

Consultation comments received on Railway Group Standard, Rail Industry Approved Code of Practice, Guidance Note GEGN8575 issue one on the Management of Electrical Risk Rail Operational Tasks on Electrified Lines



Closing date: 21/10/2020

- 1.WSP
- 2.Southeastern
- 3.Avantia
- 4.WMTrains
- 5.Scotrail
- 6.Network Rail

Summary of comments submitted	Number	Comment categorisation key
Consulted	344	
Critical errors		CE
Editorial		ED
Typographical errors		TY
Observations		OB
<b>Total returns</b>		
<b>Classification codes (CC)</b>		
Document change		DC
No change		NC
<b>Date responses published:</b>		

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
1	7	G1.1.1	It is not clear in this section that the document relates to day-to-day operational tasks unlike section G2.1.1 which uses this phrase.	Insert 'day-to-day' before operational tasks	1			DC	Section 1.1.1 has been reworded and the term 'day-to-day' has been incorporated.
2	7	G1.1.2	The terminology used to describe the three zones is confusing as 'centre zone' could imply the zone at the centre which it is not. Also these terms are different from those used later in G3.2, of vicinity zone and live zone.	Use a different term for 'centre zone' such as 'middle zone' or 'intermediate zone'. Also add a note that 'middle/intermediate zone' and 'inner zone' are later in	1			DC	GN text updated at G1.1.5 to improve clarity.

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				G3.2 referred to as vicinity zone and live zone.					
3	7	G1.2 .1	It is not clear in this section that the document relates to day-to-day operational tasks unlike section G2.1.1 which uses this phrase.	Insert 'day-to-day' before operational tasks	1			DC	Suggested change has been incorporated.
4	12	G3.2 .1.6, G3.2 .2.1 & G3.2 .3.1	The electrical safety distances values have been arrived at through various sources (EN & FprEN standards, rule book sections) with a 'new' value proposed for the DC 1.5 m (outer) zone. Other sources such as HSE GS6 appear to have been discounted.	Include informative Annex setting out the rationale for how the electrical safety distance values for both OLE and CRE have been arrived at, including any sources discounted. Also to clarify the extent to which the EN and FprEN standards apply to the Low Voltage applications.	1			NC	As part of the development process for this GN, extensive consideration was given to the electrical safety distances and approaches including those applicable to EN standards, NR standards, the existing Rule Book, Model Distribution Safety Rules, GS6 and combinations thereof. This process included a range of stakeholder review workshops that were integral to determining the approach in relation to electrical safety distances relevant to the scope of this GN.
5	13	G3.2 .2.2	The need, in Table 1 Actions and Controls, for '(...electrical risk related competency)' in the 2.75m zone seems to conflict with later in G4.2.1.4 and G4.2.2.4 where specific additional control measures [are required] including competency requirements on the basis that entry is required into the Vicinity Zone	Consider moving '(including electrical risk related competency)' to the Vicinity Zone	1			NC	Table 1 (now figure 2) does refer to control measures so is not considered to conflict with sections G4.2.1.4 and G 4.2.2.4.

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6	13	G3.2 .2.2	Table 1 Actions and Controls for the Vicinity Zone which states 'Limited to specific operational tasks with strict additional control measures.' suggests that there is a pre-defined list of restricted tasks with defined control measures that apply for entry into the Vicinity Zone, however the document does not then go on to define/provide these. This is further supported by there apparently being no explicit requirement to undertake a detailed electrical risk assessment in this zone, according to this Table, from which one might conclude that the required risk assessment(s) has already been undertaken/is already available which has resulted in the strict control measures.	Include details of specific operational tasks with strict additional control measures applicable for entry into the (OLE) Vicinity Zone	1			DC		Table has been revised to improve clarity.
7	13	G3.2 .2.2	It is suggested that the rows in Table 1 should be colour-coded to match the colours of the zone in Figure 1 to reinforce which zones are being referred to.	Table 1 rows to be colour-coded	1			DC		Suggested change has been incorporated.
8	13	G3.2 .3.1	The statement: 'The 1.5m Zone....are the two safety distances identified as part of the	Clarify that 1.5m zone is a new zone and value proposed for this GN	1				NC	The reference made is to the proposed revised accompanying Rule

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			rules included in GERT 8000-DC and GERT 8000-HB17.' is not factually correct as this is a new zone and value that has been introduced for the purpose of this guidance note.	equivalent to 2.75m zone for OLE.					Book Module and Handbook wording that was issued for consultation and not the existing published Rule Book Module and Handbook.
9	14	G3.2 .3.2	The need, in Table 2 Actions and Controls, for '(...electrical risk related competency)' in the 1.5m zone seems to conflict with later in G5.2.1.4 and G5.2.2.4 where specific additional control measures [are required] including competency requirements on the basis that entry is required into the Vicinity Zone	Consider moving '(including electrical risk related competency)' to the Vicinity Zone	1			NC	Table 1 does refer to control measures so is not considered to conflict with sections G 5.2.1.4 and G 5.2.2.4.
10	14	G3.2 .3.2	Table 2 Actions and Controls for the Vicinity Zone which states 'Limited to specific operational tasks with strict additional control measures.' suggests that there is a pre-defined list of restricted tasks with defined control measures that apply for entry into the Vicinity Zone, however the document does not then go on to define/provide these. This is further supported by there apparently being no explicit requirement to undertake a detailed electrical risk assessment in this zone,	Include details of specific operational tasks with strict additional control measures applicable for entry into the (CRE) Vicinity Zone				DC	Table has been revised to improve clarity.  A definition of 'day-to-day' operational task has been added.

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			according to this Table, from which one might conclude that the required risk assessment(s) has already been undertaken/is already available which has resulted in the strict control measures.						
11	14	G3.2 .3.2	It is suggested that the rows in Table 2 should be colour-coded to match the colours of the zone in Figure 2 to reinforce which zones are being referred to.	Table 2 rows to be colour-coded	1			DC	Suggested change has been incorporated.
12	16	G3.4 .1.8	Failure modes appears to be limited to failure of the electrification infrastructure and rolling stock hardware. There is no recognition of human factors type 'failure modes' occurring in the process of a person undertaking the operational task, such as dropping or losing control of an object or a person losing footing or balance and falling etc resulting in possible entry into the vicinity or live zones.	Include need to consider human factors type 'failure modes' occurring in the process of undertaking the operational task. Also to include these in the example generic risk assessments contained later in the document.	1			DC	The guidance note has been updated at G3.4.1.1 and the risk assessment templates in the appendices have been amended to address the point raised.
13	19	G3.4 .4	This section refers to 'control measures' and 'precautions' however provides little guidance as to what constitute effective control measures and precautions and under what circumstances to apply these, in order to comply	Include guidance on various effective control measures and when it is appropriate to apply these.	1			NC	The Guidance Note includes a number of scenario specific worked example Electrical Risk Assessments that list indicative control measures that would typically be considered.

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			with EaWR Regulation 14(c). The EaWR guidance on Regulation 14(c) refers to 'system of work', 'precautions', 'accompaniment', 'control of the area', 'suitable protective equipment', and 'emergency resuscitation and first aid' but none of these is described in the GN.						
14	19	G3.4 .4.1 (&G 3.4.5 )	It is stated that Part C assists with demonstrating compliance with Electricity at Work Regulations - Regulation 14(b) however it is unclear how this is the case. This requires that 'No person shall be engaged in any activity on or so near any live conductor....that danger may arise unless.....it is reasonable in all the circumstances for him to be at work on or near it while it is live'. It is suggested that the requirement to confirm that 'it is reasonable to work live' should be undertaken following the risk assessment and control measures to be put in place as part of Part D Validation.	Include requirement to confirm that 'it is reasonable to work live' following the risk assessment, as part of Part D Validation	1			DC	The GN text at section G3.4.5 and electrical risk assessment templates have been revised to address this comment and improve clarity.
15	26	G4.1 .5 Figure 5	Figure 1 diagram shows zone(s) around -25kV (ATF) conductor as centred around conductor only. Should include the whole of the	Modify diagram to show zones around whole of support insulator.	1			DC	Figure 5 (now figure 7) has been updated.

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			support insulator which should all be treated as live.						
16	29	G5.2	Several of the (CRE related) tasks may require stepping over the live conductor rail (an example is shown on page 61 of Appendix N). As this activity may be common to several tasks the Generic Electrical Risk Assessment should be undertaken and included for this, in order to determine whether or not it is acceptable practice and what control measures are required. This is so the position on this is practice is clearly and consistently understood and applied in the industry.	Prepare and include, in accordance with the guidance in this GN, generic electrical risk assessment for stepping over live conductor rail.	1			DC	The appendices in the Guidance Note have been updated to include this example.
17	34	Appendix B, C1	The statement is made: 'How likely is it that compliance with the specified restrictions related to Vicinity Zone and Live Zone will be achieved?' however it is not clear what specified restrictions are being referred to? There is no additional information provided in G3.4.4.3 either.	Clarify what specified restrictions are being referred to.	1			DC	The ERA template wording has been amended to improve clarity.
18	34	Appendix B, C1	There is duplicity in 'acceptable control' and the assessment as to whether these control measures are acceptable or unacceptable (i.e. [according to G3.4.4.3] would	Suggest change 'acceptable control' to 'effective control'.	1			DC	The proposed change has been incorporated.

