Branschföreningen Tågoperatörerna

European Union Agency for Railways
006REC1072@era.europa.eu

ASTOC reply to the ERA public consultation on the draft of the limited revision of the TSI relating the subsystem rolling stock – Noise (TSI Noise)

ASTOC – the Association of Swedish Train Operating Companies represents the commercial railway undertakings with operations in Sweden. We are a member based industry association with some 40 active members. On behalf of the Swedish commercial railway undertakings, ASTOC is an active member of the Community of European Railway and Infrastructure Companies (CER) in Brussels.

Our members are in direct ownership of some 5,000 rail freight wagons and additionally makes use of some 9,000 rail freight wagons.

1. **ASTOC's general statement on the TSI Noise revision**

The proposal

Rolling noise, the major source of noise associated with the railway system, is regulated at EU level by the TSI Noise limit values imposed to wagons. On noise complying reference tracks, new and refurbished wagons are under an obligation to comply with the strict values set in the existing TSI Noise. The railway sector is presently accelerating the retrofitting of existing wagons. This is clearly reflected in the oversubscription of the 2016 noise call under the Connecting Europe Facility (CEF), which proves that public funding is key in implementing a rapid retrofitting programme at EU level.

ASTOC appreciates the work undertaken by the European Union Agency for Railways (ERA) following the mandate of the Commission to draft a recommendation for the limited revision of the TSI Noise with the aim of making the European wagon fleet quieter. ASTOC has in dialogue with the Swedish government officials and the NSA in Sweden, Transportstyrelsen, contributed to the development of the draft recommendation.

ASTOC is deeply concerned that the legislative proposal under consultation is in fact a draft with many unresolved issues remaining. We expect the proposal to be supplemented by a number of exemptions or "specific cases", which are currently not known. The lack of clarity makes it nearly impossible to provide a clear position on the legislative proposal. Given the

ambitions behind the Regulatory Fitness and Performance Test (REFIT), this is a severe drawback in the process.

Traffic safety

Accordingly, for railway traffic to be safe in Sweden a permanent specific case for Sweden is necessary, at least until 2032. The chosen date should ensure enough time to find adequate solutions to the safety challenges in Nordic winter conditions. Preferably new generation technology such as efficient disc brake solutions will be available in the coming years. We do not expect composite brake blocks to be the final answer to the present challenges created by railway noise.

Composite brake blocks do not ensure sufficient braking performance in Swedish winter conditions. Composite brake blocks have caused several serious traffic safety incidents. The most effective way to ensure sufficient braking performance even in harsh winter conditions is to remove composite brake blocks and replace them with cast iron blocks. The mandatory use of composite brake blocks may become a major problem for ASTOC's member companies and other RU's on the Swedish rail infrastructure. Unpredictable behaviour of braking in train operations during winter time cannot be accepted.

Winter tests using composite brake blocks have been carried out during winter 2018.

In ASTOC's opinion it is vital that the use of wagons with composite brake blocks does not undermine railway safety, in particular when used in freight operations in Nordic winter conditions. Traffic safety must always come first and the safe functioning of composite brake blocks in winter conditions must be confirmed before the regulation enters into force in any country affected by harsh winter conditions, which have proven to display challenges in the Nordics different from those in central Europe. Obviously, the operations and braking schemes in Sweden differ from those in countries such as Germany, Switzerland and Austria, giving rise to additional reservations in terms of traffic safety.

Reduced operability

Limited interoperability and accordingly the movement of goods gives reason to seriously question the concept of quieter routes. The quieter routes concept as proposed in the legislative proposal will make rail freight even more inflexible than today and in practice create new trade barriers. Among others, the following operational challenges have been identified thus far:

- Parallel planning work for deployment of quiet routes, internationally and nationally driving costs of working processes as well as additional costs for ICT and staff.
- Wagon investment and increased costs for transporting wagons to places where they are needed. Double systems reduce optimisation and increases infrastructure costs and costs related to train production. The wagons may need longer transport routes and (the bypass factor increases) resulting in more trainkilometres.
- More trains need to be built at marshalling and shunting yards. More marshalling, shunting and administration will be required and more tracks for train construction, wagon grouping and shunting will be

needed as well as supporting tracks. The result will be slower transport for customers and fewer service points.

- Lower brake percentages following lower braking power with LL blocks lead to slower trains and thus also greater infrastructure wear as well as more locomotive, driver and wagon time in the system.

Quieter routes

Regarding the quieter routes approach, the Task Force meetings and the two workshops held in 2017 could hardly deliver a firm conclusion to go further with this approach. CER, ASTOC's leg in Brussels, clearly expressed that the sector did not have a common position on the preferred approach and requested both approaches to be equally evaluated at the ERA Working Party. ASTOC and CER regret that the Commission adopted a narrow mandate, thus excluding the original "vehicle based approach". Nevertheless, CER suggested a small modification of this approach by a gradual application of the revised TSI Noise to existing freight wagons to address different degrees of noise affectedness in the member states. The proposed implementation strategy that is based on deadlines from 2022 to 2036 was supported by the majority of RU members of CER.

