

Appendix A: Terms of reference

1. In exercise of its duty under [section 33\(1\)](#) of the Enterprise Act 2002 (the **Act**) the Competition and Markets Authority (**CMA**) believes that it is or may be the case that:
 - (a) arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation, in that:
 - (i) enterprises carried on by Hitachi Rail, Ltd, a wholly owned subsidiary of Hitachi, Ltd, will cease to be distinct from the enterprise consisting of the Ground Transportation Systems business carried on by Thales SA; and
 - (ii) the condition specified in [section 23\(1\)\(b\)](#) of the Act is satisfied.
 - (b) the creation of that situation may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom for goods or services, including in the supply of:
 - (i) European Train Control System Automatic Train Protection wayside resignalling projects;
 - (ii) operation and control systems projects; and
 - (iii) communication-based train control signalling projects for metros.
2. Therefore, in exercise of its duty under [section 33\(1\)](#) of the Act, the CMA hereby makes a reference to its chair for the constitution of a group under [Schedule 4](#) to the Enterprise and Regulatory Reform Act 2013 in order that the group may investigate and report, within a period ending on 8 June 2023, on the following questions in accordance with [section 36\(1\)](#) of the Act:
 - (a) whether arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation; and
 - (b) if so, whether the creation of that situation may be expected to result in a substantial lessening of competition within any market or markets in the United Kingdom for goods or services.

Colin Raftery
Senior Director, Mergers
Competition and Markets Authority
23 December 2022

Appendix B: Conduct of the inquiry

The reference

1. On 23 December 2022, the CMA [referred](#) the anticipated acquisition by Hitachi of the Ground Transportation Business of Thales for an in-depth phase 2 inquiry. Biographies of members of the Inquiry Group conducting the phase 2 inquiry were published on the inquiry [webpage](#).

Delays to the inquiry

2. The original administrative timetable for the phase 2 inquiry was published on the inquiry [webpage](#) on 6 January 2023. At commencement of the inquiry, the statutory deadline was 8 June 2023, but this was subsequently extended to 11 August 2023 as a result of the delay by both Hitachi and Thales in complying with the requirements of notices under [section 109](#) of the Act to provide certain documents and information issued on 23 December 2022 (the **Notices**). The deadline to respond to these Notices was 6 January 2023 in relation to some data requests and 11 January 2023 for the other requests, including requests to produce internal documents. The statutory timetable was stopped between 9 January 2023 and 14 March 2023, as a result of repeated delays by both Parties in responding to the Notices. Notices of extension were published on the inquiry [webpage](#) on 9 and 13 January 2023. Following receipt of the outstanding documents and information, we re-started the statutory timetable on 14 March 2023 and termination of extension notices were published on the inquiry [webpage](#) on the same day. A revised administrative timetable was also published on the inquiry [webpage](#) on 14 March 2023 (see paragraph 18 below in relation to the subsequent update to the administrative timetable).
3. These delays disrupted the course of the inquiry. The CMA's substantive decisions in merger investigations are subject to strict statutory deadlines and a duty of expedition. The Parties' delay in responding to the Notices caused uncertainty and potentially prejudiced the CMA's ability to plan and efficiently manage its resources.

Evidence gathering

4. We invited a wide range of interested parties to comment on the Merger. We sent detailed requests for information to the Parties' customers, competitors and other third parties. A number of third parties also provided us with evidence by video conference calls as well as by responding to

supplementary written questions. Evidence submitted during the CMA's phase 1 investigation was also considered in the phase 2 investigation.

5. We received written evidence from the Parties in form of submissions and responses to information requests, including a substantial volume of internal documents.

Issues statement

6. On 17 January 2023, we published an issues statement on the inquiry [webpage](#) setting out areas on which the phase 2 inquiry would focus.

Site visits

7. On 9 February 2023, members of the Inquiry Group, accompanied by CMA staff, attended site visits with the Parties (and their advisers) at their offices.

Initial submissions

8. On 6 February 2023, we published a non-confidential version of the Parties' initial submission on the inquiry [webpage](#). This set out what they believed should be key points for consideration by the Inquiry Group.
9. We received a written submission from the ORR, a [non-confidential version](#) of which was published on the inquiry webpage on 6 April 2023.
10. The Parties made voluntary submissions on various competition issues being investigated in the inquiry, and non-confidential versions of these submissions were published on the inquiry [webpage](#) on 6 and 19 April 2023. The Parties also made observations on ORR's submission, and a non-confidential version was published on the inquiry [webpage](#) on 18 May 2023.