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			provide an acceptable level of risk control).						
19	34	Appendix B, D	The 'validation' doesn't include any requirement to confirm that 'it is reasonable to work live' following the risk assessment and control measures to be put in place, as is required by Electricity at Work Regulations - Regulation 14(b) 'No person shall be engaged in any activity on or so near any live conductor....that danger may arise unless.....it is reasonable in all the circumstances for him to be at work on or near it while it is live'.	Include requirement to 'confirm that it is reasonable to work live' following the risk assessment, within Part D Validation.	1			NC	EaWR 14 consideration is inherent to the ERA and therefore considered to cover this element. It is not normal to include the proposed level of compliance declaration as part of validation of a risk assessment. However, the validation declaration has been updated to include validation of the selected electrical safe system of work.
20	47	Appendix N	Diagrams on the right and on bottom show the live (and other) zone(s) around the -25kV (ATF) conductor as centred around the bare conductor only. It is normal to treat the whole of the support insulator as live.	Modify diagram to show zones around whole of support insulator	1			DC	The illustrations have been updated to address the comment.
21	47 on wards	Appendix N	Is there a reason why the -25kV (ATF) conductor only appears on page 47 but not on subsequent sheets?	Consider including on subsequent sheets.	1			DC	The illustrations have been updated to include more examples showing the ATF.
22	48	Appendix N	This shows water filling with conductor rail, but should there be an example with OLE?	Consider including an example of water filling with OLE	1			DC	The illustrations have been updated to include the suggested example.



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23	51	Appendix N	Why there are 2 zones around the conductor rail when it is shown as continuous?	Show as continuous zone (if conductor rail is continuous)	1			DC		The illustration has been updated to clearly depict a conductor rail gap.
24	57	Appendix N	Live zone not shown below conductor rail on top sketch.	Show live zone below conductor rail.	1			DC		The illustration has been updated to improve clarity.
25	61	Appendix N	Plan view doesn't seem to match the other views. Also zone missing under conductor rail.	Address plan view consistency and zone missing under conductor rail.	1			DC		Illustrations have been updated to improve clarity and explanatory note added.
26	66	Appendix N	Live zone not shown below conductor on bottom sketch	Show live zone below conductor rail.	1			DC		The illustrations have been updated to improve clarity.
27	various	Appendix N	It is assumed many of the conductor rail drawings are meant to be showing the conductor rail on the remote side to the activity. This is not very clear and inclusion of plan views might be better.	Consider including plan views for clarity, or clear statements regarding position of the conductor rail relative to the activity.	1			DC		Illustrations have been updated to improve clarity and explanatory note added.

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28		General	Will there be a further GN developed to address operational tasks other than those which are day-to-day such as cleaning and maintenance of platform canopies/roofs possibly involving access to such?	Consider developing GN to address operational tasks such as cleaning and maintenance etc.	1			NC	RSSB is receptive to considering other areas in future where there may be a benefit in developing similar guidance.
29	All	All	<p>Whilst we understand the intentions of this proposed GN, and recognise that its preparation has involved a significant amount of work, we have significant concerns about the document as proposed, as well as the supporting business case. Rather than provide a long series of – quite repetitive – detailed points on a <i>per paragraph</i> basis, we feel it would be more helpful to address the document at a higher level.</p> <p>The stated intention of the document is to provide a methodology to assist railway undertakings in the management of electrical risks – and compliance with the Electricity at Work Regulations 1989 (specifically R.4 and R.14) – in relation to operational tasks. The basis of this is the establishment</p>						<p>Noted</p> <p>This misunderstands the purpose of the outer zone (2.75m / 1.5m). This outer zone is the basis for triggering the electrical RA process to establish the nature of the risk (if any) and identify what controls might be needed. It is not the intention to imply an activity within this zone is inherently dangerous. The approach in the GN retains the existing 2.75m</p>

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			<p>of 3 zones for both OLE and CRE, being the “live zone”, “vicinity zone”, and “1.5/2.75m” zone. However no evidence is presented to establish the appropriateness or validity of these zones. For example we are not aware of anyone ever having been injured when they (and things they are in contact with) remain wholly outside the “live zone” on AC OLE, yet the “2.75m” zone effectively extends the area regarded as dangerous – and thus requiring a detailed risk assessment - by 350%. This distance has remained unchanged for many years despite overwhelming evidence on a daily basis that it is perfectly possible to enter within the 2.75m zone without risk of injury, we would have hoped for some recognition of this.</p> <p>The draft GN states (G3.2.1.2) that distances are used because they are “simple to apply in practice”. We would argue that they are anything but; it is clearly impossible to take a measurement from OLE or CRE</p>						<p>distance for AC OLE systems currently set out in the Rule Book.</p> <p>The GN has been updated to make clear the approach in relation to safety distances. To encourage simplicity and consistency of assessment, notional safety distances (some of which have been in use in various industry documents) have been used as a proxy to assess if danger may</p>

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			<p>without first making it dead, and we know that many people are poor judges of distance. On the other hand, no mention if made of the use of the orange cant rail line on rolling stock, which does provide a clearly visible safety demarcation – albeit at less than 2.75m from the OLE – and which has proved effective for the last 50+ years as a risk control.</p> <p>The draft GN introduces a 1.6m “vicinity zone” from the OLE (G.3.2.2.2), but no justification is provided as to why this distance is appropriate, nor is any indication given as to how risks within this “vicinity zone” might be higher than elsewhere in the “2.75m zone”; the reader is left to work this out for themselves.</p>						<p>arise or not. These distances create zones which in turn allow for different level of assessments to be applied to justify if an activity is safe enough. Zones allow for the risk assessments to become more challenging the closer an activity moves a person towards the hazard. Please note, duty holders are free to not use this simplistic approach and assess whether danger arises or not, by other means.</p> <p>The safety distances in this GN should not be used in a literal sense or examined or measured with unnecessary or spurious precision. They are general guides for the purposes of examining existing practices and assessments that underpin them, and to consider the extent to which any further assessment may be required for internal assurance of duty holders. There is no expectation that duty holders will be measuring distances from live parts or physically demarcating zones for working practices.</p>

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			<p>With respect to the CRE, the GN (G3.2.3.1) introduces a new 1.5m zone, which it states is already in GE/RT8000-DC and GE/RT8000-HB17. However this distance does not currently appear in either document.</p> <p>Furthermore, the guidance appears to treat the whole area within the 2.75m zone (OLE) or 1.5m zone (CRE) as being within the scope of EAW R.14, which relates to “working on or so near a live conductor that danger may arise”.</p> <p>The Regulation is clearly not intended to encompass work that involves passing within a 2.75m radius of a live conductor without risking approaching it more closely and in fact we would consider that the placement of the OLE in relation to persons on station platforms would make it compliant with EAW R. 7(b).</p>						<p>There appears to have been a misunderstanding, the revised Rule Book and Handbook content was included in a separate consultation which was issued shortly after the draft GN was circulated.</p> <p>It is not the intention to treat everything within the 2.75/1.5 m zones as being in the scope of EaWR 14. The purpose of these dimensions in the GN is to trigger the electrical risk assessment activity and it is this assessment that helps to inform the duty holder about appropriate consideration of EaWR 14.</p> <p>Noted (In response to your observation regarding EaWR 7(b) and the consideration of passengers and others waiting on station platforms).</p>

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			<p>The suggestion that the design of the OLE presents danger to passengers and others waiting on station platforms or boarding and alighting trains – merely because they encroach within 2.75m – is clearly misplaced; if it were so the whole system would require to be re-designed to remove this danger.</p> <p>Whilst the establishment of a 1.5m distance in relation to CRE may be more helpful in general terms, we would again argue that interpreting EAW R. 14 as extending to any activity that infringes this distance in any part is an excessive and incorrect interpretation of the Regulation.</p> <p>Moving on to the need to carry out risk assessments using a generic template in certain situations, we acknowledge and agree that there are a number of operational tasks which can bring rail staff in relatively close proximity to live conductors (whether OLE or CRE) and that it is right that these tasks should be identified and the risks assessed.</p>						

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			<p>However it is our view that where these tasks are generic to the entire industry, risk assessment should be carried out and controls established at an industry level, these controls being incorporated within the rules and instructions applicable to those specific tasks. Examples of these activities would include the majority, if not all, of those listed in Appendix A. The alternative to this is different companies performing the same activity coming to different conclusions about the level of risk and the appropriate controls with the result that there would be significant confusion where there is inter-working (TOC A using TOC B's depot or station, for example), potentially leading to increased risk.</p> <p>We note that section G3.4.5 sets out suggested requirements for validation of these assessments but have concerns as to the precise competence that would need to be demonstrated by a person approving them No competence standard is suggested in the document and</p>						<p>As the legislation places obligations on duty holders and given the limitations in the scope of the Rule Book and Handbook content, we do not currently envisage it being practicable to adopt a uniform approach mandated at industry level.</p> <p>We envisage that the determination of competency requirements is addressed within the organisation's SMS. On this basis, detailed related requirements are not covered by the GN.</p>

