Network Statement 2026

Validity period: December 14th 2025 – December 12th 2026

BANEDANMARK

CORRECTIONS AND AMENDMENTS

This document contains the corrections and amendments described in the table below.

This document replaces previous versions of the Network Statement 2024 mentioned in the table.

Version	**Date of publication**
1.0	December 14th 2024

Contents

1 General information

1.1 Introduction

Banedanmark – as manager of the State's railway infrastructure in Denmark - has, cf. § 16, clause 1, of the Railway Act, produced and published this Network Statement. The Network Statement's main target group is Railway Undertakings and others planning to apply for capacity on Banedanmark's infrastructure in Denmark. The Network Statement primarily contains information about infrastructure managed by Banedanmark but also contains information about connected infrastructure and Infrastructure Managers.

Basically, the infrastructure managed by Banedanmark will in the following be referred to as Banedanmark's infrastructure.

1.2 Purpose of the Network Statement

The purpose of the Network Statement is to inform Railway Undertakings and other applicants about Banedanmark's infrastructure, and the terms and conditions for allocation and use of capacity.

The Network Statement is produced in accordance with directive 2012/34/EU, act no. 1091 af 11/08/2023 (The Railway Act) and Executive order no. 1245 of 10/11/2015 on allocation of railway infrastructure capacity (paths) etc. with later changes.

1.3 Legal aspects

1.3.1 Legal framework

The Network Statement is produced with reference to the EU railway package as well as the derived Danish legislation. Below is a list of the most important legislation related to the operations and use of the railway's infrastructure in Denmark. The list is not exhaustive:

EU legislation

DIRECTIVE (EU) 2012/34 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 November 2012 on establishing a single European railway area (recast)

DIRECTIVE (EU) 2016/2370 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 December 2016 amending Directive 2012/34/EU as regards the

opening of the market for domestic passenger transport services by rail and the governance of the railway infrastructure

REGULATION (EU) No. 913/2010 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 September 2010 concerning a European rail network for competitive freight

REGULATION (EU) No. 2021/782 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL 29 April 2021 on rail passengers' rights and obligations (Text with EEA relevance) (revised version)

REGULATION (EC) No. 1370/2007 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/70

COMMISSION IMPLEMENTING REGULATION (EU) 2015/10 of 6 January 2015 on criteria for applicants for rail infrastructure capacity and repealing Implementing Regulation (EU) No 870/2014

COMMISSION IMPLEMENTING REGULATION (EU) 2018/1795 of 20 November 2018 on laying down procedure and criteria for the application of the economic equilibrium test pursuant to Article 11 of Directive 2012/34/EU of the European Parliament and of the Council (Text with EEA relevance)

COMMISSION IMPLEMENTING REGULATION (EU) 2015/909 of 12 June 2015 on the modalities for the calculation of the cost that is directly incurred as a result of operating the train service

COMMISSION IMPLEMENTING REGULATION (EU) 2015/171 of 4 February 2015 on certain aspects of the procedure of licensing railway undertakings

COMMISSION IMPLEMENTING REGULATION (EU) 2017/2177 of 22 November 2017 on access to service facilities and rail-related services

COMMISION DELEGATED Decision (EU) 2017/20175 of 4 September 2017 replacing the Annex VII to Directive 2012/34/EU of the European Parliament and of the Council establishing a common European railway area

National legislation

Announcement of law no. 1091 of 11/08/2023 (The Railway Act)

Act no. 588 of 24/06/2005 on Sund & Bælt Holding A/S with later changes

Executive order no. 1709 of 02/12/2024 on infrastructure charges etc. for the railway network

Executive order no. 855 of 19/06/2023 on Banedanmark's duties and powers (retsinformation.dk)

Executive order no. 1245 of 10/11/2015 on allocation of railway infrastructure capacity (paths) etc. retsinformation.dk)
with later changes

Executive order no. 1503 of 29/06/2021 on railway related service facilities and services

Executive order no. 1380 of 01/12/2015 on obligation to provide access at stations with later changes