Annotated Issues Statement, Working Papers and main party hearings

11. We held separate hearings with each of the Parties on 26 April 2023 and 2 May 2023.
12. Prior to the hearings, we sent the Parties a number of Working Papers (**WPs**) for comment. We also provided the Parties and third parties with extracts from the WPs for comments on accuracy and confidentiality. The Parties were also sent the Annotated Issues Statement (**AIS**), which outlined our thinking prior to their respective hearings. The Parties provided comments on our AIS and WPs on 2 May 2023.

Provisional Findings, Remedies Notice and response hearings

13. We announced our provisional findings on 8 June 2023. We provisionally concluded that the Merger would result in the creation of a relevant merger situation, and that the creation of that situation may be expected to result in an SLC, as a result of horizontal unilateral effects in: (a) the supply of digital mainline signalling systems and related services (digital mainline signalling systems) in GB; and (b) the supply of CBTC systems in the UK. We published a Notice of provisional findings and a summary of the provisional findings, alongside a CMA press release, on the inquiry [webpage](#) on 8 June 2023. We also published a Notice of Possible Remedies (the **Remedies Notice**) on the inquiry [webpage](#) on 8 June 2023.
14. Following signing of the relevant confidentiality ring undertakings, the confidential version of the Provisional Findings Report was disclosed to certain of the Parties' external advisers on 9 June 2023.
15. On 12 June 2023 we published a non-confidential version of our Provisional Findings Report and accompanying appendices on the inquiry [webpage](#).
16. On 3 and 4 July 2023 we held response hearings with Thales and Hitachi respectively. We also held remedies calls with a number of third parties and issued a number of requests for information to clarify our understanding of certain issues (see Appendix C, paragraph 25).
17. We published the Parties' and third parties' responses to the Remedies Notice on the inquiry [webpage](#) between 4 and 27 July 2023. On 19 July 2023 we published the Parties' and third parties' responses to the provisional findings on the inquiry [webpage](#). On 30 August 2023, we published the Parties' observations on ORR's remedies submission and the Parties' observations on third-party submissions on the inquiry [webpage](#).

Notice of extension

18. On 27 July 2023 we published a Notice of extension on the inquiry [webpage](#) setting out the Inquiry Group's 18 July 2023 decision to extend the reference period of the inquiry by eight weeks under section 39(3) of the Act to 6 October 2023. In taking this decision the Inquiry Group had regard to the need to consider the issues raised and additional evidence submitted by the Parties in their response to the provisional findings, the need to gather and analyse further evidence from third parties which had become available following publication of the provisional findings, and the need to consider the issues raised in the Parties' response to the Remedies Notice, taking into account the complexity of the remedy being proposed by the Parties. The

Inquiry Group also had regard to the need to consult with stakeholders in relation to the proposed remedy, in reaching its decision on remedies, if required. A revised administrative timetable was also published on the inquiry [webpage](#) on 27 July 2023.

Interim undertakings

19. On 3 August 2023 we accepted interim undertakings offered by Hitachi pursuant to [section 80](#) of the Act, which we published on the inquiry [webpage](#) on 10 August 2023. The accepted interim undertakings prevented Hitachi, without the CMA's consent, from taking 'any action which might prejudice the reference or impede the taking of any action under the Act by the CMA which may be justified by the CMA's decisions on the reference'. Pursuant to these interim undertakings, on 8 August 2023 we directed the Parties to appoint a Monitoring Trustee. We published the directions to appoint the Monitoring Trustee on the inquiry [webpage](#) on 18 August 2023.

Further competition assessment after the Provisional Findings Report

20. On 15 August 2023 we disclosed to the Parties a non-confidential version of the 'Digital MLS Further Evidence Paper' setting out further evidence in relation to the theory of harm on the supply of digital mainline signalling systems in GB received since the publication of the Provisional Findings Report. The confidential version of the paper was disclosed to certain of the Parties' external advisers on the same day. This paper was disclosed to the Parties in the interests of transparency and to ensure that we had the Parties' submissions on relevant additional evidence gathered in the period following the provisional findings. The Parties provided a response to the Digital MLS Further Evidence Paper on 22 August 2023.
21. The Parties also provided a supplemental submission on further evidence on 8 September 2023 in which they asserted that the Digital MLS Further Evidence Paper was insufficient to discharge the CMA's duties as it merely collated further evidence and did not contain any material analysis by the CMA which took into account the whole corpus of evidence, including information provided before the publication of the Provisional Findings Report.¹
22. We do not agree with the Parties' submissions set out above. Under [section 104](#) of the Act, the CMA has a duty to consult where it proposes to

