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By email only

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## **Network Rail Response to ORR Market Study into the Supply of Signalling Systems**

Dear Grahame,

### Context

Between November 2020 and November 2021, the Office of Rail and Road (ORR) undertook a study to review and better understand the strength of competition for signalling systems within Great Britain (GB). ORR published an interim report on its findings in May 2021 and a final report in November 2021 that detailed a series of proposed remedies on parties in the rail industry, including Network Rail, to address these findings.

This paper sets out Network Rail's reply to the report published by ORR in November 2021 following its study into the GB signalling market. No part of this response is confidential, and Network Rail is content for it be published in full.

It is provided further to the request made by ORR in section 11 of their report for a response to the proposed remedies and sets out the proposed implementation strategy and plans for how Network Rail intends to respond to and address the proposed remedies.

### Executive Summary

Network Rail welcomes and supports ORR's study into the GB signalling market and its report. Many of the conclusions reached align with Network Rail's existing views and as noted in the report several activities are either already underway or planned which are intended to address many of the points highlighted in the report.

As ORR acknowledges, this market sector is complex with many challenges, however Network Rail recognises the on-going need to drive further improvement [in market competition], to increase the

value obtained from signalling renewal works and the role this plays in supporting a more diverse, variegated, and sustainable GB signalling market as well as delivering a better value railway for Great Britain.

Network Rail generally supports the conclusions the report reaches, whilst noting that there are limitations in relation to elements of the data underpinning some conclusions reached and that the conclusions must be considered in the context of the GB railway industry and the overall dynamics and nuances of the Europe-wide signalling market environment.

Network Rail supports ORR's remedies set out in its report and as we will expand upon in this response, Network Rail has in many instances commenced planning and or is taking action to address each remedy:

- Remedy 1 – Network Rail will work with ORR to develop, agree, and provide additional reporting information to improve transparency and inform decision making about signalling renewal market performance;
- Remedy 2 - Network Rail's forthcoming supplier contracts to deliver the roll-out of ETCS infrastructure are expected to be materially different from the approach used over recent control periods and intend to create several long-term, national collaborative relationships with suppliers which will improve the attractiveness of GB signalling works to suppliers by lowering barriers and investment required to enter the market and providing a more certain visibility of supplier return on investment;
- Remedy 3 - Network Rail will maintain, reinforce further, and improve the commercial and technical obligations and incentives around interfacing to encourage a more open approach and to realise the opportunities that European Initiative to Linking Interlocking Systems (EULYNX) in particular provides;
- Remedy 4 - Network Rail will implement additional activities and incentives to encourage, review and manage the achievement of an appropriate balancing of works; and
- Remedy 5 - Network Rail will strengthen the linkage between supplier tendering success and volumes of work delivered by suppliers in forthcoming ETCS delivery relationships. To encourage further innovation and reduce the dependency on supplier innovation investment Network Rail will require signalling innovation funding in its CP7 research and development funding.

Network Rail will continue to work with ORR to implement the remedies and actions proposed with the objective of delivering further improvements in this key railway industry area and to work with ORR to monitor progress on delivery and benefits of these remedies.

This market study was underpinned by a spirit of open and transparent collaboration and Network Rail anticipates continuing to work closely and collaboratively with ORR in connection with on-going engagement to implement, monitor and report on these future steps.

### Response to Report Contents

Network Rail welcomes ORR's study into the GB signalling market and its report, and generally, Network Rail supports the conclusions.

The conclusions reached broadly align with Network Rail's own perspective and as noted in the report several actions are already underway, or are already planned, to attempt to address many of the issues highlighted in the report.

Network Rail agrees, as acknowledged in the report, that actions must be practical and that ETCS provides a major opportunity for changes to be made. We note however that there are far fewer practical opportunities to make material changes on conventional signalling works and this is reflected in our planned actions in addressing the remedies.

We note the current material role Siemens and Alstom play in the majority of major signalling renewal activity. We believe this situation has developed as the result of several incremental factors including technological transition to Solid State Interlocking (SSI) and significant consolidation within the signalling supplier market. Improvements to this situation will not happen immediately and the activities proposed by both ORR and Network Rail will deliver change over the medium to longer term horizon of CP7, CP8 and beyond.

Although Siemens and Alstom have the majority share of major signalling renewal works, Network Rail has also had strategic framework relationships with a third provider under both the previous and current major renewals relationships (Atkins and Hitachi/Linbrooke respectively) to support wider market development.