Executive order no. 1461 of 15/12/2009 on liability insurance for Railway Undertakings and Infrastructure Managers with later changes

Executive order no. 1475 of 01/12/2023 on regulation of amount of compensation and insurance in relation to the Railway act

Executive order no. 2424 of 13/12/2021 on the Danish Rail Regulatory Body

Executive order no. 863 of 20/06/2024 on vehicles' technical compatibility with the rail network

Executive order no. 712 af 20/05/2020 on safety approval and EU safety certificate and safety certificate within the railway sector with later changes

Executive order no. 896 of 13/07/2015 on the abrogation of Executive order on locomotives and passenger coaches operating on the Danish rail network

Executive order no. 601 of 23/06/2009 on rail transportation of dangerous goods with later changes

Executive order no. 1581 of 05/12/2023 on approval of vehicle within the railway sector

Executive order no. 372 of 25/04/2016 on control of risk for major accidents and dangerous goods with later changes

Executive order no. 854 of 07/07/2015 on the authorization of railway undertakings with later changes

Announcement of law no. 5 03/01/2023 Law on environmental protection

1.3.2 Legal status and liability

The Network Statement 2026 is based on valid legislation and associated administrative regulations, including §§ 26-27 of the Executive order no. 1245 of 10/11/2015 on allocation of railway infrastructure capacity (paths) etc., with later changes, especially implementing article 27 of Directive 2012/34/EU as well as Annex IV of the Directive. The infrastructure fulfils the standards, procedures and specifications outlined in this Network Statement.

In general, Banedanmark makes reservations for the possibility of planned capacity restrictions in connection with projects being changed or cancelled, if a political decision is made in this regard.

Banedanmark is not responsible for faults which may occur in connection with the configuration or printing of the Network Statement.

Banedanmark cannot vouch for the correctness of the information in this Network Statement provided by and describing other Infrastructure Managers or service facility operators, including terminal operators.

Reservations are made with regard to changes to the Network Statement or to the condition of the infrastructure which could not be foreseen at the time of publishing the Network Statement.

Applicable relevant legislation and associated administrative regulations applicable in this field shall prevail over the information contained in this Network Statement.

1.3.3 Appeals procedure

Complaints related to the content of the Network Statement or to decisions on allocation of capacity made by Banedanmark can be made to the Danish Rail Regulatory Body. For further information on complaint rights, fees and deadlines reference is made to the Danish Rail Regulatory Body's website

1.4 Structure of the Network Statement

The international group of European Infrastructure Managers, RailNetEurope (RNE), has produced a common structure for the organisation and content of Network Statements.

The Network Statement has been drawn up in accordance with the common structure with the purpose of making information available to a greater extent to those applying for capacity across borders.

Not all issues/headings of the common structure are relevant to Banedanmark's infrastructure. For the ease of reference such issues will not form part of the Danish version of Banedanmark's Network Statement. The English version of Banedanmark's Network Statement complies with the common structure, and all issues will appear from the headings with an indication as to the issue being not relevant to Banedanmark's infrastructure.

The Network Statement consists of a main document, which describes the infrastructure as well as the general conditions regarding access to the infrastructure. In addition, the Network Statement contains an appendix section with more technically detailed information. Finally, the Network Statement includes links, for example to publications and relevant websites.

1.5 Validity period, updating and publishing

1.5.1 Validity period

The Network Statement 2026 is valid for the capacity allocation period of n K26, (i.e. as from December 14th 2025 to and inclusive of December 12th 2026).

1.5.2 Updating

In the event of significant changes to the conditions contained in this Network Statement, Banedanmark will update the Network Statement. Generally, this will be without a prior public consultation. A wholly or partly revised version of the Network Statement will replace the previous version of the Network Statement. Version history appears from the announcements on page 2.

The above-mentioned does not apply to Banedanmark and the Resounds Konsortiet's (Øresund Bridge Consortium Partnership) standard access contracts (see appendixes 2.3C and 2.3D). Changes to the standard access contract during the period from the publication of the Network Statement to its implementation can only occur after consultation with the Railway Undertakings. However, changes prompted by authority requirements – for example new or altered legislation, Ministry of Transport and Housing requirements or decisions made by the Danish Rail Regulatory Body – will be implemented without public consultation.