¹ Hitachi's supplemental submission on further evidence, 8 September 2023, paragraph 13.

make a relevant decision that is likely to be adverse to the interests of the merger parties. As set out in our guidance, and consistent with settled precedent, the Provisional Findings are the main means by which the CMA fulfils this duty in relation to its competitive assessment.² In the context of remedies, the CMA discharges its duty to consult by issuing a ‘Remedies Working Paper’ to the merger parties, which contains a detailed assessment of the different remedy options and sets out the provisional decision on remedies.³

23. It may be appropriate for the CMA to issue updated provisional findings where ‘the CMA changes its provisional decisions on the statutory questions (or, exceptionally, where the ‘gist’ of the CMA’s case fundamentally evolves) as a result of evidence received following publication of its provisional findings’. In such circumstances, ‘it may be appropriate for the CMA to publish on its website, or otherwise disclose to the merger parties and relevant third parties, a description of its reasons for changing its provisional decision in order to provide parties with an opportunity to comment prior to publication of the final report’.⁴ However, where such evidence involves matters that are already within the scope of the CMA’s provisional findings and does not change the ‘gist’ of the case, CMA may instead take into account representations on the additional evidence prior to making its final decision on the statutory questions.⁵
24. Unlike the further evidence relating to the supply of urban signalling in the UK addressed in the Provisional Findings Addendum (the **Addendum**) (see paragraph 26), the additional evidence collated and identified after the publication of Provisional Findings in the Digital MLS Further Evidence Paper did not meet the threshold for issuing updated provisional findings. It did not alter our provisional decisions on the statutory questions set out in the Provisional Findings, nor did it result in a fundamental evolution of the gist of the CMA’s case. The CMA clearly explained in the cover note to the Digital MLS Further Evidence Paper: ‘We do not currently consider that this additional evidence changes our provisional finding that the Merger may be expected to result in an SLC in the supply of digital mainline signalling systems in Great Britain. The CMA intends to take this additional evidence into account when deciding the statutory questions and preparing the Final

² Mergers: Guidance on the CMA’s jurisdiction and procedure (**CMA2**), December 2020, paragraphs 12.12-12.13 and 13.4, and [Cérélia Group Holding SAS and Cérélia UK Limited v Competition and Markets Authority \[2023\] CAT 54](#), paragraph 247.

³ [Mergers: Guidance on the CMA’s jurisdiction and procedure \(CMA2 revised\)](#), January 2021 (as amended on 4 January 2022), paragraph 13.18.

⁴ [Mergers: Guidance on the CMA’s jurisdiction and procedure \(CMA2 revised\)](#), January 2021 (as amended on 4 January 2022), paragraph 13.21.

⁵ [Cérélia Group Holding SAS and Cérélia UK Limited v Competition and Markets Authority \[2023\] CAT 54](#), paragraphs 256-257.

Report'. As such, there was no need to revise the Provisional Findings or conduct a further consultation on any revised findings.

25. However, the CMA's views on all aspects of the substantive assessment (including those to which the further evidence contained in the Digital MLS Further Evidence Paper related) remained provisional at this stage of the process. The cover note to the Digital MLS Further Evidence Paper made clear that: 'no final decision on the SLC has yet been taken and we are continuing to consider the submissions made by the Parties in response to the Provisional Findings, along with all of the other evidence available to the CMA'. The CMA took into account the Parties' representations on the Digital MLS Further Evidence Paper prior to making its decision on the statutory questions. The CMA's views on these submissions are set out in the relevant sections of this Final Report.
26. On 23 August 2023 we announced the Provisional Findings Addendum in which we provisionally found that the Merger is unlikely to result in an SLC in relation to the supply of urban signalling in the UK. Having carefully considered the new evidence gathered after the Provisional Findings, together with the wide range of information gathered previously, we provisionally concluded that Hitachi would not be a credible bidder to supply CBTC signalling systems to the London Underground in the near to medium term. On 23 August 2023, the non-confidential version of the Addendum was published on the inquiry [webpage](#) and the confidential version of the Addendum was disclosed into the confidentiality ring. The Parties and the third parties had until 31 August 2023 to respond to the Addendum. We published non-confidential versions of the responses to the Addendum on the inquiry [webpage](#) on 5 September 2023.