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			<p>we doubt whether we would have anyone with the suggested competence.</p> <p>As we disagree with the premise of using three separate distances in relation to EAW Regulations 4(3) and 14, we also find the risk assessment template and flow charts to be unhelpful. In our view the need for risk assessment is based not on whether the activity involves entering a theoretical zone drawn large around a live conductor, but on whether the activity carries a risk of coming so close to the live conductor as to present a danger (i.e. close to or within the live zone).</p> <p>Turning finally to the business case presented to support this business case, we once again have issues. The business case assumes benefits but does not assess the costs which may derive from the proposed change. There is no Taking Safe Decisions assessment. No safety benefit is claimed for the introduction of this Guidance, which seems odd.</p>						<p>We have done further work to clarify the approach so the zones are used to support the electrical risk assessment decision making in relation to whether danger and/or injury is to be avoided.</p> <p>We did not value safety benefit on the basis that duty holders will be compliant with the law and that the benefit of this document is to assist duty holders, who choose to make use of it, in assuring themselves that their arrangements are appropriate and can be developed in a structured and efficient way. This might be particularly beneficial for those duty</p>



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			<p>Costs likely to be incurred as a result of the implementation of this guidance note and proposed Rule Book changes include:</p> <ul style="list-style-type: none"> <li>• ..... Costs of carrying out the new generic assessments</li> <li>• ..... Costs of implementing new controls, including potentially loss of ability to carry out tasks which are currently carried out safely</li> <li>• ..... Costs of training and briefing</li> </ul> <p>We would not expect the savings suggested in having a template to use to conduct risk assessments that companies would not otherwise be doing are spurious if not specious. Even if companies did need to conduct all these risk assessments, they have established SMS in place which are as capable of dealing with electrical risks as any others.</p> <p>For these reasons Southeastern disagrees with the proposed publication of this Guidance Note.</p>						holders who do not have historical experience on electrified lines.

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30	20	G3.4 .5.3	Perhaps the standard needs to be more specific as to the qualifications this person needs, or even departments/companies they belong to, for approving risk assessments as it is doubtful that these people exist within TOC's with such level of expertise as detailed within the standard	n/a	3			NC	It is the organisation's responsibility to determine appropriate qualifications and competence requirements in accordance with its SMS. On this basis, detailed related requirements are not covered by the GN.
31	27	G4.2 .1.1	Are there any more specifics as to the minimum distances the person in the diagram is from the train. This should be to provide further considerations for risk assessments. In relation to the differing heights of individuals will the measurements regarding the distance of sections of OLE, at station for example, from a platform be provided or readily available from NR in order to ensure risk assessments are suitable and sufficient?	n/a	3			DC	<p>The view is that practical proxies are likely to be used to achieve practicable means of satisfying the relevant safety distances. The illustrations are provided as indicative examples.</p> <p>In circumstances where it is necessary, location infrastructure specific details should be available from the IM. It may be a practical approach to request confirmation of locations where a specific clearance is not met.</p> <p>A new paragraph has been added at G3.1.5 to state that all parties will have arrangements in place to co-operate to enable effective assessment and management of electrical risk.</p>

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32	76	Definitions	Define “operational tasks”		4			DC		The GN has been updated to include a definition for day-to-day operational tasks.
33	11	2.1.5	Appendix N should be M?		4			DC		The Appendix designation has been corrected and the cross reference moved to Part 1.
34	15	G3.4.1.2	What qualifications would be acceptable – is IOSH enough?		4				NC	It is the organisation’s responsibility to determine appropriate qualifications and competence requirements in accordance with its SMS. On this basis, detailed related requirements are not covered by the GN.
35	16	G3.5.1.8	Abnormal conditions – The diagrams show worst case as the dispatcher coming into the vicinity zone - should we now restrict the height of train dispatch staff? Or start doing anthropological measurements of staff as part of recruitment?		4				NC	It is not suggested such restrictions are applied but rather that risks are assessed, and appropriate controls are in place.
36	17	G3.4.2.6	How does the RU get information regarding every location OLE		4				DC	In circumstances where it is necessary, location infrastructure

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			height and weight?						specific details should be available from the IM. It may be a practical approach to request confirmation of locations where a specific clearance is not met. Additional text added indicating that such an approach can simplify considerations.
37	20	G3.4 .5.2/ 3	As comment on Page 15 – what qualifications would be acceptable for both assessor and verifier? Electrical risk is a specialism that is not necessarily held by the people that would be responsible for the task. This may need to be bought in. This will have a cost to the business that has not been recognised in any supporting document.		4			NC	It is the organisation's responsibility to determine appropriate qualifications and competence requirements in accordance with its SMS. On this basis, detailed related requirements are not covered by the GN.
38	20	G3.5	I am unable to find anything that discusses who is responsible for the risk assessments – if there is a location that serves multiple operators (such as Birmingham New St), who does the RA? Does each TOC need to do one for their specific traction? What if TOCs have the same traction types? Plus, if a NR station, should the responsibility not fall to the infrastructure owner with a duty of co-operation amongst users? Or even as the provider of		4			NC	Arrangements should be in place as part of SMS frameworks already in place for cooperation in relation to the management of risk at multi-user stations.

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			the risk, should NR not be responsible for the risk caused by their equipment? I firmly believe the responsibility should sit with the infrastructure owner who will hold all the necessary competencies and knowledge of the equipment height, weight, etc. at each location. RUs should support the process in the same way that the permissive working RAs are managed.						
39	20	G3.5	I am unable to find where it states the granularity that the RA must go into. Bearing in mind how track and OHLE undulate, the distances will vary considerably over a short distance – so considering a loop such as Mayfield in Manchester, a train can stop and reverse at multiple locations, so do we need to RA by each inch or mile?		4			DC	It is proposed that a practical approach may be to consider worst case conditions thus minimising the number of variations to consider. Additional text added (G3.5.1.8) indicating that such an approach can simplify considerations.
40	45	Appendix M	We run a railway primarily to move people about yet this whole document just has a few lines covering this risk. In addition, the risks associated with passengers are similar to traincrew, so does that really need a separate risk assessment or could it be added		4			NC	RSSB is receptive to considering this element in more detail at a future date but this aspect is not the primary scope of this GN.

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			as a section to the generic.						
41	46	Appendix N 1.2	What percentile has been referenced? Refer to comments above regarding dispatcher heights – if you have someone outside of the percentiles used, we would need to factor in the individual height too. This could restrict people, again importing cost – or asking for a control measure of NR to raise the OHLE height.		4			NC	The illustrations included in the GN are indicative only. RUs will need to determine suitable assumptions to use. The GN has referenced the relevant guidance documentation.
42		General	This is not a workable solution as it is.		4				
43	7	G1.1.2	A member of the public carrying and umbrella or member of staff carrying a dispatch baton could conceivably encroach on the vicinity zone of the Pan/Overheads dependant on wire height. The wire height is not information that is held by the RU or can be controlled by the RU. Should this not be an IM risk assessment?		5			NC	Under the relevant legislation the responsibility is with the employer of the person undertaking the task and therefore rests with the RU for example.  Location infrastructure specific details, if required, should be available from the IM who has determined the placement of the live parts. It may be a practical approach to request confirmation of locations where a specific clearance is not met.
44	13	G3.2.2.2	<i>Vicinity Zone (1.6 m) Limited to specific operational tasks with strict additional control measures.</i> How do you apply strict additional		5			DC	Consideration relevant to the public is covered in Appendix N.

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
			controls to customers?						Tables 1 & 2 (now figures 2 and 4) have been revised and other relevant text has been amended to refer to 'proportionate additional control measures.'
45	15	G3.4 .1.2	<i>Minimum competence requirements associated with the preparation and authorisation of electrical risk assessments would typically be identified in the safety management system.</i> <b>What should be the minimum competence to carry out these risk assessments?</b>		5			NC	It is the organisation's responsibility to determine appropriate qualifications and competence requirements in accordance with its SMS. On this basis, detailed related requirements are not covered by the GN.
46	17	G3.4 .2.6	As per first comment this information is not held by the RU.		5			NC	Location infrastructure specific details, if required, should be available from the IM. It may be a practical approach to request confirmation of locations where a specific clearance is not met.
47	20	G3.4 .5.3	This is not a competence normally held by TOCs? Again more of a IM competence		5			NC	This is a responsibility of the duty holder and it is recognised it may not historically have been available in-house but is likely to be required to fulfil the relevant legal obligations. Option of externally procuring the required support may be a solution.
48		General	This appears to create a large workstream for TOCs and FOCs		5			NC	Undertaking a risk assessment is a

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
			where nothing like this has been done before. Any work underneath the cant line has always previously been deemed as safe and not requiring a Risk Assessment for electrical risk. I cannot think of one occasion where we have had a member of staff or public injured whilst walking on the platform under OHLE.						prerequisite to determining if it is safe. This is also a requirement of wider H&S legislation.
49			<p>Objective 1 – Produce guidance which supports efficient and effective assessment of electrical risk from electrified lines to the workforce undertaking operational tasks on these lines and the public, when on the operational GB mainline railway.</p> <p><i>Objective 2 – Review and revise the Rule Book module for ac and handbook 16 to better support duty-holders in complying with EaWR Regulation 4 and Regulation 14.</i></p> <p>Objective 3 - Review and revise the Rule Book module for dc and handbook 17 to better supports duty-holders in complying with</p>	Include details to support duty holder in complying with regulation 4 in Rulebook and Handbooks.	6			DC	The revised introductory text in Step 1 of the process set out in this GN reinforces how the approach in the GN supports users in complying with EaWR Regulation 4.