1.5.3 Publishing

The Network Statement is published on Banedanmark's website,; Netredegørelsen, Banedanmark. The English version "Network Statement" will be available on both Banedanmark's website and on RNE's website www.rne.eu

The Network Statement is available in Danish and English. The main document and all appendixes have been translated into English. In the event of discrepancies between the two versions of the Network Statement, the Danish version shall apply.

1.6 Contacts

Requests regarding national and international rail traffic and infrastructure access can be directed to Banedanmark.

Banedanmark's prima ry contact details:

Banedanmark
Carsten Niebuhrs Gade 43
DK-1577 København V

DENMARK

CVR: 18 63 22 76
Phone: (+45) 82 34 00 00
E-mail: banedanmark@bane.dk
Web: www.bane.dk

1.7 Cooperation between European Infrastructure Managers/Allocation Bodies

1.7.1 Rail Freight Corridors

The EU regulation 913/2010 outlines the establishment of a series of European rail freight corridors and was created in order to increase competition within international freight traffic, including competition with other forms of transport.

Part of the Danish rail network is included in European rail freight corridor 3 (Scandinavian Mediterranean – ScanMed), which covers the line Stockholm/Oslo – Malmö – Copenhagen – Padborg – Hamburg – Innsbruck – Verona – Palermo.

A Corridor Information Document (CID) has been produced, which gives further details about the freight corridor. Further information can be found on ScanMed's website.

More information on the rail freight corridor is available on Banedanmark's website.

For information on other freight corridors, reference is made to RNE's website.

1.7.2 RailNetEurope and other international cooperation

Banedanmark is member of RailNetEurope (RNE). RNE is an umbrella organisation of European Infrastructure Managers. RNE facilitates the operational, international business cooperation between the member countries. More information about the organisation can be found on RNE's website.

RailNetEurope tools

Path Coordination System (PCS)
PCS is an online software tool which supports the coordination of processes for international train path requests. Banedanmark recommends using PCS. For further information, reference is made to the website of the tool.

Charging Information System (CIS)
CIS is a web-based application for the calculation of infrastructure charges. The application is designed to provide Railway Undertakings and any other applicants who intend to apply for the allocation of capacity in international rail freight corridors with pricing information. The system calculates a price

estimate. For further information, reference is made to the website of the application.

Train Information System (TIS)
TIS is a web-based application which visualises international trains from origin to destination. It supports international train management by delivering data concerning international passenger and freight transport performed in rail freight corridors. For further information, reference is made to the website of the application.

One Stop Shop (OSS)

One Europe – ONE Service
In Denmark enquiries regarding applications for capacity in international rail freight corridors must be made by contacting Banedanmark's One Stop Shop through Traffic Operations, Coordination & Processes, by mail -t-kp@bane.dk

Further information on One Stop Shops can be found on RNE's website.

2 Infrastructure

2.1 Introduction

Below Banedanmarks's infrastructure is described. The description comprises a range of geographical, technical and operational characteristics, which are relevant to the application purpose of the infrastructure.

An outline map of lines open for passenger traffic in Denmark can be seen in appendix 3.1A. An outline map of lines and facilities open for freight traffic can be seen in appendix 3.1B.

This section also contains relevant information on other Infrastructure Managers' infrastructure or connected infrastructure elements.

Further information on Banedanmark's infrastructure can be found in Banedanmark's infrastructure register, BaneGISX:

http://banedanmark.maps.arcgis.com/apps/webappviewer/index.html?id=6541fbc0cbba499b861e4d7fe23b10b6

It should be noted that data in BaneGISX are intended as a guide. Railway Undertakings and others can contact Banedanmark for further details and/or a confirmation of the data contained in BaneGISX.

2.2 Extent of network

Access to Banedanmark's infrastructure is regulated by a number of acts and Executive orders. The Railway Act and the Executive order no. 712/2020 with later changes with regard to safety approvals, EU safety certificate and safety certificate on the railway area form part of the most essential basis of regulation applicable to the area.

