

**CASE ME/6971/21 ACQUISITION BY HITACHI RAIL OF THALES' GROUND
TRANSPORTATION SYSTEMS BUSINESS**

SUBMISSION ON ETCS ATP WAYSIDE RE-SIGNALLING PROJECTS

1. OVERVIEW – NO SLC IN RESPECT OF ETCS ATP WAYSIDE RE-SIGNALLING PROJECTS

- 1.1 The Proposed Transaction will not result in a substantial lessening of competition ("SLC") in respect of ETCS ATP wayside re-signalling projects in the UK, regardless of the framework that Network Rail ultimately adopts and implements for CP7 and CP8.¹ In particular, the Proposed Transaction will not give the Parties, through the merged entity, either the ability or the incentive to increase prices or otherwise worsen their bids for ETCS ATP wayside re-signalling projects (should the merged entity choose to bid).
- 1.2 As matters currently stand, the Parties do not have the relevant incentives, capabilities and resources in the UK to be significant challengers to the Siemens and Alstom-Bombardier duopoly in UK mainline signalling. The Parties welcome the evolution to digital signalling solutions (including ETCS ATP wayside re-signalling projects) because it could provide them (and other players) with potential opportunities for entry and expansion.
- 1.3 Subject to its final form, the Train Control Systems Framework ("TCSF") procurement structure should provide new opportunities to participate in the supply of digital re-signalling projects in the UK. However, significant uncertainties remain with respect to the TCSF's form and procurement structure² which will impact the entry decision of any possible challenger of the current UK duopoly. In particular, recent amendments to the procurement structure have altered the incentives for new entrants, since the TCSF now contemplates fewer framework suppliers, a greater proportion of conventional signalling projects overall (moving from [REDACTED] of projects to [REDACTED] of the total value), and

¹ [REDACTED]

² For example, the value Lot 2 (digital signalling works) is expected to be [REDACTED]. The contract notice for the TCSF indicates an indicative value for Lot 2 of between GBP [REDACTED] and GBI [REDACTED].

[REDACTED]

[REDACTED]

the [REDACTED] of projects within CP7 being conventional signalling.³ The reduction in value and volume of digital projects could be offset by the increased proportion of work within those projects which are to be allocated to suppliers. It is also likely to place integrators in a better competitive position in competing for both conventional⁴ and digital signalling opportunities using third party technology (either under licence or in a consortium with a European OEM) in conjunction with their existing experience and capabilities in the UK across legacy systems. Suppliers will keep under consideration throughout the process the decision on whether or not to bid, and submitting a PQQ response does not mean that an organisation has decided to bid through the invitation to tender ("ITT") phase.

- 1.4 The Target is in a [REDACTED] position to other competent European OEMs (such as CAF, Stadler, Mennec and Indra) as well as Integrators (in particular, Amey, Atkins, Linbrooke and Volker Rail), in assessing whether the incentives and conditions to compete for digital projects within the TCSF structure (Lot 2) justify the investment to participate, either alone or in consortia.
- 1.5 Even if both of the Parties were to compete for Lot 2 of the TCSF, in the absence of the Proposed Transaction, [REDACTED], such that they could not plausibly be close competitors. In the likely scenario where the TCSF is implemented with a reduced volume of digital signalling projects and an increased proportion of conventional signalling works, [REDACTED] new entrants who do not have UK approved products will be at a competitive disadvantage to incumbent UK suppliers.
- [REDACTED]

³ [REDACTED]. See Network Rail Prior Information Notice dated 2 March 2023: <https://bidstats.uk/tenders/2023/W09/7938>; ⁸¹⁰¹ and based on Network Rail briefing no 10 March 2023.

⁴ For completeness, the CMA has not identified concerns in relation to the supply of conventional signalling projects in the UK. In any event, [REDACTED]

[REDACTED]

Moreover, while procurement for conventional signalling projects is expected to continue for many years, it is a legacy market, which will diminish over time.

2. DIGITALISATION OF THE UK MAINLINE SECTOR

- 2.1 Network Rail's ambition is for the UK mainline signalling sector to undergo a process of modernisation through the procurement of digital signalling in the UK. A large proportion of signalling assets are due to expire in the medium term: approximately [REDACTED] % of external (*i.e.*, wayside) signalling assets are expected to expire in the next 15 years (and approximately [REDACTED] % in the next 20 years). Replacement of conventional signalling with like-for-like technology is expected to be unsustainable, expensive, and ineffective in catering for the projected increase in rail transport use in the long-term.⁵ These concerns are a key driver of Network Rail's planned move to digital technology (*i.e.*, the move to ETCS and ETCS-ready signalling subsystems).⁶
- 2.2 The UK is a nascent market for digital signalling – only approx. [REDACTED] % of the UK network has been upgraded to ETCS to date (including projects awarded or in progress), which is much lower than most EEA countries (*e.g.*, [REDACTED] % or [REDACTED] % for Belgium, Denmark Luxembourg and Norway, and over [REDACTED] % for Switzerland).⁷ Digitalisation has stimulated new entry: for example, in Italy where the Italian railway infrastructure owner has launched a plan to upgrade most of the Italian rail signalling network to ERTMS. This program includes tenders for new signalling players whose product is not approved but in an advanced stage of development, which were awarded to Progress Rail (ECM) and Mermec.
- 2.3 Given that ETCS adheres to a European standard (unlike legacy products which are UK-specific), a greater number of players will have the requisite technology to compete for digital signalling in the UK. However, each supplier's products will need to be adapted to UK requirements and approved in order to be deployed in the UK. New players, therefore, could enter the UK mainline sector as it begins its move to digitalisation, provided there is a sufficient pipeline of work to justify the investment. Whether the incentives and conditions to compete for digital projects within the TCSF structure (Lot 2) would justify the investment to participate, will need to be assessed by each supplier (see **Section 3** below).

⁵ ORR Signalling Market Study Final Report (November 2021), para 5.3.

⁶ [REDACTED]

⁷ Source: data collected from the ERTMS website and the UCI 2021 report, reviewed and adjusted by [REDACTED].