Given the meanwhile noticeable economical and operational challenges of the quieter routes approach and its risks for the competitiveness of European rail freight, ASTOC considers a renewed legal assessment of a successive European noise abatement strategy, wagon based approach, to be urgently required.

Support to a proportionate and step by step approach

ASTOC is committed to supporting noise reduction at source through a step by step migration towards a quieter freight wagon fleet. For this reason, a one-size-fits-all approach is not feasible to solve the noise problem effectively. Instead, solutions have to be found that ensure both complementary requirements:

- on the one hand safeguard a smooth operation of rail freight transport from, to and through countries with high noise sensitivity and,
- on the other hand, minimise the administrative and financial burden of implementing measures such as retrofitting in member states where citizens are less exposed to noise and thus having lower public concern.

Therefore, an EU approach on rail freight noise should be proportionate. In doing so, the policy makers should also learn from the experience from other regulations (e.g. ETCS) and refrain from generalising regulations taking into account a lacking intermodal level playing field (cf. the sector funding requests as expressed by CER).

To conclude, ASTOC believes that retrofitting existing wagons with composite brake blocks is – at present – one of the most effective noise mitigation measures available. It is already part of the TSI Noise in respect of new rolling stock and it is embedded in the sector strategy for reducing rail freight noise and will mandatorily be requested and therefore accelerated by the limited revision of the TSI Noise. The deployment of new technology, however, must not undermine railway safety, in particular to freight operations in winter conditions and/or related to track circuits once retrofitted freight wagons are massively introduced on the network. ASTOC's member RU Green Cargo has repeatedly reported traffic safety issues

with composite brake blocks in Nordic winter conditions to the ERA. Similar reports have been submitted by VR, the major RU in Finland.

2. ASTOC's comments on the draft recommendation

Even if the legislative proposal under consultation is in fact a draft with many unresolved issues remaining, our main reservations are the following.

For railway traffic to be safe in Sweden a permanent specific case for Sweden is necessary, at least until 2032. The chosen date should ensure enough time to find adequate solutions to the safety challenges in Nordic winter conditions.

Additionally, for wagons for which there exists no 1-to-1 retrofit solution, retrofitting should not be mandatory even in noise sensitive countries as it would create a trade barrier clearly disadvantaging the Swedish wagon fleet. Details on the main three affected wagon types have been submitted by the Swedish NSA, Transportstyrelsen.

ASTOC clarifies that the idea of the quieter routes approach was to have a common approach that addresses the different degrees of noise affectedness in the member states and as a consequence to concentrate the retrofitting and relating costs on areas where it is urgently needed. A common understanding on the operating rules of rolling out quieter routes at European level needs to be developed before the revised TSI Noise enters into force. ASTOC reiterates that the complexity of running freight businesses must not be further increased. Freight RUs represented by ASTOC have already expressed their concerns on daily operational difficulties that would arise from the implementation of quieter routes in the EU. Overall, this approach could lead to further weakening of rail freight's competitiveness.

ASTOC objects to any retroactive application of legislation. The revision of the TSI Noise shall not lead to the removal of existing authorisation of vehicles. The TSI Noise limit values should gradually be applied to existing freight wagons.

3. Impact assessment data

Based on cost calculations carried out by the International union of wagon keepers (UIP) Swedish railway organisations have estimated that maintenance (mainly wheels) costs will increase by approximately 30 percent, which implies a cost increase for rail freight by 5-7 percent. The composite brake blocks are 3 to 5 times more expensive, however their lifetime is only twice as long. In addition to increased maintenance costs, there will also be a cost for retrofitting existing wagons. The increased costs will be transferred to shippers and harm their competitiveness, which in the end also reduces the competitiveness of the railway. This could cause the noise reduction ambitions to pave the way for shift of externalities from rail to road and increasing CO_2-emissions at the same time.

In this section we present some relevant impact data as collected by the Swedish NSA, Transportstyrelsen, whose reply in the public consultation we support.

Safety and maintained competitiveness of the Swedish Railways sector are key elements. On the one hand, the composite brakes show evident inadequate performance, leading to probable high risks. To mitigate these safety threats costly operative measures need to be put in place.

Secondly, the draft legislation is proposed to enter in force within a short term. This will cause increased costs for retrofitting and necessary adjustment measures, as the 1-1-solution is not feasible on the Swedish wagon fleet and therefore severely damage the Swedish railway sector. The proposal will cause direct unproportioned increase of costs – operative and material – hence hampering the railway undertakings.

Thirdly, the introduction of quieter routes will impede and unlawfully restrict the access to the European market, and only offer an unbalanced benefit for a few Member States. Quieter routes in a Member State will handicap the Swedish existing wagon fleet automatically. Hence, limiting the possibility to offer business opportunities on the European market for the transport buyer, and its products. This will affect the Swedish industrial market economy in its entirety.

The consequences will lead to modal shift from rail to road as an immediate consequence of the increased operative and material costs directly linked to retrofitting and risk mitigating measures. Freight transport will move from rail to road traffic. Railway will lose its competitiveness and performance.