Engagement on possible remedies

27. On 1 August 2023, we sent the Parties a paper setting out our emerging views on the Parties' remedy proposal and invited the Parties to put forward a modified (or if necessary, alternative) remedy proposal and/or to make such/any further representations in light of our emerging views. We received Hitachi's response to this document on 10 August 2023.
28. On 18 August 2023 Hitachi submitted a modified version of the Parties' original remedy proposal. On 22 August 2023, Hitachi met with the Inquiry Group, at Hitachi's request, to clarify certain elements of Hitachi's revised remedies proposal and explain how its proposal addresses the risks previously raised with Hitachi.

29. On 5 September 2023 we sent a non-confidential version of the Remedies Working Paper (**RWP**) to the Parties for comment. The confidential version of the RWP was disclosed to certain of the Parties' external advisers on the same date. The Parties provided their comments on this paper on 14 September 2023.

Final report

30. Our final decision was announced on 4 October 2023. A non-confidential version of the final report has been published on the inquiry [webpage](#).
31. We would like to thank all those who have assisted in our inquiry.

Appendix C: Summary of third-party evidence

Introduction

1. This Appendix outlines our approach to gathering evidence from third parties in relation to the supply of digital mainline signalling systems in GB, CBTC signalling systems in the UK and the Parties' remedies offered to address the SLCs identified at the Provisional Findings stage.
2. We have gathered evidence and views from the Parties' customers and competitors¹ both in and outside the UK in relation to the nature of competition, the competitive conditions and effects of the Merger in the supply of digital mainline signalling systems and CBTC signalling systems. Following the issue of the Provisional Findings we also engaged with the Parties' competitors and customers regarding the Parties' proposed remedy offer.
3. We engaged with the sector regulator (**ORR**) and the Railway Industry Association (**RIA**), in relation to our assessment of the Merger in the supply of digital mainline signalling. We also engaged with the ORR regarding the Parties' proposed remedy. We also sought evidence from the Department for Transport in relation to plans and funding for the digitalisation of the GB railway, as well as for expected CBTC signalling systems in the London Underground.
4. We engaged with these third parties primarily through written requests for information. With many of them we also scheduled virtual or in-person meetings.²
5. The main focus of our requests for information and meetings with third parties in relation to the supply of mainline signalling systems was to understand:
 - (a) the importance of suppliers having access to technology, to be able to compete for the digital lot of the TCSF;
 - (b) the process, costs and challenges involved with homologating mainline signalling technology in GB and Europe;
 - (c) the competitive strength of each potential supplier of digital mainline signalling in GB, in particular in the context of the TCSF, and whether

¹ For the purposes of this Appendix, by competitors in relation to the supply of digital mainline signalling we refer to integrators and OEMs.

² We had in-person meetings with the ORR and Network Rail.

these suppliers were likely to be credible rivals to the Parties in the TCSF tender;

- (d) the importance of management experience and technical expertise in undertaking digital mainline signalling projects in the UK and Europe in bidding for the TCSF, including interacting with Network Rail;
- (e) their views on the Merger; and
- (f) the viability and practical implementation of the Parties' proposed remedy.

6. The main focus of our requests for information and meetings with third parties in relation to the supply of CBTC signalling systems was to understand:

- (a) the relative strengths of the Parties in bidding for projects on the London Underground;
- (b) the extent of barriers to entry and expansion and any incumbency advantages of the incumbent suppliers in the London Underground;
- (c) the competitive strength of each potential supplier of CBTC systems in the UK and whether these suppliers were likely to be credible rivals to the Parties in relation to future projects in the London Underground;
- (d) the role and importance of management experience, technical expertise and local capacity in bidding for CBTC projects, and in particular for the London Underground;
- (e) their views on the Merger; and
- (f) the viability and practical implementation of the Parties' proposed remedy.

7. The evidence provided by third parties has, in the main, been qualitative rather than quantitative.

Third-party engagement prior to publication of the Provisional Findings

8. We provide below details about our engagement with third parties in relation to each of the relevant markets we considered in our competition assessment prior to publication of the Provisional Findings.