3. RELEVANT CONSIDERATIONS IN COMPETING FOR ETCS ATP
WAYSIDE RE-SIGNALLING PROJECTS ()

3.1 , comprising ETCS ATP
wayside re-signalling projects in the UK

⁹ having regard to the final details of the TCSF, including the timing, funding and allocations (including the timing and proportion of conventional and digital projects respectively).

Opportunity cost of participating in TCSF

3.2 The case for participating will involve careful consideration of the costs and benefits by each existing and potential market participant. Suppliers have a finite amount of resources (including resources for bidding and business development, R&D, application engineering and testing) which need to be allocated to the most promising opportunities, taking into account new opportunities as well as the execution of committed projects. The pricing of signalling projects is heavily influenced by costs other than the technology itself, including significant project delivery costs for design, installation, testing and commissioning, which require local capabilities and manpower. This means that market participants such as Integrators (particularly those with a large existing UK presence / workforce to deploy and with fewer alternatives outside of the UK)

3.3

3.4 Suppliers must also balance the resources required to deliver on-going projects in their decision-making in respect of any new tenders.

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_____.

- _____

Certainty of pipeline

- _____

3.8

Most importantly,

3.8.1 In July 2022, Network Rail envisaged that [REDACTED] of the work-bank (or GBP [REDACTED] in value¹⁴) would be allocated to digital signalling projects. The announcements in March 2023 confirm that this figure has changed to GBP [REDACTED] at most (*i.e.*, [REDACTED] of the total value of the TCSF).

3.8.2 This represents [REDACTED]. For comparison, GBP [REDACTED] the proportion of work originally envisaged in July 2022 for the TCSF supplier awarded [REDACTED] place (GBP [REDACTED]) or suppliers awarded [REDACTED] and [REDACTED] place combined ([REDACTED]).

3.8.3 [REDACTED]: in July 2022, Network Rail expected the TCSF to comprise [REDACTED] digital signalling projects.¹⁵ In its update this month, [REDACTED]. In other words, over the past eight months, the expected digital work bank under TCSF has decreased by over [REDACTED].

3.9

[REDACTED] given the multiple variables (*e.g.*, funding, and priorities) that could arise in the intervening period.

¹¹ See <http://www.infrastructure-intelligence.com/article/may-2017/britains-railways-poised-modernise>

¹² See also [REDACTED]

¹³ See Prior Information Notice of 2 March 2023: <https://bidstats.uk/tenders/2023/W09/793838101>.

¹⁴ Network Rail indicated that [REDACTED] of projects would relate to digital signalling. The value has been estimated by calculating [REDACTED] of GBP [REDACTED].

¹⁵ See [REDACTED].

¹⁶ [REDACTED]

3.10

[REDACTED]

¹⁷ In particular, it is possible that global suppliers with limited, or no, presence in the mainline signalling sector in the UK may choose to prioritise investment in other markets depending on the degree of attractiveness of the TCSF compared to other countries (including size and predictability of an opportunity, barriers to entry, local resources available, competitive position, credibility of roll-out plan, execution risk, track record and relationship with customer, etc.).

[REDACTED]

Continued strength of the incumbents

3.11 One of the key requirements to supply a mainline signalling project is that the other mainline subsystems need to interface with interlockings. Siemens and Alstom-Bombardier have a near monopoly of the installed interlockings in the UK. Atkins, who accounts for ~% of the installed interlockings base has also achieved considerable success (and revenues) under CP5 and CP6. By contrast, there have been only very limited instances of success for other suppliers trying to enter the UK mainline sector. Indeed, Hitachi Rail, the Target, Atos, Indra, CAF, SBB/DXC, CRRC (in partnership with Arup) and integrators have shown an interest in potentially entering or materially increasing their existing presence in the UK mainline signalling sector, but have failed to do so.

3.12 Siemens and Alstom-Bombardier are expected to remain the dominant players in the next "control periods", CP7 and CP8, for digital as well as conventional signalling, given their significant incumbency advantage. This will be the case regardless of the timing and final form of the TCSF. The reason for their continued strength in digital signalling is threefold:

3.12.1 These incumbents are the only suppliers¹⁸ that are expected to have suitable digital interlockings, [REDACTED] that are approved for use in the UK by the time that the TCSF is awarded.¹⁹ Indeed, Siemens won the East Coast

¹⁷ Without sufficient revenue, the justification for investment in product qualification is weaker as it will take longer for suppliers to see a return on their investment. [REDACTED]

¹⁸ As explained at paragraph 5.5 below, Atkins offers the interlockings product ElectroLogIXS, which is licensed to Atkins by General Electric Transportation Systems (which was subsequently acquired by Alstom) for use in Great Britain and is approved for use in the UK. This product also forms part of the current installed interlockings base in the UK, and is compatible with future implementations of ETCS. Atkins holds the legacy sole-use licence agreement for the ElectroLogIXS interlocking for the UK until 2027.

¹⁹ [REDACTED]

Development Programme ("ECDP"), which effectively gives it a [REDACTED] share of supply for ETCS projects in the UK. Accordingly, Siemens and Alstom-Bombardier would be able to deliver ETCS projects within Lot 2 of the TCSF without significant further investment, with reduced risks and more limited delays, when other framework suppliers may still be developing and seeking approval of their ETCS capabilities.²⁰ Their likely supply of conventional signalling works during CP7 will also support their ETCS development costs.