Whilst we shall not comment in detail on cost and unit rate conclusions in ORR's report, we would highlight that, as noted in the report, the data sets available to ORR for use in the analysis are small. Therefore, the average rates may be unrepresentative and should be viewed only as representative of relative positions rather than absolute costs.

The lineside signalling system is part of the wider railway system and cannot be changed in isolation. This is especially true of the move to ETCS technology which has implications for other elements of the railway system e.g., ETCS on-board fitment is also needed to align to lineside equipment changes. The pace of the move to ETCS technology and the opportunities to increase the diversity and competition in the signalling supply market that this brings is dependant therefore on appropriate aligned activity to support this introduction from funders and others and does not sit wholly within Network Rail's control.

Finally, we would note that the report focuses mainly on initial capital works and costs and makes limited reference to lifecycle or whole life cost implications and issues. It is important that in its decision-making Network Rail considers the whole life practicalities and costs of operating and maintaining assets and Network Rail's planned actions seek to balance these issues that are not always aligned.

### Response to Remedy One

Network Rail is committed to providing an appropriate level of transparency and reporting around its signalling expenditure. There are several factors to be considered when determining this enhanced reporting including:

1. Reporting frequency should be appropriate and balance practicality and timeliness of insight (we would suggest a frequency of not more than every 6 months is appropriate);
2. The reporting should sit alongside existing processes and enhance not duplicate;
3. Careful consideration needs to be given to reporting any data on work in progress/incomplete schemes as this could be misleading and present an incomplete picture;
4. The reporting needs to pick up sufficient parameters to understand drivers of cost/other issues for a given scheme (e.g., early adoption of new technology);
5. Issues of commercial confidentiality of some data will need to be considered and managed appropriately; and
6. The obligations contained in Network Rail's Network Licence conditions as well as the Data Protocol between Network Rail and ORR.

We would therefore propose that Network Rail works with ORR to define and detail the additional nature and timing of data and reporting to be provided, with a target of defining and agreeing the reporting details no later than end of June 2022.

#### Response to Remedy Two

Network Rail has been working for several months on the development of a revised commercial approach for how it procures and delivers ETCS in CP7 onwards to address several of the underlying challenges that are highlighted in the ORR report. This development builds on an approach used as part of the East Coast Digital Programme (ECDP) model and has included extensive engagement with industry bodies such as the Rail Industry Association (RIA) and suppliers to better understand concerns and possible solutions.

A Prior Information Notice (PIN) was launched in December 2021 on these proposals and formal supplier engagement and feedback is underway. This engagement builds on previous work with RIA around the Rail Sector Deal and T190plus supplier workstreams all as noted in ORR report.

This commercial strategy is designed to increase the pool of suppliers from the current position and to grow supplier capability, to achieve a more equal market share over-time, and to improve value for money.

The strategic approach taken is designed to improve competition and diversity in the market overall as time develops by the creation of long-term collaborative relationships. This is key to create an environment for suppliers to mature and grow capability and obtain return on investment. This will be achieved by the creation of long-term commitment and continuity as opposed to the repetitive instability and change that comes from competition of individual schemes/projects.

The details within this remedy are largely addressed by this proposed future commercial strategy for ETCS renewals which, as currently being consulted, would:

1. Create long term framework relationships of 8 to 10 years duration, with potentially much longer contract-lengths (acknowledging that previous relationships have not provided sufficient longevity and continuity for suppliers such as Atkins in CP5 to fully mature and compete);

2. Strengthen levels of commitment to suppliers (noting that to fulfil this commitment appropriate funding to Network Rail for renewal works in CP7 onwards through the periodic determination process is necessary);
3. Support new entrants to the supplier market and relationships;
4. Use selection criteria and process designed to encourage new entrant and clear allocation criteria designed to not favour incumbent suppliers and rewards those more open to integration to support both growth/entry of OEM's and integrators;
5. Increase the amount of work not directly awarded to suppliers by use of a work allocation process based on supplier achieved performance and value (focused on achievement of strategic commitments and outcomes such as reducing unit rates being achieved), not just lowest price;
6. Use outcome-based contracts and scopes;
7. Re-imburse part of supplier development and proving costs via a proposed two -stage approach, comprising a bid process at the first stage; at the second stage, development and proving jointly funded which must be completed before moving onto works being awarded; as well as encouraging new entrants by reducing investment required initially also reduces some of the local disincentive to adopt new technology. (noting that to fulfil this commitment appropriate, specific, funding to Network Rail for these costs will need to be confirmed via the PR23 process)

The proposed work allocation approach under these new relationships means all successful suppliers will be allocated work and so will have the benefit of “pilot” projects on which to develop and mature capability (this is in addition to the partially funded development & demonstration stage proposed).