Supply of digital mainline signalling projects

Customers

9. We sent tailored requests for information to the UK customers that were likely to organise tenders for the supply of mainline signalling projects in the near future or had launched a tender which is currently ongoing. All the customers that we reached out to (ie Network Rail, HS2, Translink and Nexus) responded to our written requests. Further, there were three main virtual meetings with Network Rail, before Provisional Findings, one of which was attended by the Inquiry Group. Our engagement with customers is outlined in more detail below.
10. We have been in regular contact with Network Rail throughout our investigation. While we asked Network Rail to provide information in relation to past purchases of mainline signalling projects, our questions overall focused on the design and scope of the TCSF and on the assessment of the potential bidders for the supply of digital mainline signalling projects under the TCSF with a particular focus on the criteria that Network Rail would consider when selecting the successful bidders.
11. We asked HS2 to provide information in relation to past purchases of mainline signalling projects and the ongoing tender, particularly regarding the pre-qualification phase of the tender. Our engagement with Nexus and Translink focused on past and future tenders for the supply of digital mainline signalling projects.

Competitors

12. We sent initial requests for information covering the supply of mainline signalling in GB to 18 OEMs and 18 integrators and we received seven responses from OEMs and eight from integrators.^{3,4} In addition, we had virtual meetings with five OEMs and six integrators.⁵ We sent additional requests for information to these stakeholders throughout our investigation.

³ OEMs: Alstom, Siemens, CAF, Mermec, Progress Rail, Resonate, Stadler. Integrators: Amey, Atkins, Colas Rail, Costain, Linbrooke, Mipro, Terna and VolkerRail.

⁴ Some of these competitors did not respond to our request for information, but set out their views of the Merger and provided a description of their business.

⁵ Siemens, Alstom, Indra, Mermec, Resonate, Amey, Atkins, Colas, Costain, Linbrooke and VolkerRail.

Other stakeholders

13. As set out in paragraph 33, we discussed the Merger with RIA, ORR and the Department for Transport.
14. We have engaged with ORR regularly during our investigation, both by organising virtual/in-person meetings and sending requests for information. The ORR has also provided us with a submission on the effects of the Merger in the delivery of mainline signalling in GB.
15. Further, we sent a request for information to RIA and organised a virtual meeting with the Department for Transport.

Supply of CBTC signalling systems

Customers

16. We sent tailored requests for information to seven customers (both in the UK and outside the UK)⁶ among other things to get an overview of the Parties' capabilities in supplying CBTC signalling systems and received four written responses.⁷ We had virtual meetings with three customers.⁸

Competitors

17. We sent questionnaires covering the supply of CBTC signalling systems to six competitors and we received five responses.⁹ In addition, we had virtual meetings with those five competitors.¹⁰ We sent additional requests for information to these stakeholders throughout our investigation.

Responses to the Provisional Findings, Remedies Notice and the Addendum

18. We received responses to the Provisional Findings Report from two third parties: Network Rail and RMT Union.
19. We received responses to the Addendum from two third parties.

⁶ TfL, Strathclyde Partnership for London Transport, Transport Authorities from Brussels, Oslo, Paris, San Francisco and New York.

⁷ TfL, Strathclyde Partnership for London Transport, Brussels Transport Authority, Oslo Transport Authority.

⁸ TfL, New York Metropolitan Transportation Authority and San Francisco Infrastructure Manager.

⁹ We sent questionnaires to Siemens, Alstom, CAF, Stadler, Mitsubishi and Nippon. Only Nippon did not reply.

¹⁰ Siemens, Alstom, CAF, Stadler and Mitsubishi.

Third-party engagement after the publication of the Provisional Findings Report

Supply of digital mainline signalling projects

Customers

20. The case team continued to engage regularly with Network Rail. We issued further requests for information to Network Rail and held a further main call with this customer (in addition to the remedies call referred to in paragraph 25 below), which was attended by the Inquiry Group. This conference call focused on the ongoing TCSF tender process and especially on the results of the PQQ stage of that tender as well as on Network Rail's views on our provisional findings and the impact of the Merger on the TCSF tender.
21. Network Rail provided a further submission setting its views on the Merger on 5 September.

Competitors

22. We sent further requests for information to seven integrators and received responses from five of them.¹¹

Supply of CBTC signalling systems

Customers

23. We issued further information requests to and held a further call with TfL (in addition to the remedies call referred to in paragraph 25 below) focusing on its plans for procurement of the CBTC signalling systems for the Piccadilly and Bakerloo lines.

Competitors

24. We issued further requests for information to two competitors both of whom responded.¹²

¹¹ [REDACTED], [REDACTED], [REDACTED], [REDACTED] and [REDACTED].

¹² [REDACTED] and [REDACTED].

Remedies

25. We received responses to the Remedies Notice from three third parties: CAF, ORR and Wabtec.¹³ We held remedy calls with 11 third parties¹⁴ in relation to possible remedy solutions, including customers, competitors and ORR.¹⁵

¹³ We also received an email from [REDACTED], noting that it had been informed about 'Project Ark' and that based on this preliminary information, indicated that while it was waiting on the detailed information, it considered that the 'direction seems the right one'. Source: [REDACTED] email to the CMA, [REDACTED].