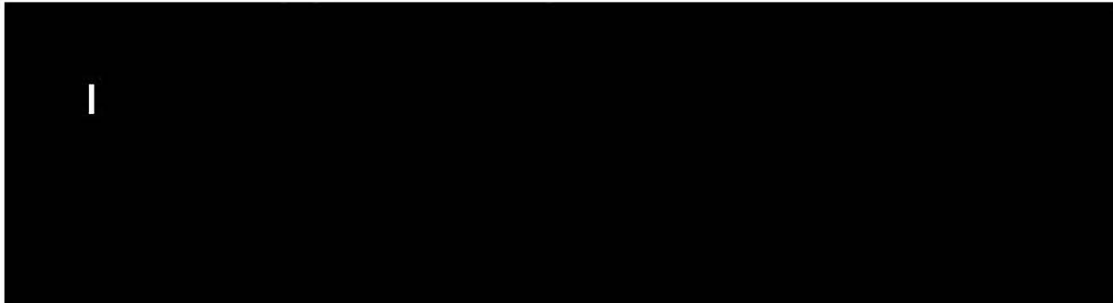
- 3.12.2 Their incumbent position for conventional signalling, and their ability to supply conventional and digital signalling projects during CP7 will give them a wealth of experience in relation to project delivery and familiarity with Network Rail stakeholders, UK processes and standards, and the mainline environment, such that Siemens and Alstom-Bombardier are likely to be particularly well-placed to meet Network Rail's Key Performance Indicators ("KPIs"). As currently understood, [REDACTED] of Lot 2 will be allocated using mini-competitions based on these KPIs.
- 3.12.3 Siemens and Alstom-Bombardier already have ample local resources to deliver and service TCSF Lot 2 projects.
- 3.13 Assuming that the TCSF provides sufficient incentives to entice new entrants to compete (particularly those who have ETCS capabilities elsewhere in Europe), all suppliers without an existing UK approved digital interlocking would face (i) costs in terms of product development, testing and approval; (ii) associated delays in the delivery of the project; and (iii) the inherent risks linked to the deployment of a new solution as compared to a solution which has already been previously deployed (and therefore requires minimal development).
- 3.14 By contrast to other suppliers, Siemens' and Alstom-Bombardier's KPIs used to assess the mini-competition for the unallocated work-bank are less likely to be affected by any initial difficulties in deployment, given their extensive experience of deploying existing products. Siemens and Alstom-Bombardier would therefore continue to have a significant advantage over other potential participants and will also logically be the strongest competitors for the contestable portion of the Lot 2 work-bank (should the final TCSF contain a contestable work-bank as currently envisaged).
4. **THE PARTIES ARE NOT CLOSE COMPETITORS FOR ETCS ATP WAYSIDE RE-SIGNALLING PROJECTS IN THE UK**
- 4.1 The UK mainline signalling sector is dominated by Siemens and Alstom-Bombardier with Atkins playing a supporting role. [REDACTED]

²⁰ While they may need to make small modifications to comply with the specifications required for the TCSF, Siemens and Alstom-Bombardier would not need to incur material upfront investment costs in order to deliver ETCS projects in the UK.



Both Parties lack meaningful presence in the UK

4.2



4.3

Similarly, [REDACTED]
[REDACTED] Rolling stock accounts for [REDACTED] of Hitachi Rail's business in the UK for each of the last 5 years. [REDACTED]
[REDACTED]. Hitachi Rail's total order intake across all mainline signalling projects in the UK (excluding internal sales) over the period 2012 to 2021 is [REDACTED]
[REDACTED]

4.4

In addition to the overwhelming presence of Siemens and Alstom-Bombardier,²² it is striking that the integrators Atkins, Babcock, Volker Rail and Linbrooke each also won lots with higher values than the Parties' total revenues generated across mainline signalling projects over the same period.²³ For example, Atkins won the primary award for two CP5 MaSREF lots with a combined value of GBP 353 million, and the Anglia, South East & Wessex lot of the S&T Framework under CP6 with a value of GBP

²¹ In February and March 2023.

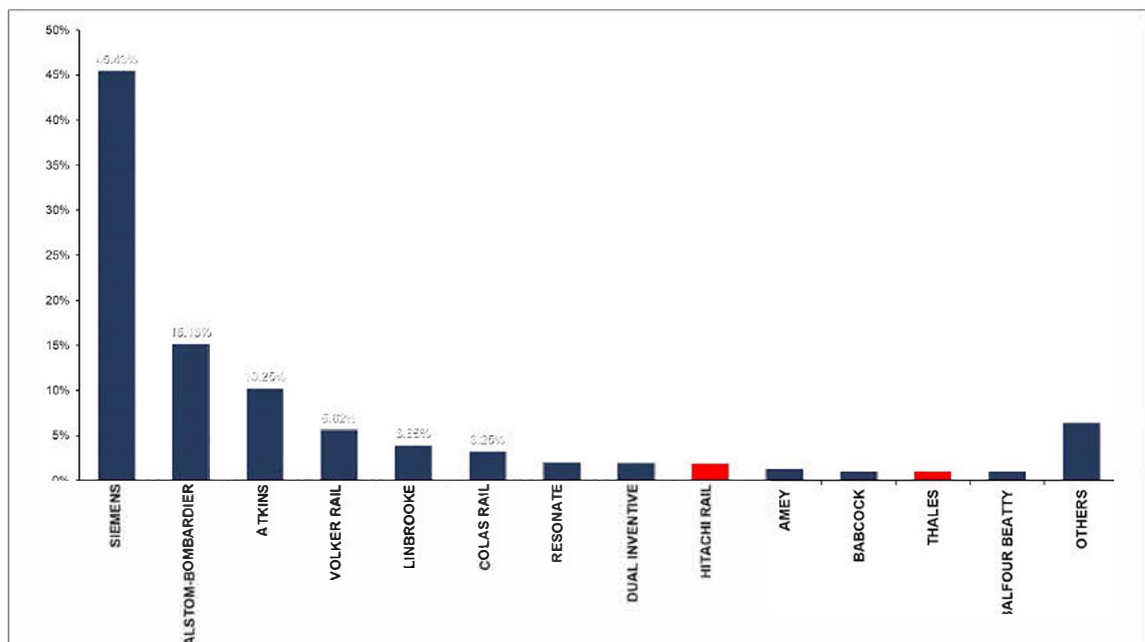
²² Across CP6, Siemens and Alstom-Bombardier won lots totalling GBP 536m and GBP 854m, respectively.

²³ <https://www.orr.gov.uk/sites/default/files/2021-05/annex-c-signalling-market-study-update-may-2021.pdf>

291m.²⁴ VolkerRail, Babcock and Linbrooke each won a lot of the S&T Framework under CP6 with a value of GBP 216m, GBP 291m and GBP 261m, respectively.

