Ref:	139797
Version:	1.1
Date:	June 2015

### Appendix K

### **DRN Comments**



DRN No: 139797-MP2-CIV01-SB-20001

	139797		Proje	ct Name:	MetroWest	Phase 2			
Project Manager:	Rachel	Leighfie	eld Finch		Principal Contractor	. UR	lS .		
Engineering Deliverable Owner:	URS				CEM Name	: Ste	eve Turn	er	
Submission Discipline:	Building	Civils			CRE Name	: Ste	eve Turn	er	
Document Number:			nent Title	) <b>:</b>					Revision
		MetroV	Vest Phas	se 2 GRIP	Stage 2 - Fea	sibility Re	eport		0.02
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REVIEWERS:-	DRN N	o:   1	139797-M	P2-CIV01-	SB-20001		DRN D	ate: 3	30/01/15
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	Network Rail (NR)				Supplier		N
9	Comments	By	Type	Comment Accepted	Responses	Ву	Response Accepted
_	Drawing CV-DRG-0001 P01 Waiting shelters - confirm adequate clearances are provided to waiting shelters from edge of platforms (i.e.>2.5m). Footbridge clearances - confirm footbridge clearance has been designed to allow for future electrification	88	ZA	Yes	All waiting shelters and benches are located greater than 2.5 m from the platform edge. Note will be added to drawing.  Footbridge ramps/stairs have been designed to allow for electrification clearances greater than 5.1m.	S	Yes
	(5.1m) and that ramp and stair arrangements are designed accordingly. Lighting strategy to footbridge/ramps to be agreed at GRIP 3 (lighting column currently shown at midspan of footbridge).				Agreed column will be deleted.		
2	Drawing CV-DRG-0002 P01 Confirm adequate space has been allowed to	SB	2A	Yes	A clearance zone of 20 m has been provided behind the buffer stop, will be noted on drawing.	ST	Yes
	Lighting strategy to be developed at GRIP 3/4 and locations of columns to be co-ordinated to limit interference with pedestrian desire lines.				Agreed.		HIGHIOLOGICA CONTRACTOR CONTRACTO
3	Drawing CV-DRG-0003 P01	SB	2A	Yes	Footbridge ramps/stairs have been designed to	ST	Yes
	Footbridge clearances - confirm footbrige clearance has been designed to allow for future electrification (5.1m) and that ramp and stair arrangements are designed accordingly (co-ordinate with North Filton				allow for electrification clearances greater than 5.1m. Agreed.		
	Lighting strategy to be developed at GRIP 3/4 and locations of columns to be co-ordinated to limit interference with footways and cycle stand locations.				All waiting shelters and benches are located greater than 2.5 m from the platform edge. Note will be added to drawing.		
	Waiting shelters - confirm adequate clearances are provided to waiting shelters from edge of platforms (i.e. >2.5m).						
4	Drawing CV-DRG-0004 P01	SB	2A	Yes	Drawing amended.	ST	Yes
	Layout to be adjusted such that platform alignment does not clash with adjacent car park footway.  Waiting shelters - confirm adequate clearances are				All waiting shelters and benches are located greater than 2.5 m from the platform edge. Note will be		
NR/L2/I	NR/LZ/INI/02009/F0044 Issue Date: 03/05/2013			Version 6.0			Page 2 of 3



	Network Rail (NR)				Supplier		NR
S S	Comments	By	Туре	Comment Accepted	Responses	Ву	Response Accepted
	>2.5m). Proposed vehicle servicing strategy of adjacent food store to be developed at GRIP 3 and co-ordinated with car park layout. Confirm adequate space has been allowed for the buffer stop.				Agreed. A clearance zone of 20 m has been provided behind the buffer stop, will be noted on drawing.		
	Drawing CV-DRG-0005 P01  Waiting shelters - confirm waiting shelters can be accommodated under the stair/ramp in terms of height. Note that adequate clearance needs to be provided to waiting shelters from platform edge.  Footbridge clearances - confirm footbridge clearance has been designed to allow for future electrification (5.1m) and that ramp and stair arrangements are	SB	5A	Yes	Location of shelters ajusted to ensure sufficient height clearance and clearance to platform edge, note added to drawing.  Footbridge ramps have been designed to allow for electrification clearances greater than 5.1m.	TS	Yes
	CRE Signatures - ensure that the appointed CRE has signed all documents and drawings relevant to that discipline.	SB	2A	Yes	All documents will be signed by relevant CRE's prior to formal issue.	ST	Yes
	Utilities - provide confirmation that there are no major existing services located within the footprint of the proposed developments.	SB	2A	Yes	The buried services records show that there are no major buried services in the vicinity of the prposed developments.	ST	Yes
	Hard and soft landscaping - hard and soft landscaping and boundary treatment proposals to be developed during GRIP 3/4.	SB	4	Yes	Noted	ST	Yes

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DRN No: 139797-MP2-EPY01-RH-20001