¹⁴ We held call to discuss possible remedies with the following third parties: Network Rail, the ORR, Indra, Siemens, [REDACTED], [REDACTED], TfL, Mitsubishi, Stadler, [REDACTED] and SNCF.

¹⁵ Two of these competitors ([REDACTED] and [REDACTED]) had expressed interest in the sale process of Project Ark, by signing letters of intent.

Appendix D: Hitachi's performance [REDACTED]

1. Hitachi told us that it had incurred [REDACTED] and had adopted stricter bidding processes [REDACTED]. In this Annex, we set out evidence from Hitachi's internal documents which discuss the [REDACTED] projects and the issues faced by Hitachi.
2. In June 2021, Hitachi carried out an internal audit in which it assessed various projects [REDACTED]. As part of its internal audit report, Hitachi considered [REDACTED]. It stated that '[REDACTED]' and that [REDACTED]. The internal audit report [REDACTED].¹
3. Subsequently, in September 2021, Hitachi's Risk Management Unit carried out 'deep dive reviews' of its performance in [REDACTED]. These documents were presented to Hitachi's Audit and Risk Committee. [REDACTED].² In relation to the [REDACTED], Hitachi identified that projected costs had [REDACTED]. [REDACTED].^{3,4} [REDACTED]:
 - (a) [REDACTED];
 - (b) [REDACTED];
 - (c) [REDACTED]; and
 - (d) [REDACTED].⁵
4. With respect to each of the issues above, Hitachi sought to identify lessons learned for future projects to mitigate these risks. It considered key lessons to be:
 - (a) [REDACTED]
 - (b) [REDACTED]
 - (c) [REDACTED]⁶
5. In its review of the [REDACTED], Hitachi similarly identified that cost expectations [REDACTED].⁷ [REDACTED]:
 - (a) [REDACTED];

¹ Thales response to s109 Notice dated 23 December 2023, Annex HRL0003388, page 13; and Parties, Response to AIS and WPs, 2 May 2023, pages 46-47.

² [REDACTED], slide 3 and [REDACTED], slide 3.

³ Hitachi separately submitted that [REDACTED] (Hitachi's response to RFI 3, Q35), [REDACTED]. Hitachi clarified that [REDACTED] (Hitachi, email to the CMA dated 24 May 2023).

⁴ Hitachi notes that [REDACTED] (see Annex CBTC H.WP.006 and Annex H.RFI8.003) [REDACTED].

⁵ [REDACTED], slides 3 and 15.

⁶ [REDACTED], slides 3 and 15.

⁷ [REDACTED], slide 3.

(b) [REDACTED]; and

(c) [REDACTED].⁸

6. Hitachi accordingly identified a similar set of lessons learned from its experience [REDACTED]. It stated that:

(a) [REDACTED];

(b) [REDACTED];

(c) [REDACTED]; and

(d) [REDACTED].⁹

⁸ [REDACTED], slide 3.

⁹ [REDACTED], slides 3 and 13.

Appendix E: Details of the Proposed Hitachi Divestment Business

Staff

1. A breakdown of the staff of the Proposed Hitachi Divestment Business is provided below:¹

Table 11: Proposed Hitachi Divestment Business sites (and FTEs by site)

[REDACTED]

Source: Parties' response dated 22 June 2023 to the Remedies Questionnaire (8 June 2023), paragraph 6.3.

Sites

2. The tableTable 22 below summarises the sites contained within the Proposed Hitachi Divestment Business.^{2,3}

Table 22: Proposed Hitachi Divestment Business sites (and FTEs by site)

[REDACTED]

Source: Hitachi response of 28 July 2023 to RFI 15, Appendix E, response to Q5; and Hitachi response of 26 June 2023 to RFI 11, Annex 2 ([REDACTED], June 2023).

Proposed [REDACTED]

3. Figure 1Figure 11 below illustrates the [REDACTED] of the Proposed Hitachi Divestment Business as currently constituted (left-hand side) and under the Parties' Remedy Proposal (right-hand side).

Figure 11: [REDACTED] of the Proposed Hitachi Divestment Business

[REDACTED]

Source: Hitachi, Response to RWP, 14 September 2023, 'Annex RWP.001 – [REDACTED] – September 2023', p.51.