2.2.1 Limits

The geographical limits of the Danish rail network are outlined in appendix 3.2B.

The following lines are inactive (see definition below). Consequently, capacity cannot be allocated for the lines:

- Nykøbing F – Gedser
- Nykøbing F – Rødby Færge (possessed until opening of the Fehmarn Belt link)
- Tønder – Tinglev

Sidings and branch lines connected to other sidings, such as connections to port lines and private tracks

A siding can be classified as to one of three levels:

Open

Usage of the siding is requested. The siding is fully maintained and fully functional. An overview of open sidings for passenger trains and freight trains as well as rolling stock to be used in connection with maintenance and reconstruction can be seen in appendix 3.2A.

Inactive

Usage of the siding is not requested. Consequently, the siding is not available for traffic use, and Banedanmark can subsequently declare the siding inactive.

If usage of the siding is requested within 24 hours, it can be used for traffic purpose. The siding is technically operational, and maintenance of the siding can, if necessary, take place.

Closed

Usage of the siding has not been requested for the last 24 months, during which period the siding has been inactive. Banedanmark will recommend to the Danish Civil Aviation and Railway Authority that the siding is closed. If this recommendation is approved by the Danish Civil Aviation and Railway Authority, the siding will be closed operationally and technically.

If a request for reopening of the siding is not expected in the foreseeable future, Banedanmark will recommend to the Danish Transport, Construction and Housing Agency that the siding is removed.

Further information on Banedanmark's sidings can be found in Banedanmark's infrastructure register, BaneGISX:

http://banedanmark.maps.arcgis.com/apps/webappviewer/index.html?id=6541fbc0cbba499b861e4d7fe23b10b6

It should be noted that data in BaneGISX are intended as a guide. Railway Undertakings and others can contact Banedanmark for further details and/or a confirmation of the data contained in BaneGISX.

2.2.2 Connecting Railway Networks

The interface of Banedanmark's infrastructure with other Infrastructure Managers can be seen in appendix 3.2B.

National borders with other Infrastructure Managers

The Great Belt Link

The fixed connection over the Great Belt is owned by A/S Storebælt (Great Belt Inc). Banedanmark is the Infrastructure Manager of the fixed connection over the Great Belt and is responsible for traffic operations.

A/S Storebælt is responsible for maintenance and reinvestment related to infrastructure on the fixed connection over the Great Belt and covers all costs related hereto.

Sund & Bælt Holding Inc. administrates the system owned by A/S Storebælt Inc. and is responsible for all maintenance and reinvestment projects on the railway line from km 106,840 to 132,396.

Every two years an exercise is conducted with regard to the Great Belt Link. The Great Belt Link is closed for traffic during the exercise.

The Oeresund Railway
The Danish infrastructure connected to the Oeresund Bridge – Øresundsbanen (Oeresund railway) – is owned by A/S Øresund (Oeresund Inc.)

Banedanmark is Infrastructure Manager of the Danish railway infrastructure connected to the Fixed Oeresund Link and is responsible for traffic operations.

A/S Øresund is responsible for the maintenance and reinvestments in relation to the infrastructure on the Danish railway infrastructure connected to the Fixed Oeresund Link. A/S Øresund covers all expenses on the railway lines København H – Peberholm until km 12,854 and Vigerslev – Kalvebod until km 1,555. However, Banedanmark will be in charge of the maintenance and reinvestments of the interlocking systems on the Danish railway infrastructure connected to the Fixed Oeresund Link, until a new signalling system (ERTMS) been implemented on the lines.

Sund & Bælt Holding A/S (Sund and Belt Holding Inc.) administrates the system owned by A/S Øresund and is responsible for all maintenance and reinvestment projects. However, Banedanmark is responsible for the administration of the interlocking systems on the Danish railway infrastructure connected to the Oeresund Fixed Link.

The Oeresund Bridge
Øresundsbro Konsortiet (Oeresund Bridge Consortium Partnership) is Infrastructure Manager for the railway systems located after km 12,854, and Øresundsbro Konsortiet (Oeresund Bridge Consortium Partnership) is responsible for the maintenance and reinvestments in relation to this part of the infrastructure.