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			<p>EaWR Regulation 4 and Regulation 14.</p> <p>It is not possible to determine if the project has achieved its objectives due to the staged nature of the consultation.</p> <p>However, it is unclear how GEGN8575 assists in achieving support in complying with regulation 4</p>						
50			<p>It is not clear how GEGN8575 supports duty-holders in complying with regulation 14 with regards to on board energy sources.</p>	<p>Update document throughout to recognise that both rolling stock and electrification systems need to be made dead to prevent danger.</p>	6			DC	<p>The GN scope is limited to dealing with hazards from the electrification system and associated vehicle equipment. Some additional text has been added at G3.4.3.1 to make this clear.</p>
51		general	<p>Guidance appears to be overly wordy if this can be simplified would make it more accessible to users and less likely to lose the broad benefits included in the document.</p>		6			NC	<p>Considering the intended users and its use, as set in the new introductory text, we feel the document style is appropriate given the subject matter concerned.</p>
52		general	<p>Document describes making systems dead but does not reference the likelihood of part dead with adjacent live electrical</p>		6			DC	<p>Additional text has been added at G3.4.4.4 to address this point.</p>

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
			section or other residual hazards. Suggest examples in text and risk assessment template include reference to residual electrical hazards.						
53		general	EaWR - It would be useful to repeat EaWR requirements in the document, especially reg 4, 12, 13 and 14.	Include in document	6			NC	RSSB policy is to reference and not repeat legislation. The intended users of this GN are expected to have ready access to these regulations.
54		General	The diagrams are a very positive addition and clearly articulate the risk. These also need to be included in the updates to in GERT8000-AC, GERT8000-DC, GERT8000-HB16 and GERT8000-HB17	Includes drawings from GEGN8575 in GERT8000-AC, GERT8000-DC, GERT8000-HB16 and GERT8000-HB17	6			NC	Noted. See comment responses to the Module AC & DC and Handbook 16 & 17 comments.
55	7	G.1.1.1	The purpose is very wordy. Especially, the second sentence of this paragraph	reword	6			DC	Noted, wording has been revised following consultation.
56	7	G1.2.1	No mention of Handbook 16 and 17	Add reference to Handbook 16 and 17	6			NC	It is not considered necessary to include reference to HB16 & HB17 as the GN scope covers operational tasks that are generally associated with Modules AC & DC rather than the Handbooks.
57	7	G1.2.2	Missing 'V' against sub clause c)	750 V	6			DC	This typographical error has been corrected.

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward		[RSSB responses] [ENE Standards Committee approved responses]
58	7	G1.2.2 and others	Use of abbreviations without initial explanation e.g. OLE, CRE.	Use complete term during first use and abbreviate thereafter.	6			DC		Suggested change has been incorporated.
59	8	G1.2.4	No mention of HSE GS6 - Avoiding danger from overhead power line	Add reference to HSE GS6	6				NC	Tasks and context and environment covered by GS6 differ from typical railway operational tasks and GS6 is not well suited for use in the railway environment and operational tasks covered by the scope of the GN.
60	8	G1.2.4	No mention of HSE HSG 281 - A guide to the Control of Electromagnetic Fields at Work Regulations 2016 or GLGN1620	Add reference to HSG 281	6				NC	Not considered to be in scope of this GN and the GN does not cover identification of all hazards.
61	11	G.2.1.1.	It would be useful to reference appendix A for the definition of operational tasks	Add reference to Appendix A	6				NC	A definition of operational task has now been included in the GN.
62	11	G2.1.2	Scope description suggest making it clearer that this guidance applies to all i.e., TOC FOC, NR & OTP etc. Add all as indicated highlighted in yellow or equivalent reference that makes this clear.	This section provides guidance for all employers whose staff undertake operational tasks. The guidance relates to establishing an efficient and effective framework for managing electrical risk	6			DC		Revised introductory text in the updated GN provides better clarity with respect to scope of the document.

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
				relating to exposed live parts of the electrification systems and associated parts on electric vehicles. The guidance is also aimed at supporting employers in demonstrating compliance with the relevant legislation particularly the Electricity at Work Regulations 1989.					
63	11	G2.1.2	Does this Guidance Note apply to operational tasks such as working on a pantograph as part of, for example, a dewirement incident?	Make specific reference to this task in para, or appendix A	6			NC	This is not the intended use of the GN, it is aimed at addressing personal safety in the first instance and not the specific management of individual incidents. The IM would be expected to take the lead for the example quoted which is not considered to be an operational task but rather an incident management activity.
64	11	G2.1.5	Does it make sense to wrap up passengers and public in one group for this GN?	Suggest this is a separate risk assessment process, and should be a separate standard	6			NC	The terminology (public including passengers) is appropriate for the entities intended to use this guidance who for example deal with both passengers and general members of the public at stations.
65	11	G2.1.5	Appendix N includes consideration of the general public in relation to managing electrical risk where organisations	change to appendix M?	6			DC	Typographical error has been corrected at G1.4.6.

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
			are responsible for safety of the public (including passengers). Appendix N is titled Diagrammatical depictions of a range of typical operational tasks - not clear what tasks include general public						
66	13	G.3.2	Tables 1 & 2 do not appear to align with HSE GS6 para 11. How has RSSB determined the 10 m dimension to star assessing the electrical risk is not applicable to mainline railways	Add detail about how the electrical safety distances in GEGN8575 are justified and how there have been determined reasonable practical in light of GS6.	6			NC	Tasks and context and environment covered by GS6 differ from typical railway operational tasks and GS6 is not well suited for use in the railway environment and operational tasks covered by the scope of the GN.
67	13	G.3.2	How are insulators and sealing ends treated? Need to consider both electrification and rolling stock	Add clarity - Suggest text in pr EN 50122 is most suitable	6			NC	For the purpose of the illustrations, the complete insulator has been treated as Live.
68	13	G.3.2	How are insulated pantograph horns treated?	Aligned document with T1120 results (with and without surge arrestors)	6			NC	Not considered advisable to adopt differing clearances to people dependent on the pantograph horn type at this time given that conductive horns are dominant throughout the network. Consequently, a single approach has been applied assuming that the complete pantograph is Live.
69	13	G3.2.2.	Overhead line equipment electrical safety distance This needs to be renamed to as it applies equally to bare live equipment on infrastructure and	25 kV electrical safety distance,	6			DC	Title has been revised to address the comment.

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
			rolling stock						
70	13	G.3.2.2.	No consideration of return conductors (insulated and bare), autotransformer feeders and aerial earth wires. How are these to be treated? Using the safety distances proposed will cause confusion where conductors are insulated, or referenced to earth	Add detail about how the following conductors are to be considered Autotransformer feeder conductors (bare) Autotransformer feeder cable Aerial Earth wire (bare) Return Conductor (bare) Return Conductor (insulated)	6			NC	As per section G2.1.1, the GN deals with exposed Live parts. As per Module AC and HB16, for the purpose of this GN and the relevant roles, all along track conductors are treated as Live. This is considered appropriate for the intended users.
71	13	G.3.2.2.	No consideration on the impact of screenings of live conductors.	Add detail about how the following conductors when a screen or obstacle prevents direct contact	6			NC	This is covered by section G3.2.1.6 in the GN.
72	13	G.3.2.3.	No consideration on traction bonding, HV cabling or dc track cabling (apart from figure on page 61)	Add clarity about how insulated cables and bonds are to be considered	6			NC	Damaged bonds are already adequately covered by Module AC and HB16. Insulated cables where the insulation is self-evident are outside the scope of the GN.
73	13	G.3.2.3	The electrical safety distances do not consider guard boarding or frail shields	Add detail about how guard boarding and shields impacts the electrical safety distances	6			NC	Covered by G3.2.1.6. Guard boarding is not considered to fundamentally alter the applicable distances. If the rail shield is applied, it is considered to be suitable protective equipment that would alter the applicable electrical

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									safety distances.
74	13	G.3.2.3.	The electrical safety distances do not consider fourth rail systems	Add detail about how fourth rail systems are considered	6			NC	Fourth rails systems are out of scope for this GN.
75	13	G3.2.2.1	Neither GERT 8000-AC nor GERT 8000-HB16 make use of the term “2.75m Zone” and neither document references a 600mm Live Zone.	Provide appropriate clarification around the alignment of the proposed zones with the existing text on the two rule books references. (Or does this draft assume that these handbooks will have been updated to align with this GN?)	6			DC	Text updated at G3.2.2.1 and G3.2.3.1 to address the comment.
76	13	G3.2.2.2	It doesn't explicitly state that these zones are to live OLE, obviously if it is within an isolation then they are not applicable. But then this document is for operational tasks so they are unlikely to have an isolation	State the safety distances are for live working only, and modify table to allow entry into live zone when conductor is made dead.	6			DC	Additional text has been added at G3.2.2.1 to clarify the point that the stated Zones apply unless the relevant conductors have been made dead.
77	13	G3.2.2.2	No definition of Strict additional control measures in the guidance necessary for entering the vicinity zone. (i.e. a detailed electrical risk assessment and 'control measures' are required to enter	Add definition	6			DC	Table has been revised to improve clarity.