[REDACTED]

4. The [REDACTED] and [REDACTED] information for the Proposed Hitachi Divestment Business is provided belowTable 33.

¹ Parties' response dated 22 June 2023 to the Remedies Questionnaire (8 June 2023), paragraph 6.3.

² Hitachi response of 26 June 2023 to RFI 11, Annex 2 ([REDACTED], June 2023).

³ Hitachi response of 28 July 2023 to RFI 15, Appendix E, response to Q5.

Table 33: Proposed Hitachi Divestment Business [REDACTED]

[REDACTED]

Source: Hitachi response dated 24 July 2023 to RFI 12, Annex Q4.001, CMA analysis. Hitachi response dated 24 July 2023 to RFI 12, paragraph 4.4.

[REDACTED]

5. The list of the Parties' proposed [REDACTED] and [REDACTED] is provided below:^{4,5}

Table 44: Summary of [REDACTED] and [REDACTED]

[REDACTED]

Source: Parties' response dated 22 June 2023 to the Remedies Questionnaire (8 June 2023), paragraph 11.1.

[REDACTED]

6. The list of the Parties' proposed [REDACTED] is provided below:^{6,7}

Table 55: Summary of [REDACTED]

[REDACTED]

Source: Hitachi's response of 28 July 2023 to RFI 15, Annex H.RFI15.Q32.001.

⁴ Parties' response dated 22 June 2023 to the Remedies Questionnaire (8 June 2023), footnote 26.

⁵ Hitachi response of 28 July 2023 to RFI 15, Annex H.RFI15.Q32.001.

⁶ Parties' response dated 22 June 2023 to the Remedies Questionnaire (8 June 2023), footnote 26.

⁷ Hitachi response of 28 July 2023 to RFI 15, Annex H.RFI15.Q32.001.

Glossary

Term	Definition
Additional Trained Staff Proposal	Hitachi's proposal to transfer up to [5-10] trained Hitachi FTEs to the purchaser of the Proposed Hitachi Divestment Business
Addendum	Addendum to the CMA's Provisional Findings published on 23 August 2023
AIS	Annotated Issues Statement
ARGOS Platforms	ARGOS interlocking platform and ARGOS wayside platform
ARGOS Wayside TSA	TSA related to the development of ARGOS Wayside Platform
Ansaldo	Ansaldo Signalling and Transportation Systems
ATP	Automatic train protection
Backlog Contracts	The Proposed Hitachi Divestment Business's contracts with unfulfilled orders at the time of sale closing
BSM	Bid Submission Meeting
CBTC	Communication-based train control
CBTC France Carve-Out	Carve out of the assets (and liabilities) of the Retained CBTC France Business, as well as a number of support staff needed to support the Retained CBTC France Business from the Hitachi Rail France entity prior to the divestment
CBTC SLC	Provisional conclusion that the Merger may be expected to give rise to a substantial lessening of competition in the supply of CBTC
CBTC Systems	CBTC signalling systems and related services
Components business line	Production of track circuits, relays, treadles, hot box detectors and components for OBUs

Term	Definition
DfT	Department for Transport
Digital Mainline Signalling Systems	Digital mainline signalling systems and related services
DTUP	Deep Tube Upgrade Programme
Emerging Views Document	A paper sent to the Parties on 1 August 2023 setting out the CMA's emerging views of the Parties' remedy proposal, outlining the key risks associated with the proposal
ERTM	European Rail Traffic Management System
ETCS	European Train Control System
EULYNX	European Initiative Linking Interlocking Systems
EVC	European Vital Computer
EVP	Executive vice-president
French Backlog Contracts	All of Hitachi's ETCS ATP wayside, interlocking, ETCS and legacy OBU projects, components and maintenance and service backlog contracts awarded to the Hitachi Rail France entity up until the divestment, including its projects outside France
FTE	Full-time equivalent staff
German Backlog Contracts	All of Hitachi's ETCS ATP wayside and interlocking backlog contracts awarded to the Hitachi Rail Deutschland entity up until the divestment
German WSP	Relevant signalling technology under the Proposed Hitachi Divestment Business's mainline signalling contracts with Deutsche Bahn
German WSP Training TSA	Training given under transitional service agreement to employees in Les Ulis in order to manage the German Backlog Contracts and any future evolutions of German WSP