- 4.5 Similarly for the period 2021-2022, Siemens, Alstom-Bombardier, Atkins, Volker Rail and Linbrooke each accounted for a higher proportion of Network Rail's signalling spend than the Parties, who each represented less than 5% of Network Rail's spending, as shown in Figure 1 below.²⁵

Figure 1 – Shares of Network Rail signalling spend by supplier (2021 – 2022)



- 4.6 The Target has only [REDACTED] employees for mainline signalling in the UK (representing c. [REDACTED] % of the Target's UK workforce), [REDACTED]. While the Target has a significant number of staff dedicated to its CBTC business,²⁶ [REDACTED].

²⁴ See also paragraph 5.3 below: Atkins has recently been selected as the signalling partner for Network Rail's Southern Region Integrated Delivery alliance for CP7 and CP8. This role confirms Atkins' position as a key signalling supplier in the UK for the next ten years.

²⁵ <https://www.networkrail.co.uk/who-we-are/transparency-and-ethics/transparency/our-information-and-data/>, "Supplier Spend", "Spend over £25,000", each spreadsheet filtered for "Signalling".

²⁶ [REDACTED].

[REDACTED]

4.7 Similarly, Hitachi Rail has a total of approximately [REDACTED] employees allocated to the UK signalling business, [REDACTED] of whom are allocated to mainline signalling (and [REDACTED] of whom are allocated to the Glasgow metro project). Hitachi Rail's signalling bids and capabilities are generally delivered [REDACTED]

4.8 By contrast, it is estimated that Siemens and Alstom-Bombardier have around 900 and >1,000 mainline signalling employees in the UK, respectively.

Lack of success in mainline ETCS ATP wayside re-signalling tenders in the UK

4.9 [REDACTED] ²⁸

4.10 [REDACTED]. Hitachi Rail has delivered very few projects in the UK in the period 2012-2021,²⁹ and its track record for UK major signalling frameworks [REDACTED] in CP6 (as part of a consortium with Linbrooke).

[REDACTED]

Lack of mainline signalling products approved for use in the UK – [REDACTED]

4.11 In order to compete successfully, suppliers require access to technology and design, local resources and knowledge and, ideally, an installed base of interlockings. Any

²⁷ [REDACTED]

²⁸ Phase 1 decision, para 285.

²⁹ [REDACTED]

³⁰ [REDACTED]

[REDACTED]

[REDACTED]

investment in the project delivery (including product development, testing and approval) will require sufficient return on investment to incentivise suppliers to bid. [REDACTED]

[REDACTED]

4.12

[REDACTED]

4.13

[REDACTED]

[REDACTED] Hitachi Rail, together with Linbrooke, is in the design phase of developing a new generation product, the "Wayside Standard Platform" ("WSP") within the CP6 framework. Hitachi Rail-Linbrooke have been looking to tailor the WSP for the Gloucester and Manchester areas.

The Parties are not close competitors

4.14

[REDACTED]. Hitachi Rail has participated in [REDACTED] out of three ETCS ATP wayside re-signalling projects in the UK in the period 2012-2021. [REDACTED]

[REDACTED]

31

[REDACTED]

32

[REDACTED]

33

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. As noted above, [REDACTED], and it has no ETCS trackside, SCS or interlockings references in the UK.³⁴

4.15 The competitive position of the Parties for [REDACTED] of the TCSF is expected to [REDACTED]
[REDACTED]

4.15.1 [REDACTED]

4.15.2 [REDACTED]

4.16 As a result, given that there is no reason to expect that the Parties would become closer competitors in the future, separate bids would not be more attractive than a bid from the merged entity (whether for the TCSF or for any unallocated work-bank within the TCSF).

³⁴ Phase 1 decision, para 285.

³⁵ [REDACTED]

³⁶ [REDACTED]

5. **THE PARTIES' POSITION IN THE UK IN COMPARISON TO OTHER SUPPLIERS**

5.1

[REDACTED] In order to participate in digital projects under the TCSF, [REDACTED] new entrants would need to adapt and obtain UK approval for products approved and deployed outside the UK.

Atkins

5.2 Atkins is a leading design, engineering and project-management consultancy. Atkins is present across the full transport ecosystem, including consultancy and advisory, intelligent networks and cyber security, design and engineering, procurement, and project and construction management services. Atkins became a member of the SNC-Lavalin Group in July 2017.

5.3 Atkins has recently been selected as the signalling partner for Network Rail's Southern Region Integrated Delivery alliance for CP7 and CP8.³⁷ This role confirms Atkins' position as a key signalling supplier in the UK for the next ten years.

5.4 Atkins has been very successful in UK signalling projects more generally, and accounted for 8% of Network Rail's major signalling expenditure over the period 2014 to 2019 in the UK³⁸ and 10% of Network Rail's signalling spend over the period 2021-2022.³⁹

5.4.1 Atkins won two CP5 MaSREF lots as the primary signalling supplier (GBP 353 million in total)⁴⁰ and also competed for CP6 MaSREF lots.

5.4.2 Atkins won the South East & Wessex lot of the CP6 Signalling and Telecoms Framework with a value of GBP 29 lm.⁴¹

5.4.3 Atkins has delivered ElectroLogIXS digital interlockings as part of the Feltham and Norwich-Yarmouth-Lowestoft re-signalling projects.⁴² Atkins has also

³⁷ <https://www.networkrailmediacentre.co.uk/news/network-rail-southern-region-announces-successful-alliance-partners-for-revolutionary-southern-integrated-delivery-portfolio-for-2024-2034>.

³⁸ ORR Signalling Market Study Final Report (November 2021), Figure 6.3.

³⁹ See Figure 1 above.

⁴⁰ See <https://www.orr.gov.uk/sites/default/files/2021-05/annex-c-signalling-market-study-update-may-2021.pdf>.

⁴¹ <https://www.orr.gov.uk/sites/default/files/2021-05/annex-c-signalling-market-study-update-may-2021.pdf>.