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			the 2.75m zone but what further measures are necessary to enter the 1.6m zone?)							
78	13	G3.2 .2.2	Modify sentence to clarify that there are actions and control measures	The actions and control measures.....	6			DC		Table has been revised to improve clarity.
79	13	G3.2 .2.2	Table 1. The actions and controls for the Vicinity Zone should be additive to those for the 2.75m zone. Modify table entry for Vicinity zone	Detailed electrical risk assessment, control measures (including electrical risk related competency) AND Limited to specific operational tasks with strict additional control measures.	6			DC		Table has been revised to improve clarity.
80	13	G3.2 .3.1	GERT 8000-DC and GERT 8000-HB17 do not reference the 1.5m Zone nor do they use the term Vicinity Zone.	Provide appropriate clarification around the alignment of the proposed zones with the existing text on the two rule books references. (Or does this draft assume that these handbooks will have been updated to align with this GN?)	6			DC		Text has been updated to address the comment.
81	14	G3.2 .3.2	Consideration as to the potential confusion created by introducing a new safety distance of 1.5m which is close to but different	No definition of additional control measures in the guidance.	6			DC		In this document, this distance triggers the need for an ERA and it is not a distance that needs to be judged



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			greater than position of safety distance 1.25m (<100mph) which is very well understood by PTS holders. Is the 1.5m electrical safety zone currently defined in existing NR safety documentation and currently practiced or is this a new dimension?						precisely by persons undertaking the operational task.  Table has been revised to improve clarity.
82	13	G3.2.3	Conductor rail equipment electrical safety distance This needs to be renamed to as it applies equally to bare live equipment on infrastructure and rolling stock	750 V electrical safety distance,	6			DC	The section heading has been revised to address the comment.
83	14	G3.2.3.2	Table 2. The content of the actions and controls column of the vicinity zone should be additive to that of the 1.5 m Zone	Detailed electrical risk assessment, control measures (including electrical risk related competency) AND limited to specific operational tasks with strict additional control measures. Consider same approach for Live Zone. Needs to have additive requirements	6			DC	Table has been revised to improve clarity.
84	15	G3.4.1.3	It is not clear that the review and approval of the Electrical Risk Assessment is to be carried out by separate persons....would be worth highlighting it here.	Review and approval (by separate parties authorised to do so) including confirmation that the identified risk control	6			DC	An additional statement has been added in line with the intent of the comment, noting that authority is already self-evident.

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				measures deliver adequate risk mitigation.					
85	15	G3.4 .1.3	b) making electrical equipment dead Suggest this need to be split between infrastructure and rolling stock	i) Consideration of making Infrastructure equipment dead  ii) Consideration of making rolling stock equipment dead	6			DC	The GN deals with hazards from electrification system and associated vehicle equipment. However, some additional text has been added at G3.4.3.1 to make this clear.
86	16	G3.4 .2.3	In its current form the “full detail of how the task is to be performed” will drive an infeasible number of generic assessments on separate forms – e.g. inspection with/out binoculars	The information documented in A2 of the template provides a detailed description of the nature of the operational task and any possible combinations of tools and equipment required and delivery method...	6			DC	ERA can consider reasonable variances in how the task is carried out thereby rationalising the number of ERAs that may be required. The wording has been simplified and updated to improve clarity in this regard.
87	16	G3.4 .2.4	The inclusion of access requirements within the task risk assessment drives multiple generic assessments e.g. where the same end task is being conducted but the access method is different	Access requirements may be relating to the operational task are also considered and are recorded either on the same risk assessment or on their own dedicated risk assessment.	6			NC	It is possible to separate or combine the access element and operational task elements in the ERAs in a way that minimises the effort whilst still providing suitable and sufficient electrical risk assessment. The GN supports understanding of the requirements to be considered rather

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									than dictating the specific solution to be implemented.
88	16	G3.4 .1.6	OLE clearances	25 kV clearances	6			NC	OLE is used as an example. Lower voltage OLE systems are present on parts of the network.
89	16	G3.4 .1.8	Does not consider impact of vandalism of railway, Shopping trolleys, plastic sheeting etc	Operational tasks associated by mobile vehicle technician appear to be absent in document. Please add drawings show typical tasks carried out by MVTs	6			NC	The GN does not specifically depict or cover this scenario as it is not a typical day-to-day operational task for the target user group. However, should the duty holder need to consider such a scenario, the principles outlined in the GN could be applied if they consider it appropriate.
90	17	3.4.3 .14	There are many operational activities which are ordinarily unreasonable to be undertaken dead, but which may, during concurrent other activities (a possession) become entirely reasonable to undertake dead. This needs squaring with the permission for a generic risk assessment – i.e. that a generic justification is considered reasonable to support a generic risk assessment and that therefore no further check of other concurrent reason which makes it	Additional section after 3.4.3.14: In situations where a task is supported by a generic electrical risk assessment, a generic justification shall be produced, which shall consider the railway under normal operational conditions. No further justification for generically assessed tasks is required.	6			NC	The GN is aimed at day-to-day operational tasks as part of day-to-day normal operation of the railway. Should a situation arise that presents a different operating condition then it should be subject to appropriate consideration in terms of electrical risk as necessary.

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			reasonable to work dead is required over and above the generic risk assessment and its justification						
91	17	G3.4 .2.6	Does not include on board batteries, and other energy sources that could be dangerous	Add to para, on board energy sources.	6			NC	This is considered out of scope as the hazard is not specific to electrified lines. However, additional text has been added in the GN to clarify the scope boundary.
92	17	G.3. 4.3.1	This correctly states the associated vehicle equipment which might give rise to danger at the location where operational task is taking place can be made dead. However the risk assessment and diagrams focus on electrification risk. Greater consideration is required for the associated vehicle equipment, especially with multi mode vehicles, and bus lines between pantographs	Add drawings to show the electrical safety distances applied to train vehicles	6			DC	Wording has been added to clearly define the scope covered by this GN. Additional text has been added at Appendix P to explain the limitation related to the illustrations and associated live parts included in the GN.  This GN is aimed at dealing with electrical risk associated with OLE, pantographs and associated roof mounted equipment. The existing typical illustrations are indicative and are not intended to cover every conceivable scenario.
93	17	G3.4 .3	In EaWR hierarchy making dead would be the first option, should that be brought forward in the document?		6			NC	The GN addresses day-to-day operational tasks on an operational railway which is designed to be operated in an energised state. Consequently, the focus is on tasks that are expected to be performed

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									safely with the system energised.
94	17	G3.4 .3.4	Inconsistent capitalisation of defined terms e.g. Dead. Last word in the last sentence of this clause.	.... evidence that appropriate consideration has been given to making the equipment Dead.	6			DC	Amended as suggested.
95	18	G3.4 .3.6	.... to make the OLE and associated vehicle equipment dead  This statement ignores that with multi-mode vehicles it is possible to power away from station with the pan down. If discontinuous electrification can pan down and pan up around bridge, it must be also possible at a station.	to make the OLE and / or associated vehicle equipment dead	6			NC	Any hazards associated with vehicles, which are not utilising the electrification system, are not within the scope of this GN.
96	18	G3.4 .3.9	Need to consider best practice of making dead between different duty holders	add text to recommend that permits are transferred between duty-holders when making equipment dead at interface	6			NC	The GN covers consideration of the assessment of electrical risks associated with the OLE, pantographs and associated roof mounted equipment. Details associated with the processes for making equipment dead is outside the scope of this document and would be covered under the respective SMSs and the duty to co-operate.
97	18	G3.4	...to make the electrification	to make the electrification	6			DC	Wording has been revised to improve

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		.3.10	system dead	system and / or associated vehicle equipment dead					clarity.
98	18	G3.4 .3.12	In the case of CRE This could equally apply to shoe gear	In the case of CRE and / or shoe gear	6			DC	Wording has been revised to improve clarity.
99	19	G3.4 .3.14	This clause omits to detail where a duty holder is reliant on another duty holder to make equipment dead.	Detail cross dutyholder process for making equipment dead	6			NC	The GN covers consideration of the assessment of electrical risks associated with the OLE, pantographs and associated roof mounted equipment. Details associated with the processes for making equipment dead is outside the scope of this document and would be covered under the respective SMSs and the duty to co-operate.
100	19	G3.4 .4.4	...hazardous parts of electrification systems and associated vehicle equipment	...hazardous parts of electrification systems and /or vehicle equipment	6			DC	Text has been simplified to address the comment.
101	19	G3.4 .4.6	No mention of PPE	Add PPE (ie arc flash clothing)	6			DC	PPE is covered by the reference to control measures and this will be identified as part of the ERA. The ERA