Regional railways
The following links contain information on the regional railways in Denmark with railway infrastructure connected to Banedanmark's infrastructure:

- Midtjyske Jernbaner's website
- Lokaltog's website
- Nordjyske Jernbaner's website
- Vestbanen's website

Information on where each individual regional railway is connected to Banedanmark's infrastructure can be seen in appendix 3.2B. Banedanmark is Infrastructure Manager for road-related conditions of secured crossings on private railways.

Private sidings
For further information on private sidings, see appendix 3.2C. Information on port railway tracks and port berths can be obtained from the relevant track owners, see section 7.2.

For information on freight terminals, see section 7.3.3.

International interface to other Infrastructure Managers
Banedanmark's infrastructure is connected to the German infrastructure at the Padborg border and the Tønder border. For further information on the borders' locations and adjacent Infrastructure Managers, reference is made to appendix 3.2B.

The interface between the Danish rail network and the Swedish rail network is at the system border at Peberholm's western station border at km 23.6. The interface between Banedanmark's infrastructure and the infrastructure managed by Øresundsbro Konsortiet (Oeresund Bridge Consortium Partnership) is outlined in appendix 3.2B. Infrastructure managed by Øresundsbro Konsortiet is described in Øresundsbroens Netredegørelse
(Network Statement for the Oeresund Bridge).

2.3 Description of Banedanmarks's infrastructure

The infrastructure for which Banedanmark is Infrastructure Manager is described below.

Appendix 2.3A and 2.3B contain outline maps for passenger and freight traffic where the classification is performed based on the on the TSI-INF categories (P and F). The outline maps illustrate the basic parameters of the railway lines (maximum speed, axle load, gauge, etc.).

The classification is based on TSI-INF P3, P5, and P6, as P3 is divided into two ranges of speed as stated in the signature in appendix 2.3A. The railway's "big H", incl. Nordvestbanen, is classified as P3a/b due to longer trains than on the smaller P5 and P6 railways. On certain railway lines two colours occur. This is due to the fact that lengths of platforms of the smaller stations only allow trains of shorter length than required for a higher category. From appendices 2.3A and 2.3B (reference, cf. the subsequent section) it appears which lengths of platform are available on which stations. The S-train lines are shown as category P5 – solely for a visualisation of the basic parameters compared to other railways. The S-train lines are not covered by the TSI requirements.

The classification for freight trains complies with the basis parameters in F2 and F4 – the latter only on lines where the maximum axle load is below 20 tons. Thus, at the moment F2 is the dominant classification. Signature F1 is reserved for a future corridor Øresund-Femern. Regarding lengths of passing tracks reference is made to appendices 2.3.A and 2.3B.

The reference line for rolling stock appears from appendix 3.3C.

2.3.1 Track typologies

Banedanmark's railway network consists of long-distance lines (1.751 km lines) and the S-train lines (171,4 km double track lines). The long-distance lines include 811,7 km double track lines, 927 km single track lines, and 11,8 km lines with more than one track. To this are added the lines owned by Sund & Bælt A/S: Storebælt (25,6 km), Kastrupbanen (151,1) and Øresundsbroen (5,3 km).

Appendix 3.3.A and 3.3B include number of tracks per line and a map of TIB lines.

Appendix 3.2.I include DSB tracks where Banedanmark is Infrastructure Manager.

2.3.2 Track gauge

In Denmark the nominal track gauge is 1435 mm.

2.3.3 Stations and nodes

A map of selected stations, stopping points and nodes on Banedanmark's infrastructure can be seen in appendix 3.1A.

Banedanmark's standard for platforms in stations with long-distance or international traffic is 320 meters. It should be noted that this standard is not applied at all stations. Guideline information on the length and height of all platforms at stations on Banedanmark's infrastructure can be seen in appendix 3.6.