⁴² <https://www.snclavalin.com/en/media/trade-releases/2019/at-2019-06-25-fss>;
<https://www.snclavalin.com/en/media/trade-releases/2017/15-08-2017>.

recently been awarded a GBP23m contract to deliver the final phase of the Feltham to Wokingham re-signalling scheme.⁴³

5.4.4 Network Rail has recently awarded the contract to design, deliver operate and maintain its National ETCS Test Verification Validation and Integration Laboratory to Atkins.⁴⁴

5.4.5 Atkins was also appointed Railway Systems Integration Partner for the ECDP.⁴⁵

5.5 Atkins has significant experience in gaining product approval for OEMs, including the Ansaldo ACC interlocking in 2004 and Alstom ElectroLogIXS interlocking in 2019.⁴⁶ Atkins offers the interlockings product ElectroLogIXS, which is licensed to Atkins by General Electric Transportation Systems (which was subsequently acquired by Alstom) for use in Great Britain and is approved for use in the UK.⁴⁷ This product also forms part of the current installed interlockings base in the UK, and is compatible with future implementations of ETCS. Atkins holds the legacy sole-use licence agreement for the ElectroLogIXS interlocking for the UK until 2027.

5.6 In addition, Atkins' success in winning the contract to design, deliver operate and maintain Network Rail's National ETCS Test Verification Validation and Integration Laboratory⁴⁸ demonstrates a clear interest in, and familiarity with, the supply of ETCS solutions.

5.7

⁴³ <https://www.snclavalin.com/en/media/trade-releases/2022/2022-05-4-uk>.

⁴⁴ <https://www.snclavalin.com/en/media/press-releases/2021/14-09-2021>.

⁴⁵ <https://www.snclavalin.com/en/media/press-releases/2020/25-03-2020>.

⁴⁶ Atkins also previously had access to the SSI interlocking technology owned by Westinghouse/Invensys and GEC/Alstom. See ORR Signalling Market Study Final Report (November 2021), para 6.8.

⁴⁷ See ORR Signalling Market Study Final Report (November 2021), para 3.7.

⁴⁸ <http://www.infrastructure-intelligence.com/article/sep-2021/network-rail-appoints-atkins-landmark-digital-signalling-facility>.

CAF

- 5.8 Construcciones y Auxiliar de Ferrocarriles ("CAF")⁴⁹ is a leading Spanish provider of turnkey solutions, rolling stock operator and signalling OEM. CAF is active globally, including in the UK and other countries in Europe. In 2017, CAF acquired BWB, a UK rail services consultancy specialising in planning, design, and construction. CAF has invested in a factory engaged in the assembly and testing of a full range of rolling stock in Newport which opened in February 2020. This investment demonstrates CAF's desire to expand and develop further within the UK markets.
- 5.9 CAF is authorised to supply onboard ERTMS products in the UK, and has previously supplied ETCS onboard units and rolling stock in the UK (including the Birmingham tram, electric and diesel regional trains servicing the north of England, sleeper passenger coaches operating between London and Scotland, and automated light metros for the Docklands Light Railway). CAF's longer-standing projects in the UK include supply of electric units to Heathrow Express since 1995, and the first line of the Edinburgh tram in 2007. In November 2022, the ORR granted authorisation for 21 CAF Class 197 vehicles to be fitted with CAF's ETCS and GSM-R to operate on the Cambrian lines.⁵⁰
- 5.10 [REDACTED], CAF has a portfolio of wayside products for use in Europe, which could be adapted for UK entry. CAF has digital interlockings capabilities (Quasar SE4),⁵¹ ETCS solutions certified by the European Rail Agency (AURIGA - ERTMS Level 1 and Level 2),⁵² and SCS capabilities.⁵³ It also has strong ETCS credentials, including at least seven European references for ETCS re-signalling, and is a member of Unisig.⁵⁴
- 5.11 In addition, CAF has a track record of entering new markets and building up a significant presence. For example, CAF entered the UK market by supplying electric units to Heathrow Express (in 1995)⁵⁵ and Northern Spirit (in 2000-2002)⁵⁶ on behalf of Siemens. It was subsequently able to secure seven rolling stock orders in the last seven years, and has been awarded the LNER contract. CAF has also entered the Polish market through a partnership with local interlockings provider Kombud to provide

⁴⁹ <https://www.cafsignalling.com/en/>.

⁵⁰ <https://www.orr.gov.uk/sites/default/files/2022-11/caf-rolling-stock-class-197-etcs-variant-authorisation-2022-11-23.pdf>.

⁵¹ <https://www.caf.net/en/soluciones/senalizacion/enclavamientos-electronicos.php>.

⁵² <https://www.caf.net/en/soluciones/senalizacion/sistemas-ERTMS.php>.

⁵³ <https://www.caf.net/en/soluciones/senalizacion/centros-control-integrado.php>.

⁵⁴ <https://www.ertms.net/about-ertms/about-unsig/>.

⁵⁵ <https://www.caf.net/en/soluciones/proyectos/proyecto-detalle.php?p=164>.

⁵⁶ <https://www.caf.net/en/soluciones/proyectos/proyecto-detalle.php?p=145>.

ETCS in Poland.⁵⁷ In addition, CAF has also set up alliances with The Signalling Company in Brussels,⁵⁸ ISKRA in Slovenia⁵⁹ and AER in Bulgaria.⁶⁰

- 5.12 CAF has built strong relationships with many British rail companies through its supply of rolling stock. Fleet procurement in Britain is not a standalone delivery, with all fleets being procured by a lessor, leased by the operator, and maintained by the operator, the manufacturer, or a third party depending on the lease agreement. Most of CAF's fleets have been procured with a technical support and spares supply agreement, requiring CAF to partner with the existing maintenance organisation to provide the contracted support (e.g., Northern Trains and West Midlands Railway). CAF recently took over Chester maintenance facility from Alstom in respect of the CL.197 fleet for Wales, requiring close working relationships to be developed to prevent a loss in output during the changeover.⁶¹

5.13

Stadler

- 5.14 Stadler Rail⁶² ("Stadler") is a Swiss turnkey solutions provider with products and signalling subsystems in Europe, manufacturer of rolling stock and train maintenance service provider, whose range includes high-speed trains, intercity trains, regional trains and trams. Notable projects include the supply of 52 metros for the Liverpool urban region, 58 regional and intercity trains for Abellio East Anglia and 17 underground trains for the Glasgow Subway.⁶³ In January 2020, Stadler was awarded a contract to build and maintain 46 light rail vehicles for the Tyne and Wear Metro.⁶⁴

⁵⁷ <https://www.cafsignalling.com/en/caf-signalling-allies-with-kombud-and-strengthens-its-international-presence/>.