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									will identify the necessary control measures which could include competence, physical controls, process requirements and ultimately PPE where relevant. The GN text has been updated to reflect this.
102	21	G3.5 .19	Rename OLE systems and CRE system to 25 kV systems and 750V systems, as the distances apply to rolling stock and infrastructure	25 kV system 750 V system	6			DC	Lower voltage OLE systems are present on parts of the network and alignment is maintained with the wording of the Rule Book Modules and Handbooks. The GN text has been updated to improve clarity that relevant infrastructure and rolling stock exposed live parts are included.
103	23	G3.5 .2.6	Rename OLE systems and CRE system to 25 kV systems and 750V systems, as the distances apply to rolling stock and infrastructure	25 kV system 750 V system	6			DC	Lower voltage OLE systems are present on parts of the network and alignment is maintained with the wording of the Rule Book Modules and Handbooks. The GN text has been updated to improve clarity that relevant infrastructure and rolling stock exposed live parts are included.
104	24	Part 4	OLE system	25 kV system	6			NC	Lower voltage OLE systems are present on parts of the network and alignment is maintained with the wording of the Rule Book Modules and Handbooks.
105	24	Fig.3	Figure 3 denotes a typical OLE portal arrangement with auto	Include return conductor and applicable safety	6			DC	Figure description has been amended

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			transformer feeding, portal and mast arrangements also exist with return conductors. Consideration should be given to the return conductor as this is lower than the drawing suggests which would reduce the safety clearance from a standing surface cess side of the mast.	distances.					to make it clear that the diagram is for illustrative purposes only. The illustration is not intended to cover all scenarios and further diagrams depicting RC arrangements are included in Appendix P.
106	24	Figure 3	Caption states - typical portal OLE arrangement with associated safety distances	Update caption to state typical portal OLE arrangement with ATF (no earth wires or RC) with associated safety distances	6			NC	As this is for illustrative purposes only, it is not considered necessary to fully define the arrangement shown.
107	24	G4.1.5	Figure 3 Assembly not recognised what's with the centre strap between registration arms?.	update drawing	6			DC	The connection has been removed for clarity.
108	24	G4.1.5 & Figure 3	Highlight the fact that this is an auto-transformer OLE arrangement and the fact that there is Live 25,000 V exposed conductors that are placed not above the running line(s).	Figure 3: Typical portal OLE arrangement with associated safety distances (Note the position of the auto-transformer feeders which may place Live 25,000 Volt conductors in positions other than above the running lines)	6			DC	Figure description and clause have been amended to states that the diagram is for illustrative purposes only and that equipment arrangements and position of Live parts do vary.
109	25	Fig.4	Figure 4 does not include the autotransformer feeder or return conductor.	Include return conductor and applicable safety	6			DC	Diagram has been updated to include RC arrangement.



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				distances.					
110	25	Fig.4	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC	Guidance has been updated to clarify dimension parameters.
111	25	Figure 4	typical headspan OLE arrangement with associated safety distances	typical portal OLE arrangement with (no earth wires, RC or ATF) with associated safety distances	6			DC	Figure description has been amended to make it clear that the diagram is for illustrative purposes only. The illustration is not intended to cover all scenarios and further diagrams are included in Appendix N.
112	25	Figure 4	The nominal platform height and OLE wire heights have not been introduced. The relevant information on these heights should be added in as new clauses in G4.1. Similarly, the assumptions around the height of the blue character(s) should be set out so that the reader is able to scale the diagrams more readily.	update drawings	6			NC	It is considered that the relevance of wire height and platform height is self-evident from the illustrations. The information relevant to the height of persons included in the illustrations is included in the notes accompanying Appendix P. It is not intended for the diagrams to be scaled as they are illustrative but do convey a sense of proportion.
113	26	Fig.5	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC	Guidance has been updated to clarify dimension parameters.
114	26	Fig.6	The 915mm measurement does not state where this is to, OLE	Include note with measurement meaning,	6			DC	Guidance has been updated to clarify dimension parameters.

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			foundation or top of platform surface.	running rail to platform surface.					
115	26	Fig.6	Typical midspan arrangement does not consider auto transformer or return conductor. Consideration should be given to open route and station areas. Return conductor positioning in station areas is over the platform in some cases and the safety distance is reduced when passing under overbridges or footbridges.	Include earth wires, autotransformer feeders, return conductor (insulated and non insulated) and applicable safety distances.	6			DC	A range of illustrations have been included to depict the typical arrangements of Live parts including for a midspan arrangement. Additional text has been added to the GN to provide further guidance in respect to RC in station areas and differentiating between insulated and uninsulated RC.
116	26	Figure 5	Caption - typical twin track cantilever OLE arrangement with associated safety distances	Caption - typical twin track cantilever arrangement with ATF (no earth wires or RC) with associated safety distances	6			NC	As this is for illustrative purposes only, it is not considered necessary to fully define the arrangement shown.
117	26	Figure 5	Inconsistence consideration of ATF insulator	Clarify if ATF insulator are considered live	6			DC	The drawing has been corrected.
118	27	G4.2	OLE scenarios	25 kV scenarios	6			NC	Lower voltage OLE systems are present on parts of the network and alignment is maintained with the wording of the Rule Book Modules and Handbooks.
119	27	Fig.7	Figure 7 doesn't consider auto transformer or return conductor position in platform areas. Return conductor positioning in station areas is over the platform in some	Include earth wires, autotransformer feeders, return conductor (insulated and non-insulated) and	6			DC	A range of illustrations have been included to depict the typical arrangements of Live parts including for a midspan arrangement. Additional

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
			cases. Return conductor positioning in station areas is over the platform in some cases and the safety distance is reduced when passing under overbridges or footbridges.	applicable safety distances.					text has been added to the GN to provide further guidance in respect to RC in station areas and differentiating between insulated and uninsulated RC. We understand that in station areas, the ATF is either placed above the tracks or is routed suitably using fully insulated cables and is not normally readily visible or accessible.
120	27	Figure 7	This assumes the train dispatch is aligned along the track with the pantograph, and gives a false impression that this risk only exists with electric trains,	Add additional diagram with self-powered (diesel) train	6			NC	We have depicted the most onerous case from a safety perspective in the example.
121	27	G4.2 .1.4	Figure 7 does not depict encroachment on the Vicinity zone. Need to use language similar to that in earlier sections e.g. G3.2.3.2	Figure 7 also shows that this operational task is likely to (could?) result in entry to the Vicinity Zone in less favourable conditions.	6			DC	Suggested amendment has been incorporated.
122	28	Fig.8	Figure 8 does not include the autotransformer feeder or return conductor.	Include return conductor and applicable safety distances.	6			NC	A range of illustrations have been included to depict the typical arrangements of Live parts including for a midspan arrangement. Additional text has been added to the GN to provide further guidance in respect to RC in station areas and differentiating between insulated and uninsulated RC. We understand that in station areas, the ATF is either placed above the tracks or is routed suitably using

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
									fully insulated cables and is not normally readily visible or accessible.
123	28	Figure 8	This assumes the train doors are aligned along the track with the pantograph, and gives a false impression that this risk only exists with electric trains,	Add additional diagram with self-powered train	6			DC	Doors are aligned with the pantograph position in certain cases and the illustration depicts this situation. G4.2.2.1 has been amended to cover the scenario of a self-powered train.
124	28	G4.2.2	Suggest this section is caveated – a member of train crew traveling to another location as a passenger would be subjected to the same risk. Would a risk assessment be required for that activity?	Add caveat	6			NC	It is for the duty holder to determine the extent of the operational task and consider the need for electrical risk assessment accordingly.
125	28	G4.2.2.4	Figure 8 does not depict encroachment on the Vicinity zone. Need to use language similar to that in earlier sections e.g. G3.2.3.2	Figure 8 also shows that this operational task is likely to (could?) result in entry to the Vicinity Zone in less favourable conditions.	6			DC	The suggested amendment has been incorporated.
126	28	Fig-8	<del>Figure 8 does not include the autotransformer feeder or return conductor.</del>	<del>Include return conductor and applicable safety distances.</del>	6				
127	28	Figure 8	<del>This assumes the train doors are aligned along the track with the pantograph, and gives a false impression that this risk only exists with electric trains,</del>	<del>Add additional diagram with self-powered train</del>	6				

