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20 January 2025

Dear Jonathan,

## 1 Proposal to supplement the CP7 Track Usage Price List

- 1.1 The purpose of this letter is to propose, and seek approval of, a supplement to the Control Period 7 (CP7) Track Usage Price List, consistent with Schedule 7 of the Transport for Wales Rail Ltd (TfW Rail) Track Access Contract. The proposed supplement comprises a new Variable Usage Charge (VUC) rate for the vehicle type(s) that are listed in Table 1, and which are operated by TfW Rail.
- 1.2 This proposed supplement to the CP7 Track Usage Price List has been agreed between Network Rail and TfW Rail. It is required because the new rate is required for a new class of diesel multiple unit that was introduced to the Network towards the end of CP6.  
  
Please note, this is a re-submission of a rate previously approved in CP6. The requested changes by ORR for the CP6 rate have been rectified in this submission specifically that the vehicle tare weight is 32.515 (not 32.519) and that the number of seats is 50.667 (not 51).
- 1.3 The exact date the new VUC rate will apply from is 01 April 2024.
- 1.4 The following documents have been enclosed either in the Appendix to this letter or separately via the accompanying email:
  - a) The output sheet from the Official CP7 VUC Calculator;
  - b) A fully completed passenger pro forma; and
  - c) Vehicle Averaging Calculations (Excel spreadsheet)
- 1.5 The new VUC rate(s) proposed in this letter are shown in Table 1 and were calculated using the agreed Official CP7 VUC Calculator developed by Network Rail, in 2023/24 prices. The output sheet from the calculator sets out the proposed new rate and corresponding input information.
- 1.6 Where an averaging approach has been adopted, the averaging methodology is detailed in Appendix A to this letter.

Table 1: List of VUC rates included under this application.

	VUC rate
Vehicle classification	Pence per vehicle mile
231/M	█
231/T	█

1.7 If you have any queries in relation to the calculation of the proposed new VUC rate, or in relation to the content of this letter, we would be happy to discuss this with you in more detail.

Yours sincerely,

Ewelina Brandao

Chris Dellard

Network Rail

TfW Rail

## 2 Appendix A: Averaging methodology

- 2.1 This section provides evidence and further detail of the agreed methodology applied to average vehicle characteristics used in the Official CP7 VUC Calculator to calculate the VUC rate being applied for and contained in Table 1.
- 2.2 The class 231 is an articulated train. Therefore, Network Rail and Transport for Wales believe it is appropriate to calculate the new VUC rates using the methodology developed by Network Rail's engineering expert for track and S&C, which is used as the basis for calculating new VUCs rates for articulated trains in CP7. The full generic methodology has been included in Appendix C for ease of reference.

Table 2: Class 231: original vehicle data.

Vehicle	DMSO		TSO		PP		TSOW		DMSO		Total		
Bogie	1 (M)		2 (T)		3 (T)		4 (T)		5 (T)		6 (M)		
Axles	2		2		2		2		2		2		
Axleload (kg)	14620	14480	11064	10977	13882	13882	13386	13386	10441	10528	14481	14621	155748
Seats	16		54		8		16		60		16		170
Tip-up seats	10		2		0		10		2		10		34
Unsprung mass (kg)	1956	1956	1457	1457	1457	1457	1457	1457	1457	1457	1956	1956	19480
Curving class													

For TABS, the VUC needs to be calculated for 5 vehicles. The Class 231 consists of 2 Motor (M) and 3 Trailer (T) portions.

Therefore, it would proportionate to generate 2 VUC rates, one for the Motor vehicle and one for the Trailer vehicle.

Apportioning the original vehicle data presented in Table 2 gives the vehicle data in Table 3 below.

Table 3: Apportionment of vehicle data for new VUC rate.

Vehicle:	M	T	T	T	M
Axles	2	2.667	2.667	2.667	2
Axleload (kg)	14453	12420.5	12420.5	12420.5	14453
Tare mass (t)	29.101	32.515	32.515	32.515	29.101
Seats (including tip-up)	26	50.667	50.667	50.667	26
Unsprung mass (kg)	1956	1457	1457	1457	1956
Curving class	Coach_HB_40				

The most appropriate existing curving class, Coach\_HB\_40, as advised by our engineering expert for track and S&C, has been applied (and agreed with the operator).

Averaging the Motor and Trailer vehicles in Table 3 generates the following vehicle characteristics for use in the Official CP7 VUC calculator.

Table 4: Summary data for use in the Official CP6 VUC calculator.

Vehicle	M	T
Axles	2	2.667
Tare mass (t)	29.101	32.519
Seats (including tip-up)	26	51
Unsprung mass (kg)	1956	1457
Curving class	Coach_HB_40	Coach_HB_40

### 3 Appendix B: VUC calculator output

3.1 This section provides evidence of the output(s) from the CP7 VUC calculator to confirm and support the proposed new rate(s) and vehicle characteristics for each vehicle under this application. Each separate VUC calculator output sheet, corresponding to each vehicle under this application, is provided on a separate page.

231/M

Vehicle data		
Vehicle name/class	231/M	(Motor)
Vehicle type	Coach or Multiple Unit	
Number of axles	2	
Speed (max, mph)	90	
Route speed (max, mph)		
Speed (operating, mph)	46.13	(Calculated)
Tare weight (t)	29.101	Seats 26
Operating weight (t)	30.076	
Unsprung mass (kg)	1956	
Curving class	Coach_HB_40	
Ct factor	0.89	

Calculated VUC		
2023/24 prices		
VUC	10.59	3.5206
	p/vm	£/kGTM
VUC Breakdown		
Track		
Structures		
Signals (variable)		
Signals (fixed)		
Surface damage		

231/T

Vehicle data		
Vehicle name/class	231/T	(Trailer)
Vehicle type	Coach or Multiple Unit	
Number of axles	2.667	
Speed (max, mph)	90	
Route speed (max, mph)		
Speed (operating, mph)	46.13	(Calculated)
Tare weight (t)	32.515	Seats 50.667
Operating weight (t)	34.415	
Unsprung mass (kg)	1457	
Curving class	Coach_HB_40	
Ct factor	0.89	

Calculated VUC		
2023/24 prices		
VUC	9.66	2.8065
	p/vm	£/kGTM
<b>VUC Breakdown</b>		
Track		
Structures		
Signals (variable)		
Signals (fixed)		
Surface damage		