⁵⁸ <https://thesignallingcompany.com/the-signalling-company-and-caf-launch-open-cooperation-on-class-b-systems/>.

⁵⁹ <https://www.railtech.com/infrastructure/2019/08/01/caf-gets-signalling-contracts-in-spain-slovenia-bulgaria/?gclid=accept>.

⁶⁰ <https://www.railtech.com/infrastructure/2019/08/01/caf-gets-signalling-contracts-in-spain-slovenia-bulgaria/?gclid=accept>.

⁶¹ <https://railinsider.co.uk/2022/07/15/caf-opens-first-uk-rolling-stock-maintenance-depot/>.

⁶² <https://www.stadlerrail.com/en/>.

⁶³ <https://www.stadlerrail.com/en/media/article/stadler-signs-contract-build-and-maintain-52-metro-trains-liverpool-city-region/47/>.

⁶⁴ <https://www.stadlerrail.com/en/about-us/locations/stadler-rail-service-uk/129/>.

5.15 Stadler first entered the European signalling market in 2016 and has since demonstrated strong investment in signalling and indicated a desire to be a one-stop solution provider, including by establishing signalling division, with over 500 employees across 7 sites in 2022.⁶⁵ Stadler [REDACTED] has a digital interlockings product that is deployed outside the UK, and has ETCS ATP wayside re-signalling capabilities in Europe.⁶⁶

5.15.1 In 2021, Stadler acquired BBR Verkehrstechnik GmbH ("**BBR**"), a manufacturer of infrastructure signalling products such as electronic interlockings, train detection systems, and points operating equipment. It also manufactures on-board equipment for rolling stock manufacturers and provides development work, especially in the areas of interlockings, train protection, and component retrofits. BBR signalling equipment is in use in Germany, Austria, Switzerland, other western and northern European countries, Asia, and the USA.⁶⁷

5.15.2 In 2022, Stadler also acquired BÄR Bahnsicherung AG, Switzerland's largest independent service provider for railway safety for more than 30 years. It produces the electronic interlocking system EUROLOCKING.⁶⁸

5.16 In 2017, Stadler entered a joint-venture with Mermec in Poland and supplied the on-board product, ETCS GUARDIA.⁶⁹ ETCS GUARDIA achieved five country homologations in Switzerland, Germany, Poland, Slovenia, and Hungary in 2021.⁷⁰ The latest version (Baseline 3.6.0) has already been approved for use in Germany and the Netherlands.⁷¹

⁶⁵ Full-year 2021 results, Stadler Rail, p30 & 35, 15 March 2022, accessed 09 February 2023, [https://www.stadlerrail.com/media/pdf/stadler%20rail%20-%20full-year%202021%20presentation online final de.pdf](https://www.stadlerrail.com/media/pdf/stadler%20rail%20-%20full-year%202021%20presentation%20online%20final%20de.pdf).

⁶⁶ In a JV with Mermec. <https://www.stadlerrail.com/en/signalling/mainline/>.

⁶⁷ <https://www.railway-technology.com/news/stadler-signalling-bbr-takeover/>.

⁶⁸ [https://www.stadlerrail.com/media/pdf/2021_1126_media%20release take-over%20baer%20bahnsicherung_en.pdf](https://www.stadlerrail.com/media/pdf/2021_1126_media%20release%20take-over%20baer%20bahnsicherung_en.pdf).

⁶⁹ <https://www.railsistem.com/blog/2018/06/20/stadler-and-mermec-form-angelstar-etcs-joint-venture/>.

⁷⁰

[https://www.stadlerrail.com/media/pdf/media%20release stadler fitting deutsche bahn vehicles with signalling equipment.pdf](https://www.stadlerrail.com/media/pdf/media%20release%20stadler%20fitting%20deutsche%20bahn%20vehicles%20with%20signalling%20equipment.pdf).

⁷¹

[https://www.stadlerrail.com/media/pdf/media%20release stadler fitting deutsche bahn vehicles with signalling equipment.pdf](https://www.stadlerrail.com/media/pdf/media%20release%20stadler%20fitting%20deutsche%20bahn%20vehicles%20with%20signalling%20equipment.pdf).

Indra

- 5.17 Indra⁷² is one of the leading global technology and consulting companies. Its rail transportation division provides solutions for public sector customers, infrastructure administrators, rail operators and logistics operators, as well as manufacturers and maintenance firms, construction companies and major integrators. Indra has references for its ETCS capabilities in Spain, and a digital-ready SCS solution.⁷³ It has previously bid with its DaVinci TMS product (installed on the Spanish high-speed rail network) in Network Rail tenders in 2009 and 2019, and is understood to be partnering with AZD Praha for the Rail Baltica tender.

Resonate

- 5.18 Resonate, formerly DeltaRail, is a technology company specialising in rail and connected transport solutions.⁷⁴ In particular, Resonate is a specialist provider of OCS, with a leading position in the UK. Resonate benefits from a historical incumbency advantage in the UK because it owns, through acquisition, British Railways SCS technology (IECC) which can interact with Siemens' and Alstom-Bombardier's interlockings (which were also, originally, British Railways technology). Resonate and its predecessors historically had 100% of the installations for control systems over the 1990s. In more recent years, Resonate accounts for around half the control system installations in the UK.⁷⁵

Progress Rail

- 5.19 Progress Rail (ECM) is one of the largest integrated and diversified suppliers of railroad and transit products and services worldwide, with nearly 200 facilities in 16 countries. Progress Rail has been designing wayside and highway crossing systems for railroads since 1992. Progress Rail (ECM) has strong ETCS credentials, an ETCS solution certified by the European Rail Agency and is a member of Unisig. It also has digital interlockings capabilities.⁷⁶ Progress Rail (ECM) recently entered the supply of ETCS solutions in Italy and has rapidly expanded

⁷² <https://www.indracompany.com/en>.

⁷³ <https://www.railway-technology.com/news/indra-siemens-jv-develop-traffic-control-system-spanish-rail-network/>

⁷⁴ <https://www.resonate.tech/ui/content/content.aspx?ID=85>.

⁷⁵ ORR Signalling Market Study Final Report (November 2021), Figure 6.2 and para 6.5.

