route maps; annual report to TSAG						
<b>5 ROLE OF THE SIC.</b> Establish the SIC as an optimising industry stakeholder / client group for the review and development of vehicle to track interaction	SIC seminars: 2005; 2006; 2007; 2008; 2009 Autumn 2005 & winter 2006 and 2009 SIC bulletins					6.1 2010 Seminar (V/T PPG Strategy Objective 4)			Seminar	Take the agreed output from the SIC seminar and implement as appropriate e.g. urther research studies.	Seminar							Seminar			
						6.2 SIC bulletin (V/T PPG Strategy Objective 4)			Bulletin												
<b>6 ROLE OF THE SIC</b> Act as a principal client group for RSSB infrastructure research topic group on Vehicle Track Interaction Research						7.1 Carrying out role of principal client group for track projects	Regular input and decision making on vehicle track interaction projects at V/T SIC meetings														
									This is arbitrary - September 2010 start review and complete in March 2011												
						7.3 Champion a review of the research findings from legacy research projects		This is arbitrary - June 2010 start review and complete in December 2011													