Project Number:	139797	7		Project	Name:	1	oWest P	hase 2				
Project Manager:	Rache	l Leig	hfield	Finch		Princ	cipal tractor:	UR	s			100
Engineering Deliverable Owner:	URS					CEM	Name:	Ste	eve Turr	ner		
Submission Discipline:	Electrif	ficatio	n Pla	nt		CRE	Name:	Ch	ris Spel	lman		
Document Number:		Dog	cumen	nt Title:								Revision
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	Network Rail (NR)				Supplier		NR.
8	Comments	By	Туре	Comment	Responses	By	Response Accepted
10	9.1 Ashley Down Station There are no E&P and M&E options mentioned for this station.	RH/CO	2A	Yes	This was outside the remit of our works.	CAS	Yes
05	9.2 Constable Road Station There are no E&P and M&E options mentioned for this station.	RH/CO	2A	Yes	This was outside the remit of our works.	CAS	Yes
03	<ul> <li>9.3 North Filton - Electrical/Utilities</li> <li>1. It is not sufficient to just state that "some measures will need to be put in place to deter damage and vandalism", options to achieve this should be outlined.</li> <li>2. It is stated here that "the luminaires are shown to be 5m above the platform and are at 10m spacings". Are these based on existing lighting or are they derived from calculations and assumptions? Options on how to provide a compliant platform lighting system, including the type of light source and controls should be presented here.</li> </ul>	RH/CO	2A	Yes	<ol> <li>The clause will be removed since the station and car park area will be covered by CCTV along with suitable fencing to be put in place with warning signs to state CCTV is in operation. These measures are highlighted in the other disciplines text.</li> <li>This is based on typical lighting installations for stations and the rule of thumb used by the lighting manufacturers to achieve a good level of lighting. IF we state how the future stages of the project is to achieve the lighting requirements highlighted we would be limiting the designer at the next stage and should their options be open on how they best achieve the desired lighting levels. We referenced standards that need to be complied with along with the illuminance levels that need to be achieved</li> </ol>	CAS	\ \
70	<ul> <li>9.4 Henbury Station Option 2A - Electrical/Utilities</li> <li>1. It is not sufficient to just state that "some measures will need to be put in place to deter damage and vandalism", options to achieve this should be outlined.</li> <li>2. Options on how to provide a compliant platform lighting system, including the type of light source and</li> </ul>	RH/CO	2A	Yes	<ol> <li>The clause will be removed since the station and car park area will be covered by CCTV along with suitable fencing to be put in place with warning signs to state CCTV is in operation. These measures are highlighted in the other disciplines text.</li> <li>This is based on typical lighting installations for stations and the rule of thumb used by the lighting manufacturers to achieve a good level of lighting. IF</li> </ol>	CAS	Yes

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2	Comments	By	Type	Comment	Responses	By	Response Accepted
	controls, should be presented here.  3. If the assumption that the waiting shelters are made from transparent material turns out to be otherwise, what are the options of providing compliant lighting in these shelters?				we state how the future stages of the project is to achieve the lighting requirements highlighted we would be limiting the designer at the next stage and should their options be open on how they best achieve the desired lighting levels. We referenced standards that need to be complied with along with the illuminance levels that need to be achieved.  3. This is a standard item of station platform furniture and it is unlikely that the shelter will not be transparent. A clause can be inserted to say that at the Form A stage the shelter construction will need to be investigated and if opaque materials are used the shelter will need to be lit to the same lighting levels as the platform. This could be achieved with a pre-wired shelter and controlled by the platform lighting in the shelter and controlled.		
98	Henbury Station Option 2B - Electrical/Utilities  1. It is not sufficient to just state that "some measures will need to be put in place to deter damage and vandalism", options to achieve this should be outlined.  2. It is stated here that "the luminaires are shown to be 5m above the platform and are at 10m spacings". Are these based on existing lighting or are they derived from calculations and assumptions? Options on how to provide a compliant platform lighting system, including the type of light source and controls should be presented here.  3. If the assumption that the waiting shelters are made from trasparent material turns out to be otherwise, what are the options of providing compliant lighting in these shelters?	RH/CO	<b>4</b>	≺es	1. The clause will be removed since the station and car park area will be covered by CCTV along with suitable fencing to be put in place with warning signs to state CCTV is in operation. These measures are highlighted in the other disciplines text.  2. This is based on typical lighting installations for stations and the rule of thumb used by the lighting manufacturers to achieve a good level of lighting. IF we state how the future stages of the project is to achieve the lighting requirements highlighted we would be limiting the designer at the next stage and should their options be open on how they best achieve the desired lighting levels. We referenced standards that need to be complied with along with the illuminance levels that need to be achieved.  3. This is a standard item of station platform furniture and it is unlikely that the shelter will not be transparent. A clause can be inserted to say that at	CAS	Yes