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128	28	G4.2.2	<del>Suggest this section is caveated – a member of train crew traveling to another location as a passenger would be subjected to the same risk. Would a risk assessment be required for that activity?</del>	Add caveat	6				
129	28	G4.2.2.4	<del>Figure 8 does not depict encroachment on the Vicinity zone. Need to use language similar to that in earlier sections e.g. G3.2.3.2</del>	<del>Figure 8 also shows that this operational task is likely to (could?) result in entry to the Vicinity Zone in less favourable conditions.</del>	6				
130	28	G4.2.3.1	...near OLE	near 25 kV	6			NC	Lower voltage OLE systems are present on parts of the network and alignment is maintained with the wording of the Rule Book Modules and Handbooks.
131	29	Part 5	CRE system	750 V system	6			NC	Lower voltage DC OLE systems are present on parts of the network and alignment is maintained with the wording of the Rule Book Modules and Handbooks.
132	29	Figure 9	How does guard boarding affect the electrical safety distances	Show guard boarding in diagram	6			NC	Covered by G3.2.1.6. Guard boarding not considered to fundamentally alter the applicable distances and therefore is not shown.
133	29	Figure 9	How does conductor rail side ramps affect the electrical safety distances	Show side ramps in diagram	6			NC	Diagrams provide typical illustrations only. In the case of ramps, the same electrical safety distances will apply

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									from the surface of the exposed live parts.
134	29	G5.2	CRE scenario	750 V scenario	6			NC	Lower voltage DC OLE systems are present on parts of the network and alignment is maintained with the wording of the Rule Book Modules and Handbooks.
135	29	Figure 9	Conductor rail insulator appear to be considered dead in this drawing. - this is not considered with other drawings	Show safety distances around insulators consistently on diagrams	6			NC	As it is a low voltage system and the Live Zone is defined as direct contact with the exposed live parts, we do not consider it appropriate to show insulated parts in contact with the CRE as part of the Live Zone given the intended use of this document.
136	30	Figure 10	It would be useful to include platform scenarios as per ac.	Add drawing	6			NC	Platform examples are included in Appendix P and presence of platform considered immaterial to the application of track circuit clips.
137	31	G5.2.2.2	Agree case by case but may be generic in depots that are carrying out that task in the same location. Coupling trains by hand is not so prevalent on the systems, not sure this is the best example – and they missed the live shoes on the side the blue person is standing which would have been a good example of sites it's not just the CR that's live.	modify drawing	6			NC	The illustration depicts a non-electric scenario with the coupling activity on the opposite side to the CRE. Additional diagrams are provided in Appendix P that depict the risks associated with Live shoe gear on the side of the vehicle that is away from the CRE.

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138	31	G 5.2.2 .2.	CRE	750V	6			NC	Lower voltage DC OLE systems are present on parts of the network and alignment is maintained with the wording of the Rule Book Modules and Handbooks.
139	31	G5.2 .3	CRE	750V	6			NC	Lower voltage DC OLE systems are present on parts of the network and alignment is maintained with the wording of the Rule Book Modules and Handbooks.
140	33	Fig.1 2	Inclusion of train staff walking to sidings or stabling yards.	Typical tasks should consider train staff walking from depots or mess rooms to train sidings or stabling yards where CRE is present.	6			NC	Diagrams depicting walking or standing adjacent to the CRE are included in Appendix P.
141	34	Appendix B	Can tables be copied in in a native format rather than an image, the images lose resolution an can be difficult to read.	Modify document production	6			DC	There is inevitably some reduction in resolution as the images are transferred to the requirements management database on which all RSSB standards are produced. Consideration will be given to hosting the appendices as supplementary content on the RSSB website for ease of access which should address any quality issues.
142	34	Appendix B	Part B only asks questions about the risk from the electrification system. This does not align with	add section to cover electrical risk from rolling stock	6			DC	Wording has been updated to include relevant elements of train equipment.

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			G.3.4.3.1						
143	34	Appendix B	Will the generic electrical risk assessment template be available in an editable format?	Provide risk assessment templet separately	6			NC	Consideration is being given to this.
144	34	Appendix B	Part C - "Is it possible" will very frequently be true, e.g. train drivers could always access the cab at extended con rail gaps, or during depot isolations but the operational disruption would be disproportionate.	Suggest "Is it unreasonable, having regard for all factors..." in line with HSR25 section 203	6			NC	When read in conjunction with the supporting guidance, the wording is considered to be appropriate. The form included in Appendix B is generic and therefore needs to be suitable for a wide range of situations.
145	34	Appendix B	Part C2 and C3 The structure necessitates duplication of the wordy control measures between the risk assessment section and the schedule of required controls	Consider methods to avoid duplication	6			NC	The provided forms are examples of how it could be done and the user may choose to modify or optimise the forms to best suit their needs or use existing forms that they may have. The examples provided include detail which helps the reader to understand the concept and approach.
146	34	Part B3	Reference to ".....where suitable precautions are in place". Why does this not just refer to control measures?	".....where suitable control measures are in place...."	6			DC	The current wording aligns with that of the relevant legislation. Relevant GN text at G3.4.4.4 has been revised to clarify the link between control measures and suitable precautions.
147	35	Fig 14, Part A1	It would be reasonable to put Yes in against B1 if the rolling stock did not derive its power source from the electrical traction	Clarify that this operational task is for the Train Dispatch of electric rolling stock in A1	6			DC	On a mixed traffic railway with a variety of traffic, making the equipment Dead would not be reasonable and the normal operational



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			system.						state of the contact line system is energised when the railway is operational. The wording in the example has been updated to clarify the scenario.
148	43	Appendix L	Flow chart (Decision box D1) refers to ORC's for both the Operative and for the person delivering the risk assessment this may be confusing.	Consider using ORC ref just for the operative who is performing the trackside activity and a different abbreviation for the activities of the risk assessor.	6			DC	Diagram has been simplified by removing the ORC references.
149	43	Appendix L	Duty holder shown in key, but not in flow chart	Add duty holder interface in flow chart	6			DC	Duty Holder has been removed from the key.
150	45	Appendix M	Consideration of General Public Consider removing appendix M and creating separate remit for the guidance of electrical risk that is indicated. Appendix M as it stands is insufficient for consideration of general public, whereas the rest of the guidance for employers is comprehensive so unclear of its value.	Remove appendix M	6			NC	The current content is understood to be helpful for station operators and railway undertakings and is proposed to be retained at this time. Removal would change the scope of the document.
151	46	Appendix	What anthropometric assumptions have been made	Add assumptions	6			NC	The information relevant to the height of persons included in the illustrations

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		x N	regarding the blue figure?						is included in the notes accompanying Appendix P. It is not intended for the diagrams to be scaled as they are illustrative but do convey a sense of proportion.
152	46	N.1.3	Noted that clarity for the depictions is required. Typical OLE arrangements in most cases have either an autotransformer feeder or return conductor present and the current depictions do not represent typical arrangements.	Consider the inclusion of autotransformers and return conductors.	6			DC	ATF and RC have been added to more of the illustrations.
153	47	Appendix N	Operational task references 1 - needs to include insulated RC	Add drawings to show insulated RC	6			DC	GN text has been updated to cover both insulated and uninsulated RCs.
154	47	Depictions	Depictions do not include the autotransformer feeder or return conductor.	Include return conductor and applicable safety distances.	6			DC	ATF and RC have been added to more of the illustrations.
155	48	Depictions	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC	Drawings have been updated to show where the dimension is taken from.
156	48	Operational task Reference	Walking or working along a platform – water refilling Poor example water points are not usually (in my experience found over live shoe gear and if	Remove drawing	6			DC	Industry stakeholders have confirmed that this is a valid scenario. Note will be added that depictions are diagrammatic only and precise locations can vary from vehicle to

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
		renc e 1	they are its not a risk assessment it's a NO don't do it.						vehicle.
157	49	Depi ction s	Depictions do not include the autotransformer feeder or return conductor.	Include return conductor and applicable safety distances.	6			DC	ATF and RC have been added to more of the illustrations.
158	49	Depi ction s	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC	Drawings have been updated to show where the dimension is taken from.
159	49	Depi ction s	Note that in legacy areas up to half the insulator was/is permitted to be over the platform		6			DC	Drawings have been updated to reflect this scenario.
160	50	Depi ction s	Depictions do not include the autotransformer feeder or return conductor.	Include return conductor and applicable safety distances.	6			DC	ATF and RC have been added to more of the illustrations.
161	50	Depi ction s	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC	Drawings have been updated to show where the dimension is taken from.
162	51	App endi x N	Operational task references 1 - Page 51 - Need to state that tool insulated to BS 8020 must be used. Most people will assume because it is in a RSSB drawing is OK to do.	Add statement regarding insulated tools	6			DC	GN has been updated at G3.4.4.6 to highlight the importance of using suitable tools and equipment in accordance with the relevant standards.