We intend to mature and finalise these proposals in Q1 and Q2 of 2022 and then commence the formal procurement process, with a target of placing contracts for these new arrangements in 2023.

An updated and more detailed timeline, and our finalised strategy, will be shared with the ORR once external consultation has been completed and the strategy is fully developed, matured and the formal procurement process is ready to commence.

In order to realise the maximum benefit from this new way of engaging and working with suppliers it is important that Network Rail staff who manage and engage with these contracts themselves understand the strategic objectives they address together with the mechanisms, culture and behaviour required. Therefore, the adoption of these new supplier relationships will be accompanied by a matching programme of engagement, education and briefing for Network Rail staff involved in their use.

Network Rail's ability to follow this approach is dependent on adequate funding provision being supported via the periodic determination process, both for renewals works in CP7 and beyond to support the development of supplier capability and the partial reimbursement of development costs to suppliers.

Network Rail's future technical and strategic policy to move towards ETCS will allow the opportunity to open up the supplier market, but there is less attractiveness around what will increasingly be seen as the legacy area of conventional signalling and we therefore expect to be able to make less impact in increasing market completion in this area.

All future contracts will include ETCS requirements and specifications that will be EULYNX compliant and suppliers of the next generation of frameworks described earlier will have to demonstrate this capability as part of the selection process (it is also intended that part of the work allocation criteria will be on-going development and use of EULYNX compliant interfaces).

We believe that over time the move to EULYNX and other more open interfaces will encourage even suppliers with partial capability (perhaps in one or more areas of the ECTS system) to enter the market, however this will take several years to be achieved. Network Rail's strategy is to lay the groundwork now by requiring new activity to utilise these interfaces with a clear understanding that impacts will take time to mature and benefits to be realised.

Network Rail intends that test and facilities noted in the report (e.g. at ENIF, RIDC), together with the next generation of facilities also currently being developed of virtual test and verification capabilities and the additional Welsh test track, will be available to suppliers to utilise (at operational cost only) for systems and product development and proving. Network Rail's ability to maintain this commitment is dependent on suitable funding to support the on-going retention of these facilities being provided by the CP7 and future periodic determination processes.

Finally, we would highlight that the pace at which Network Rail is able to begin to rebalance the renewals work bank across the supplier market will be influenced by the timing and volume of works funded and available to develop, in order to support and maintain a wider, more diverse market of supplier capabilities.

### Response to Remedy Three

Network Rail intends to retain the existing contractual requirements relating to interfacing and to include similar requirements in the new future relationships described in our response to remedy 2.

Supplier commitments and proposals as to how they will improve and embed these will form part of the future framework tender evaluation criteria and will then be embedded into the frameworks as formal commitments which can be monitored.

As outlined under our response to remedy 2, an element of the future framework relationships work allocation criteria will be based on suppliers' behaviours around interfacing (including the use and development of EULYNX compliant interfaces). We anticipate that this together with the conscious use of a more collaborative approach and contractual basis will encourage openness and increased interface use and development between suppliers.

The use in these future frameworks of a basket of value criteria, not just lowest price, to form the basis of work allocation will minimise the ability of suppliers to leverage any historical advantage on existing interfaces.

Again, as referred to in our response to remedy 2, Network Rail will move to all future contracts including ETCS requirements and specifications that will be EULYNX compliant and that supplier's commitment and proposals to achieve this will form part of the future framework tender evaluation criteria.

Finally, in our response to this remedy Network Rail proposes to introduce a forum as part of the framework relationships for suppliers to raise issues/concerns and then for these to be discussed and resolved in this open forum with input and resolution from both the suppliers themselves and Network Rail. It is anticipated that the introduction of such an open forum to collaboratively and mutually discuss and resolve concerns will be beneficial in developing common trust, openness and mutual engagement between suppliers which is necessary to reduce historical barriers to collectively resolving interface issues. This is reinforced by this forum existing within the eco-system of the collaborative long term framework relationships themselves. Details of this forum are being developed currently and will be embedded in the future framework contractual documents when the procurement is launched.