⁷⁶ <https://www.progressrail.com/en/Segments/Infrastructure/Signaling/ECM/ControlCommandSignaling.html>.

Mermec

- 5.20 Mermec is an Italian company focused on rail inspection and diagnostics, railway signalling, asset management software, diagnostic and professional services for the railway industry. It provides complete rail signalling and control solutions around the world to mainline, freight, metro and light railways. Mermec has ETCS solutions certified by the European Rail Agency and is a member of Unisig. Mermec supplies ERTMS/ETCS Level 1 and Level 2 ATP wayside signalling systems and computer based interlockings.⁷⁷ Mermec has formed a joint venture with Stadler called AngelStar, specialised in the design, development and supply of ERTMS onboard signalling and control solutions, including the GUARDIA ETCS solution.⁷⁸

Amey

- 5.21 Amey is a leading infrastructure services and engineering company in the UK comprising 11,000 personnel that achieved GBP 2.5 billion revenue in 2021. Its rail business team has grown over the past few years, and focuses on maintaining the UK's railways with the latest signalling systems, upgraded track and overhead lines and regular asset inspections.⁷⁹ Amey also delivers major enhancements, asset management including inspections, light rail and an integrated heavy rail franchise through its operation of the Docklands Light Railway, Manchester Metrolink and Wales and Borders rail franchise. Amey partnered with Hima-Sella to deliver the SIL4 depot interlocking at Taffs Well, Wales.⁸⁰
- 5.22 Amey has partnered with Hitachi Rail in previous major signalling framework tenders, including as part of the Hitachi rail led consortium of Hitachi Rail, Ansaldo, Arup and Amey for the signalling for the ECDP, tendered in 2018 (during CP5), which was ultimately awarded to Siemens,⁸¹

Linbrooke

- 5.23 Linbrooke is an approved Network Rail tier-one Principal Contractor, with the ability to supply end-to-end design and build across railway signalling, power and

⁷⁷ <https://www.mermecgroup.com/1/signalling-br-systems.php>.

⁷⁸ <https://www.angelstarcompany.com/>.

⁷⁹ <https://www.amey.co.uk/what-we-do/transport-infrastructure/rail/>.

⁸⁰ <https://sellacontrols.com/sella-controls-to-provide-taffs-well-depot-control-system-in-partnership-with-amey/>.

⁸¹ Phase 1 decision, para 152(b).

[REDACTED]

communications solutions.⁸² It is an installer of Commercial Off-The-Shelf components and is part of a team with Hitachi Rail for the Wales & Western Major Signalling framework. In addition, in 2019, it won one of six S&T framework agreements, for London North-East routes.

5.24 [REDACTED]

6. **SUPPLIERS DO NOT NEED TO BE ACTIVE IN ALL SUBSYSTEMS IN ORDER TO COMPETE**

6.1 Even if digital interlockings, ETCS ATP wayside solutions and SCS are bundled within the TCSF, suppliers will be able to compete effectively by subcontracting certain technologies or aspects of the project to one or more suppliers or forming consortia (e.g., a JV bidding jointly). There is a history of OEMs partnering with other OEMs and / or integrators to bid for UK and European tenders.

6.2 In the UK, aside from Siemens and Alstom-Bombardier, no other supplier has all of the capabilities required to supply mainline signalling projects. [REDACTED]

[REDACTED] Integrators offer the benefits of local 'boots on the ground' capabilities, route knowledge, long-standing [REDACTED] and familiarity with UK processes and standards, and the mainline environment. In the ORR's market study final report, the ORR *recommends* that Network Rail maximises the role of integrators: "*We also urge Network Rail to consider the scope for maximising the competitive constraint imposed by integrators.*"⁸³ Siemens and Alstom-Bombardier have also historically licensed their technology to integrators such that they have an understanding and experience of interfacing with the installed base of interlockings in the UK.

6.3 Examples of previous consortia and collaboration include:⁸⁴

UK

6.3.1 [REDACTED]

⁸² <https://linbrooke.co.uk/rail/>.

⁸³ ORR Signalling Market Study Final Report (November 2021), para 10.25.

⁸⁴ There may be further examples of collaboration that are not known to the Parties.



[Redacted]
[Redacted]⁸⁵

6.3.2 [Redacted]
[Redacted]

6.3.3 [Redacted]
[Redacted]

6.3.4 [Redacted]
[Redacted]

6.3.5 In 2019, Linbrooke partnered with Hitachi Rail for the CP6 Wales and Western Lot.

6.3.6 [Redacted]
[Redacted]

6.3.7 The Target partnered with Costain [Redacted]
[Redacted] when competing for the CP6 MaSREF tenders.

6.3.8 In 2018, three consortia bid for the ECDP (during CP5) in respect of ETCS ATP wayside re-signalling: an Alstom-led consortium comprising Alstom and Jacobs; a Hitachi Rail-led consortium comprising Hitachi Rail, Ansaldo, Arup and Amey; an Atkins led consortium [Redacted].⁸⁶

6.3.9 [Redacted]
[Redacted]

6.3.10 [Redacted]
[Redacted]

6.3.11 For the 2009 Network Rail TMS programme framework, SBB and DXC were in a consortium with Tracsis to provide some UK experience; however in the end they did not bid.

⁸⁵ [Redacted]

⁸⁶ Phase 1 decision, para 152(b).

[REDACTED]

6.3.12 Ansaldo collaborated with Atkins to gain product approval for its ACC interlockings in 2004.

6.3.13 Amey partnered with Hima-Sella to deliver the SIL4 depot interlocking at Taffs Well, Wales.⁸⁷

6.3.14 Network Rail has regularly commissioned projects from Siemens and Alstom-Bombardier, which required that those suppliers sub-contract the OCS component to Resonate. For example:

- (a) In relation to the [REDACTED], the Parties understand that Alstom-Bombardier was mandated to sub-contract the delivery of the SCS to Resonate, notwithstanding Alstom-Bombardier's ability to supply SCS itself.
- (b) In the context of the West Hampstead recontrol project led by Linbrooke, Siemens was the mandated interlocking provider and Resonate the control system provider to Linbrooke.
- (c) [REDACTED] was required to sub-contract to [REDACTED] in the context of the Hope Valley Railway Upgrade.