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
163	51		Dealing with objects that have fallen onto or near the conductor rail This again is a don't do – objects are retrieved once the unit have been moved, Station staff can't be asked to risk assess this, they don't know, and they can't see where shoes are.	Remove drawing, and replace showing mobile vehicle task	6			NC	Industry stakeholders have confirmed that this is a credible scenario for some organisations where it can be undertaken safely and therefore will be retained.
164	52	Depictions	Depictions do not include the autotransformer feeder or return conductor.	Include return conductor, ATF, EW , Insulated RC and applicable safety distances.	6			DC	ATF and RC have been added to more of the illustrations.
165	52	Depictions	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC	Drawings have been updated to show where the dimension is taken from.
166	53	Depictions	Depictions do not include the autotransformer feeder or return conductor.	Include return conductor, ATF, EW , Insulated RC and applicable safety distances.	6			DC	ATF and RC have been added to more of the illustrations.
167	53	Depictions	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC	Drawings have been updated to show where the dimension is taken from.

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168	54	Depictions	Depictions do not include the autotransformer feeder or return conductor.	Include return conductor, ATF, EW , Insulated RC and applicable safety distances.	6			DC		ATF and RC will have been added to more of the illustrations.
169	54	Depictions	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC		Drawings have been updated to show where the dimension is taken from.
170	55	Depictions	Depictions do not include the autotransformer feeder or return conductor.	Include return conductor, ATF, EW , Insulated RC and applicable safety distances.	6			DC		ATF and RC have been added to more of the illustrations.
171	55	Depictions	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC		Drawings have been updated to show where the dimension is taken from.
172	56	Depictions	Noted that for clarity the autotransformer or return conductor is not present on drawing. When leaving or entering a rail vehicle from the cess side at the midpoint between structures these wires are present.	Consider the inclusion of the risk presented by autotransformers and return conductors midspan.	6			DC		ATF and RC have been added to more of the illustrations.
173	58	Depictions	Depictions do not include the autotransformer feeder or return conductor.	Include return conductor, ATF, EW , Insulated RC and applicable safety	6			DC		ATF and RC have been added to more of the illustrations.

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				distances.					
174	58	Depictions	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC	Drawings have been updated to show where the dimension is taken from.
175	59	Depictions	Depictions do not include the autotransformer feeder or return conductor.	Include return conductor, ATF, EW , Insulated RC and applicable safety distances.	6			DC	ATF and RC have been added to more of the illustrations.
176	52	Depictions	Depictions do not include the autotransformer feeder or return conductor.	Include return conductor, ATF, EW , Insulated RC and applicable safety distances.	6			DC	ATF and RC have been added to more of the illustrations.
177	59	Depictions	The 915mm measurement does not state where this is to, OLE foundation or top of platform surface.	Include note with measurement meaning, running rail to platform surface.	6			DC	Drawings have been updated to show where the dimension is taken from.
178	60	Depictions	Noted that for clarity the autotransformer or return conductor is not present on drawing. When working on or near a rail vehicle from the cess side at the midpoint between structures these wires are present.	Consider the inclusion of the risk presented by autotransformers and return conductors midspan.	6			DC	Illustrations have been enhanced to include section views that depict the exposed live along track conductors.
179	61	Depi	Walking is not included as an operational task. Train staff walk	Consider the inclusion for	6			NC	Diagrams depicting walking or standing adjacent to the CRE are

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
		ction s	from depots and mess rooms to sidings and stabling yards where CRE is present.	depiction of risk present on walking routes where CRE is present.					included in Appendix P.
180	62	Depi ction s	Noted that for clarity the autotransformer or return conductor is not present on drawing. When leaving or entering a rail vehicle from the cess side at the midpoint between structures these wires are present.	Consider the inclusion of the risk presented by autotransformers and return conductors midspan.	6			DC	Illustrations have been enhanced to include section views that depict the exposed live along track conductors.
181	62	Depi ction s	Separated conductors could be autotransformer feeders or return conductors. These present a risk to train staff examining defects outside of a vehicle	Consider the inclusion of the risk presented by separated autotransformers and return conductors.	6			NC	We have illustrated failures associated with the contact line as this is the most likely related scenario that will be encountered by operational staff.
182	63	Depi ction s	Noted that for clarity the autotransformer or return conductor is not present on drawing. When examining defects outside of a train from the cess side at the midpoint between structures these wires are present.	Consider the inclusion of the risk presented by autotransformers and return conductors midspan.	6			DC	Illustrations have been enhanced to include section views that depict the exposed live along track conductors.
183	64	Depi ction s	Noted that for clarity the autotransformer or return conductor is not present on drawing. When examining a rail vehicle from the cess side at the midpoint between structures	Consider the inclusion of the risk presented by autotransformers and return conductors midspan.	6			NC	The comment appears not to be relevant to the conductor rail examples depicted on page 64.

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward	[RSSB responses] [ENE Standards Committee approved responses]
			these wires are present.						
184	65	Depictions	Noted that for clarity the autotransformer or return conductor is not present on drawing. When examining a rail vehicle below the cant line from the cess side at the midpoint between structures these wires are present.	Consider the inclusion of the risk presented by autotransformers and return conductors midspan.	6			DC	Note has been added to the illustrations pointing out that other exposed live along track conductors may exist which are not depicted here for clarity.
185	67	Depictions	Noted that for clarity the autotransformer or return conductor is not present on drawing. When working on a train below the sole bar from the cess side at the midpoint between structures these wires are present.	Consider the inclusion of the risk presented by autotransformers and return conductors midspan.	6			DC	Note has been added to the illustrations pointing out that other exposed live along track conductors may exist which are not depicted here for clarity.
186	-		The document states it doesn't have any requirements but the underlying theme throughout is a requirement to do the risk assessment at trigger points and it then lists the trigger points, are these not requirements?	Clearly identify requirements	6			NC	The document provides guidance only and is not intended to include any requirements.
187	-	Depictions	What about the risk of operational staff walking along a safe walking route parallel to conductor rail?	Add additional operational task	6			NC	Diagrams depicting walking or standing adjacent to the CRE are included in Appendix P.
188	15 &	G3.4.1.3	Sub clause a) Is it a work or 'operational task' assessment?	a)Part A Operational Task assessment or Electrical	6			DC	Wording has been changed to Assessment of Operational Task



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	16	& G3.4 .2		risk assessment template - Part A operational task assessment					
189	24, 25, 26, 27, 28	Fig.3 , Fig4. Fig.6 , Fig.7 , Fig 8	Where the Return conductor runs through platforms consideration should be given to the insulation. NR/L3/ELP/29987 module 7 clause 12.6 states that insulated return conductor can be worked on without a permit, provided that, the sheathing remains continuous and undamaged. This cannot be confirmed and presents a risk whilst undertaking operational tasks.	Return conductor to be considered as a risk for operational tasks on platforms.	6			DC	Additional text has been added to the GN to provide further guidance in respect to RC in station areas and differentiating between insulated and uninsulated RC.
190	24-26	Figure 3-5	No consideration of insulated pantograph horns	Clarify how insulated pantograph horns should be treated.	6			NC	It is not considered advisable to adopt differing clearances to people dependent on the pantograph horn type at this time given that conductive horns are dominant throughout the network. Consequently, a single approach has been applied assuming that the complete pantograph is Live.
191	35-40	Appendix C-J	Part D - the names chosen do not appear very diverse or inclusive.	change names	6			DC	Names have been altered to Person Name (1), Person Name (2)
192	35-	App	Part D the examples was signed on 01/02/03 as the next review	change dates	6			DC	The dates have been corrected.

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	40	endi x C- J	date is 01/02/2021. Is 18 years the recommended review cycle for the risk assessments?							
193	47-43	App endi x N	Drawings not captioned as figure xx	add figure numbers	6					Drawings have been captioned as figure numbers.
194	47-73	App endi x N	What dimension is assumed for the floor level on the trains. I believe that freight locos have a sole bar of 1400mm	add dimensions to drawings	6			DC		Dimensions have been checked and the GN updated as required. Additional note has been added to the illustrations clarifying the typical dimensions for the standing surface when boarding or alighting vehicles.
195		App endi x N	As well as including different OLE structures types it would be useful to include different cantilever types, as these have very different live envelopes. Earthed cantilevers are epically important at stations	Include drawings of Mk3b cantilevers, F+F Single Insulated Cantilever, Bomoni Omnia Cantilever, Headspan, Earthed cantilever for station platforms, etc.	6				NC	GN only depicts some examples and not all possible scenarios.
196	74-78	Defi nitio ns	the definition list is duplicated.		6			DC		Duplication has been removed.
197		Defi nitio ns	Ambiguous definition of Dead - this should provide greater guidance on how damager is to be avoided ie reg 12, and reg 13	Update definition	6				NC	We believe the definition is adequate for the intended audience.

No	Page	Section	Comment	Proposed revised text	By	Section	Page	Way forward		[RSSB responses] [ENE Standards Committee approved responses]
198		general	Consider including Red Bond hazard and include in diagram		6			DC		GN wording has been updated at G3.4.1.8 to include consideration of broken rails and broken bonds. An additional diagram is not considered to be necessary to communicate the required consideration.
199		general	Consider additional example in diagrams for broken cross track feed failure.		6				NC	The GN covers some typical scenarios and not all possible failure modes.
200		general	Consider adding additional points of live parts on d.c. electric train including exposed fuse gear		6				NC	The illustrations depict some typical arrangements and the duty holder would be required to consider equipment and scenario specific conditions and electrical risks.