Term	Definition
GTS	Ground transportation system
Hitachi Rail Deutschland	Hitachi Rail STS Deutschland GmbH
Hitachi Rail France	Hitachi Rail STS France SAS
Hitachi Rail Italy	Hitachi Rail STS SPA
HS1	High Speed One (HS1) Limited
HS2	High Speed Two (HS2) Ltd
Initial Non-Confidential Version	Non-confidential version of the Parties' joint response on 22 June 2023 to the CMA's Remedies Notice (see also Post-Modifications Version)
Initial Divestiture Period	The period which will commence from the acceptance by the CMA of any Final Undertakings or the making of any Final Order to the legal completion of the divestiture transaction
Interim Undertakings	The interim undertakings offered by Hitachi Rail, Ltd on 3 August 2023
ITT	Invitation to tender
LN1	Paris-Lyon high-speed line
LRT	Light Rail and Tram
MaaS	Mobility as a Service
MLS Further Evidence Paper	A paper dated 15 August 2023 setting out a further evidence received by the CMA since issue of its Provisional Findings on 8 June 2023 in relation to the theory of harm on supply of mainline digital signalling in the UK.
Monitoring Trustee	The monitoring trustee appointed by Hitachi Rail, Ltd, following directions issued by the CMA pursuant to paragraph 3.5 of the interim undertakings
MSF	Major Signalling Framework

Term	Definition
Notices	Notices under section 109 of the Act to provide certain documents and information issued to the Parties on 23 December 2022
OBU	On-board units
OEM	Original equipment manufacturer
ORR	Office of Rail and Road
ORR Market Study	ORR market study into the supply of rail signalling systems in GB
P&L	Profit and loss account
Perpetual ARGOS Licence	A perpetual, royalty-free and non-exclusive licence to use non-country and non-customer specific elements and components of the ARGOS Platforms
Perpetual WSP Licence	A perpetual, royalty-free and non-exclusive licence to use non-country and non-customer specific elements and components of the German WSP
Post-Modifications Version	A non-confidential version of the Parties' modified remedy proposal submitted to the CMA on 18 August 2023
PQQ	TCSF pre-qualification questionnaire
Primary Divestiture Remedy	The CMA's preferred remedy based on modifications and enhancements to the Parties' Remedy Proposal
Primary Divestment Business	The associated divestment business of the Primary Divestiture Remedy
Project Ark	Parties' draft remedy proposal to the European Commission
Proposed Hitachi Divestment Business	Parties' proposed divestiture remedy consisting of a partial divestiture of Hitachi's mainline signalling business based in France, Germany and the UK

Term	Definition
Provisional Findings	Provisional Findings, announced on 8 June 2023 and published on 12 June 2023
Put option agreement	An agreement between Hitachi and the purchaser which will give Hitachi the right, but not the obligation, to sell the divestment business to the purchaser
RAMS	Reliability, availability, maintainability and safety
RCBs	Relevant customer benefits
RBC	Radio block centre
Regulations	Utilities Contracts Regulations 2016
Remedies Notice	The CMA's Notice of Possible Remedies, of 8 June 2023
Retained CBTC France Business	The CBTC activities currently held by Hitachi Rail France which Hitachi will retain under the Parties' Remedy Proposal
RIA	Railway Industry Association
RMS	Relevant merger situation
SCS	Signalling control systems
SEC	Senior Executive Committee
Secondment Proposal	Secondment of up to [5-10] suitably qualified engineers from Hitachi's Italian Centres of Competence for a period of two years
SEU	Signalling equivalent unit
SLC	Substantial Lessening of Competition
SFMTA	San Francisco Municipal Transport Agency
SPA	Share purchase agreement
SPT	Strathclyde Partnership for Transport
SSI	Solid State Interlocking

Term	Definition
SSR	Sub Service Railway
S&T	Signalling and Telecoms
Supplier List Proposal	Hitachi's list of suppliers which it uses for hardware development
TBTC	Transmission-based train control
TCSF	Train Control Systems Framework
TfL	Transport for London
TMS	Traffic management systems
Transaction Agreements	Transaction agreement, transitional agreements or licences that form part of any divestiture remedy transaction
Thales Divestment Business	Thales's divestment proposal in the event the CMA rejects Hitachi's remedy proposal
TPS	Train protection systems
Trustee's Divestiture Period	A specified period where the CMA may require the Parties to appoint an independent Divestiture Trustee to dispose of the divestiture package
TVV&I	Test Verification Validation and Integration
UCR	The Utilities Contracts Regulations 2016
UK Backlog Contracts	Hitachi's current UK mainline signalling contracts
UK DMS Assets	Hitachi's UK digital mainline signalling assets
V&V	Verification and validation
WPs	Working Papers
WSP	Wayside Standard Platform