6.3.15 [REDACTED]

6.3.16 [REDACTED]

(a) [REDACTED]

(b) [REDACTED]

⁸⁷ <https://sellacontrols.com/sella-controls-to-provide-taffs-well-depot-control-system-in-partnership-with-amey/>.

⁸⁸ [REDACTED]

Europe

- 6.3.17 In 2021, Alstom and Thales Polska formed a consortium to supply ERTMS/ETCS Level 2 signalling system for the E65 railway line in Poland.⁸⁹
- 6.3.18 In addition to providing its own interlockings, CAF has partnered with local interlockings provider Kombud to provide ETCS in Poland.⁹⁰
- 6.3.19 In 2020, a consortium comprised of Ardanuy Ingeniería, S.A, Consiglio Nazionale delle Ricerche, FIT Consulting, Hit Rail B.V., SIRTl, Tree Technology and International Union of Railways bid to deliver the Shift2Rail cyber-security programme across European railways.⁹¹
- 6.3.20 In 2018 a joint venture of Indra and Siemens won a contract from railway infrastructure manager Adif to develop a traffic control and management system, known as Sitra+, for the entire Spanish rail network.⁹²
- 6.3.21 In 2017, Stadler entered a joint-venture with Mermec in Poland and supplied the on-board ETCS GUARDIA product.⁹³
- 6.3.22 In 2017, Alstom, Aktor and Arcada won a contract to supply signalling in Romania.⁹⁴
- 6.3.23 In 2015, Bombardier, Alstom and Indra formed a consortium to win a high-speed rail signalling and maintenance contract in Spain.⁹⁵
- 6.3.24 SBB (railway operator) and DXC (who provided the software and logistics knowledge) jointly developed a TMS which now controls the whole of the Swiss federal railway network. It has also been sold to two other Swiss railways, and overseas.⁹⁶

⁸⁹ <https://www.globalrailwayreview.com/news/121437/signalling-upgrade-poland/>.

⁹⁰ <https://www.cafsignalling.com/en/caf-signalling-allies-with-kombud-and-strengthens-its-international-presence/>.

⁹¹ <https://www.globalrailwayreview.com/news/97194/european-consortium-deliver-shift2rail-cyber-security-programme/>.

⁹² <https://www.indracompany.com/en/noticia/indra-develops-new-generation-key-solutions-adif-will-improve-planning-management-trains>.

⁹³ <https://railinsider.co.uk/2020/06/18/guardia-european-train-control-system-etcs-approved-for-use-in-poland/>.

⁹⁴ <https://seenews.com/news/alstom-aktor-arcada-consortium-wins-romanian-railroad-upgrade-tender-566010>.

⁹⁵ <https://www.globalrailwayreview.com/news/24866/consortium-wins-spanish-high-speed-rail-signalling-and-maintenance-contract/>.

⁹⁶ <https://www.railtech.com/digitalisation/2019/01/29/switzerland-to-implement-smartrail-4-0-traffic-management-system/?gdpr=accept&gdpr=accept>.

6.4 As shown in the examples set out above, it is clear that cooperation between industry participants is a common and viable option under any future framework tenders; [REDACTED] with the exception of Siemens and Alstom-Bombardier. Suppliers therefore do not need to be active in all subsystems (*i.e.*, digital interlockings, [REDACTED]) to win tenders, and can instead partner with or subcontract to OEMs and/or integrators. It is therefore not the case that any supplier that does not offer all subsystems will be excluded from bidding under the TCSF.

6.5 [REDACTED]
[REDACTED],⁹⁷ integrators will be in a strong position to play a significant role in tenders for the TCSF, as exemplified by Atkins' recent appointment as signalling partner for the Southern Region Integrated Delivery alliance for CP7 and CP8.⁹⁸

6.6 **Figure 2** below sets out some possible partnerships or collaborative relationships that potential competitors may form, to pool together complementary capabilities with a view to competing for the TCSF.

97 [REDACTED]

98 [REDACTED]



Figure 2 – Selection of possible consortia and other forms of collaboration between suppliers for the TCSF Lot2

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Key:

[Green Box]	UK-approved product available
[Yellow Box]	EU-approved product available
[Red Box]	No product available / No experience

THE MERGED ENTITY WILL PROVIDE STRONGER COMPETITION TO THE MARKET LEADERS POST-PROPOSED TRANSACTION

[REDACTED] which means that the merged entity will provide stronger competitive pressure to the market leaders Siemens and Alstom-Bombardier post-Proposed Transaction.

[REDACTED]

7.2

7.3

[REDACTED] the merged entity will have greater depth of local resource and shared capabilities to present better solutions for customers and consumers. In particular:

7.3.1

7.3.2

7.3.3

7.3.4

7.4 For these reasons, the merged entity will also be a more effective challenger to the incumbents Siemens and Alstom-Bombardier, both when competing for the TCSF tender and for any unallocated work-bank within the TCSF. The merged entity will have better capacity and lower overheads [REDACTED] which will enable it to bid more aggressively and effectively for a share of the work-bank.

8. CONCLUSION – NO SLC IN RESPECT OF ETCS ATP WAYSIDE RE-SIGNALLING PROJECTS

8.1 For the reasons set out above, the Proposed Transaction will not result in an SLC in respect of ETCS ATP wayside re-signalling, regardless of the framework that will ultimately be adopted and implemented by Network Rail. In particular:

8.1.1 Siemens and Alstom-Bombardier will continue to dominate the sector and impose a significant competitive constraint on the merged entity.

[REDACTED]

8.1.2 To the extent that the TCSF incentivises new entry, [REDACTED] not better placed to compete than other European suppliers such as CAF, Stadler, Indra as well as Integrators (in particular, Atkins), whether alone or through consortia or sub-contracting relationships.

8.1.3 [REDACTED], in the absence of the Proposed Transaction, [REDACTED], such that they could not plausibly be close competitors.

[REDACTED]

8.1.4 [REDACTED]

8.2 The Parties would be pleased to provide additional information and elaborate further on any aspect of this submission if it would be of assistance to the CMA.

24 March 2023