The following are estimated costs of the proposal:

The costs to retrofit, presuming no operative restriction, the fleet in Sweden would be :

The cost of retrofitting a wagon in Sweden ranges from: 17,000 SEK – 80,000 SEK
(1 EUR = 10 SEK)

- Wagons 1:1 used for transport in Sweden: 9,000 wagons x 20,000 SEK = 180,000,000 SEK
- Brake system retrofit : 1,500 wagons x 80,000 SEK = 120,000,000 SEK
- Wagons with load changing device : 3,800 wagons x 70,000 SEK = 266,000,000 SEK
- Wagons which need kink valve : 1,300 wagons x 40,000 SEK = 52,000,000 SEK

Grand total : 618 000 000 SEK one-off costs

The railway sector in Sweden estimates that the increase in maintenance costs yearly is: 0.3 SEK/km x 700,000,000 km = 200,000,000 SEK yearly

In addition, the administrative costs due to less efficient management of the fleet for each wagon for each trip is estimated to be around 200 SEK = 200,000,000 SEK

Grand total : 400,000,000 SEK yearly costs

Furthermore, the poor brake performance in severe winter conditions will have to be mitigated by operative measures such as shunting cast-iron brake blocked wagons in all trains. The operative costs in order to mitigate the risk of loss of brake performance in wintertime is 275 SEK /~28 EUR wagon shifted in a train = 400 000 000 SEK during five winter months.

The operative measure suggested by ERA is to shift wagons equipped with safe cast iron brake blocks into the trains in wintertime; half of the wagons in a train would have to be equipped with safe brake blocks. Even with the wagon composition measures the transport need to decrease the speed of the train from 100 km/h to 80 km/h to uphold a normal safety performance level. The mainline is saturated and a loss of speed would immediately lead to a loss of capacity on the line in the range of 20-25%. The estimation is that this capacity loss would be shifted from rail to road. These costs amount to 145,000,000 SEK in direct costs.

Grand total : 545,000,000 SEK

Finally, in order to accommodate the wagons required at the borders and in main hubs for the shifting in order to form trains with guaranteed brake performance necessary infrastructure investments consisting in new tracks would be required to be built.

The cost of this would be **not less than 2 billion SEK/~2,200,000 EUR.**

The indirect costs for the modal shift, etc would amount to **479,000,000 SEK.**

So, the proposal would lead to the following costs for the Swedish railway undertakings and Swedish society:

One-off costs : 2,618,000,000 SEK

Direct yearly costs : 945,000,000 SEK

Indirect yearly costs : 479,000,000 SEK

4. Funding requests

Sufficient direct funding is a pre-condition for speeding up the retrofitting of wagons. The EU support to retrofitting is provided via dedicated CEF calls but the budget is currently capped at 1% of the 2014-2020 CEF transport envelope. Besides, the co-funding rate covers only up to 20% of the eligible costs. National funding is available in Germany for all national and foreign wagon keepers operating on the German network and was provided to Swiss wagon keepers in Switzerland, too. Additionally, retrofitting could be incentivised by noise-differentiated track access charges (NDTAC). Today, NDTAC systems are applicable only in Austria, Germany, the Netherlands and Switzerland.

ASTOC demands that the availability of public funding be consistent with the policy goals set by decision makers. Today, the availability of public funding corresponds to only one third of the investment costs (estimated to be minimum EUR 700 million) and the scope of funding is limited (20% of eligible costs are covered).

As stated above the costs for retrofitting, maintenance and wear and tear of wheels have proven to be higher in Sweden than in other countries. The costs for operational challenges are huge and are not covered by any support programme.

ASTOC welcomes the 2014 and 2016 noise reduction-dedicated CEF calls and the resulting allocation of more than EUR 33 million. ASTOC would also welcome a third dedicated CEF call in 2019 with an extension of the eligible costs (e.g. to additional operational costs of retrofitted wagons) and an increased budget compared to the 2016 ASTOC call. Finally, ASTOC reminds that the European Commission is legally entitled to allocating more than EUR 200 million to noise reduction actions under the 2014-2020 Multi-Annual Financial Framework.

Reduction of rail freight noise, including the retrofitting of existing rolling stock should continue to be co-funded by CEF grants under the post-2020 Multi-Annual Financial Framework, with a co-funding rate of *at least* 50% of the eligible costs. The proper funding for investments in noise barriers should also be ensured in the context of the Multi-Annual Financial Framework and CEF.

ASTOC is ready to support the ongoing evaluation of the Implementing Regulation 2015/429 on noise charges. Depending on its outcome, it might be useful to extend the Regulation's application to cover increased operational costs for running retrofitted wagons.

ASTOC understands that allocating financial sources is a challenge for the EU and the member states due to budget constraints. ASTOC suggests providing additional capital for retrofitting by taking into account socio-economic cost savings (e.g. health costs) both at European and national level thanks to quieter rail freight traffic.

There is a particular need for coordination of funding programs between the national level and the EU level.

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Björn Westerberg
CEO, ASTOC

Gustaf Engstrand
Head of Policy and European Affairs