Page 3 of 5

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	Network Rail (NR)				Supplier		NR
%	Comments	Ву	Туре	Comment Accepted	Responses	By Acc	Response Accepted
			<b>1</b>		the Form A stage the shelter construction will need to be investigated and if opaque materials are used the shelter will need to be lit to the same lighting levels as the platform. This could be achieved with a pre-wired shelter construction or by installing lighting in the shelter and controlled by the platform lighting controller.		
90	9.4 Henbury Station Options 1A & 2A - Points Heating and Signalling Power Supplies  1. The options to use either 100W/m, 150W/m and 200W/m strips to provide heating to points should be stated here to be further developed in GRIP 3. Depending on the option adopted a three phase DNO supply and control cubicle may not be required.  2. Paragraph 4 contains conflicting information. It is stated to invesitgate the PSP at Avonmouth to determine if spare capacity exists for the increased signalling power load, and at the same time stating that the existing existing signalling power supply network has enough spare capacity to cater for the increased load.  3. The assertion that signalling power suuply could be derived directly from points heating or station DNO is not true. Signalling power supplies should only be in accordance with NR/SP/ELP/27243 and other standards relevant to signalling power supplies.	RH/CO	2A	√es	1. The use of the different strip power ratings will be included along with a reference to the points heating standards that will need to be adhered to.  2. It does not conflict, the statement is that we anticipate that the signalling system has sufficent capacity for the increased load since signalling power supply systems are typically installed with a 20% spare capacity.  3. Agreed that the system would need to comply with the appropriate standards but the standard itself does not preclude the use of a DNO supply that feeds a signalling PSP and other equipment such as points heating. The DNO Generic Technical Workscope does not allow a combined station/PSP supply so the clause will be amended to reflect this.	CAS	, es
07	9.6 Yate Options to provide heating to the new points added to provide turnback facility are not included in the report.	RH/CO	2A	Yes	Some words will be included to highlight the works necessary to provide heating to the additional points to be installed at site.	CAS	Yes

Page 4 of 5

DRN No: 139797-MP2-EPY01-RH-20001

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Version 6.0



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Engineering Deliverable Owner:	URS				CEM Name:	St	eve Turn	er	
Submission Discipline:	Track				CRE Name: Peter		ter Hillie	· Hillier	
Document Number:		Docum	ent Title:		<u> </u>				Revision
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Comments	Subsequent submissions to show Overrun Risk Zone for terminus platforms.
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Version 6.0



DRN No: 139797-MP2-TEL01-TC-20001

Project Number:	13979	7	Projec	t Name:	MetroWest	Phase 2			
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Engineering Deliverable Owner	: URS				CEM Name	M Name: Steve Turner			
Submission Discip	oline: Teleco	mmunica	itions		CRE Name: Peter F			gatt	
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Date Received:	15/01/				e Return Rec	luired:	06/02/1		
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Response Accepted

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### Page 2 of 3

### NetworkRail

## **Document Review Notice**

	Network Rail (NR)	iii (NR)							Supplier	
	Comments				By	Туре	Comment Accepted	Responses		
ပ် ဗိ	Currently CCTV monitoring is done by First Great Western.	70	4	Yes	Noted			ST	Yes	
0 5 8 5 2	Coverage drawings are required for CCTV at GRIP 4 to understand coverage, minimise camera numbers where possible, aqs currently the number seems high.	2	4	Yes	Noted			S	Yes	
A # % &	Ambient noise detectors should be thought about at stations where sound levels could be a problem for local residents etc.	2	4	Yes	Noted			ST	Yes	
G : E &	PA system should be OLE immunised including audio loop systems.	70	4	Yes	Noted			ST	Yes	
フゅた	Look at wireless CIS screens as an option where cost is reduced for ducting etc.	TC	4	Yes	Noted			ST	Yes	
⋖⋍⋍⋾	All external cabinets should be IP65 rated, internal should be IP65 and cables glanded etc. where required for entry.	5	4	Yes	Noted			ST	Yes	
шаа	FTNX/FTN should be used as the primary connectivity system where possible, as opposed to 3 <sup>rd</sup> party.	ТС	4	Yes	Noted			ST	Yes	
F 2 2 2 Z 2 2 2 8	The Flat Tool for assessing SPT requirement should be commenced at GRIP 4, the output of which should be provided to NRT for assessment, until confirmation is given all SPTs should be assumed to be required as per normal design standards.	5	4	Yes	Noted			ST	Yes	
ट व्	Signalling changes to GSM-R births shall be included and a change notice submitted (PAN	J	4	Yes	Noted			ST	Yes	
Z		Issue Date: 03/05/2013	/05/2(	113			Version 6.0	0.		

\* Click in the last Cell (Column) to add a new row after the selected cell or to delete the selected row

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Response Accepted

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DRN No: 139797-MP2-TEL01-TC-20001

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Network Rail (NR) Supplier	ents By Type Comment Responses		Concentrator type, spare capacity, TC 4 Yes Noted ST Yes and uplift shall be included for new telecoms requirements. Which panels will be affected and what is currently in use?	Telecoms equipment on stations TC 4 Yes Noted ST Yes should be installed on dedicated poles where required. Sharing a pole with other disciplines will require the agreement of that
	No Comments	61).	Concentrator type and uplift shall be telecoms require panels will be aff currently in use?	Telecoms equipm should be installe poles where requipole with other dis

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