#### Response to Remedy Four

The future commercial strategy highlighted in our response to remedy 2 purposely seeks to balance work between suppliers by its nature. The model also significantly reduces disincentive and risks felt locally around new technology and suppliers and effectively holds these centrally, by dealing with system development proving once, nationally, as part of the mobilisation of the relationships.

Whilst not related to the future commercial model the increased ease of use of offline test and verification processes that enabled by the move towards ETCS further reduce risk around future new technology and product introductions.

Network Rail will also establish an internal review forum with both regional and national representatives to monitor, and where appropriate propose further action and intervention to address shortfalls against strategic outcomes. The forum will look at issues including the overall work allocation, supplier performance, technology adoption and other related issues, across the future relationships and suppliers. We anticipate this review forum to be in place to align with the start of new framework relationships in 2023. Further details on this forum will be developed during 2022 in readiness for launch alongside the future frameworks.

Given the potential risks and impacts associated with early deployments of new systems or products Network Rail would suggest that the discussions on additional reporting referred to in remedy 1 consider to what extent it is appropriate to capture and report information influencing factors and impacts where new technology is being deployed so that outcomes and conclusions are not skewed.

As proposed in ORR's remedy 4 Network Rail will include within its CP7 (and future) funding submission an innovation fund as part of the R&D funding provision to support future new product innovation and development (incl. business change aspects) as these emerge and not "taint" regional delivery projects with these costs.

Whilst Network Rail supports the need to balance potentially competing national and regional needs when determining how to best allocate works, it is important that we consider issues from a WLC perspective and not just consider initial capital works impacts. The creation of islands of technology in particular is a significant issue in the achievement of optimised WLC and effectively maintaining the railway. The significance of these whole life issues and need for consistency varies between on-track assets and other assets which are more centralised. We also expect this issue to evolve over time as

the opportunity EULYNX and other interface initiatives create in the longer term begin to take effect. We expect that on-going engagement with ORR and funders will be necessary in establishing a long-term strategy that balances these competing pressures.

The responses detailed regarding this remedy make significant moves to reduce risks and disincentives for regions to introduce new technology and products. However, the issue of the potential creation of mechanisms to ring fence regional performance impacts from such adoption or even regional reward for such adoption is complicated and still being reviewed and no final conclusion has yet been reached. Consideration of this area will continue during 2022 and Network Rail intends to provide a further update to the ORR on proposals in this area later in 2022.

### Response to Remedy Five

The benefits that will be created by the actions we have outlined in our response to remedies 2 to 4 will only be realised if there is appropriate transparent, funding provision within the funding determination for CP7 (and future control periods) relating to:

1. Renewals works of appropriate volume to support new relationships;
2. Supplier development cost reimbursement (as outlined in our response to remedy 2); and
3. Innovation funds as part of R&D funding.

Network Rail's ability to realise the changes highlighted as necessary in the ORR remedies, and our responses to these remedies, is also dependant on such funding provision.

Alongside funding to Network Rail directly there is also a need for aligned industry funding to support related activities such as on-board fitment of ETCS to rolling stock if the strategic transition to ETCS and the opportunities this creates to address the supplier market issues highlighted are to be achieved.

The attractiveness to signalling suppliers of the GB signalling market is influenced not just by volumes of work and funding levels, but also supplier confidence in that funding and a consistency and alignment of message from funders and others is key in supporting this.

As we have outlined in our response to remedy 4, Network Rail plans to establish a centralised Innovation provision as part of the R&D funds to support future supplier innovation away from front line project delivery and therefore reduce any perceived regional or project specific cost or delivery risk.

We have outlined in our response to remedy 2, Network Rail's plans to implement a commercial approach for its future ETCS delivery relationships which will create a direct link between successfully securing a place on these frameworks and the level of work which will be awarded to each supplier.

Conclusion

Network Rail remains committed through taking the steps outlined in this response and in accordance with its legal and regulatory obligations to seek and obtaining signalling market improvements whilst continuing to work in collaboration with industry partners stakeholders and ORR.

Yours faithfully

A handwritten signature in black ink, appearing to be "Jeremy Westlake". The signature is fluid and cursive, with a prominent loop at the end.

Jeremy Westlake

Chief Financial Officer

**FOR AND ON BEHALF OF NETWORK RAIL INFRASTRUCTURE LIMITED**