The line information of Banedanmark's infrastructure (TIB) contains a description of the local operational conditions for stations. The TIB lines can be seen in appendix 3.3B and on Banedanmark's website . From Banedanmark's website the rules for operation and work on the parts of the long-distance lines which are equipped with ETCS also appear: ORF | Banedanmark.

2.3.4 Loading gauges

An overview of applicable loading gauges can be found in appendix 2.5.

Gauges for mixed traffic have not been implemented, but up to P/C 80 and P/C 410 can be transported on most lines. They must be transported as exceptional transports, see section 3.4.3.

Cross wind
The European regulation defines specific requirements for the Infrastructure Manager with regard to the limits for cross wind. These requirements depend on the speed permitted on a railway line. On Banendanmark's railway network speeds up to 180 km/h are permitted. This implies that a reference train which is stable at 34.8 m/s cross wind at a speed of 200 m/h (according to the EU regulation this is the relevant table value) must be able to run safely on the railway line under the most critical conditions. Consequently, it lies with the Railway Undertakings to ensure that their rolling stock, including load, being stable at this reference value.

2.3.5 Weight limits

Due to synergetic conditions, there is no guarantee that permission will be granted to travel at maximum speed as well as with maximum axle load and maximum meter load. For more information, see section 2.3.7 with regard to line speeds.

Maximum axle load
A guideline overview of maximum axle load can be seen in appendix 3.3D. Applicable maximum axle load of vehicles on individual lines (and line sections) is contained in AML. AML is a survey providing information as to which conditions, including wheel base weight per meter, and loading gauge must be complied with for coaches and wagons to be operated on the lines for which Banedanmark is Infrastructure Manager. The AML survey can be found on Banedanmark's website. Maximum axle load refers to the highest permitted weight per axle on the line.

Weight per meter
A guideline overview of maximum weight per meter can be seen in appendix 3.3E. Applicable maximum meter load of vehicles for individual lines (and line sections) is contained in AML, which can be found on Banedanmark's website. Maximum meter load refers to the highest weight per meter permitted on the line.

Train weight and load
Reference is made to the valid legislation as well as rules issued by Banedanmark. The rules can be found on Banedanmark's website.

2.3.6 Line gradient

TIB (SR) and the route information (ORF/ORS) contain information on gradients on the line. Max. permitted gradient/decline is contained in Track Rules 1987 section 2.10.

Line gradient
Wheel gauges must be suitable for a line gradient of 1:40. For that reason wheel profiles adjusted for a line gradient of 1:40 must be applied.

2.3.7 Maximum line speed

An overview of maximum line speeds can be seen in appendix 3.3F. Maximum line speed refers to the highest permitted speed for train sets with documented limited impact on the track (special train sets) for the given part of the line. Specifications of "*særlige togsæt*" appear from Banedanmark's norm BN2-74.

For other rolling stock, the maximum speed may be lower than the maximum line speeds mentioned in appendix 3.3F. These limits appear from TIB (Banedanmark's route information)/Overview of lines equipped with ETCS.

2.3.8 Maximum train length

Train length refers to the total length of the train including operating and non-operating traction units.

Information on permitted train lengths can be found on Banedanmark's website.

Certain passing tracks or crossing tracks cannot accommodate trains of more than 835 meters, and therefore capacity limits may be imposed in such cases. Information in this regard can be obtained from korrtoga@bane.dk.

2.3.9 Power supply

Electrified lines on the long-distance lines appear from appendix 3.3G.
Electrified sidings appear from appendix 3.8.

An overview of the electrified lines and lines of Banedanmark´s infrastructure which are planned to be electrified can be seen on Banedanmark's website; Få overblikket over elektrificeringen | Banedanmark.

System separation
Lernacken, Sweden: Between 25 kV 50 Hz (Danish) to 15 kV 16.7 (Swedish).
Operational at line speed.
Padborg: From 25 kV 50 Hz (Danish) to 15kV 16.7 Hz (German).
Not operational at line speed.

The electrical operations on the long-distance lines are performed by 25 KV 50 Hz alternating currents from distribution stations along the track.

S-train lines
The S-train lines operate at 1650 V direct current supplied by transformer stations along the track.

2.3.10 Signalling systems

Traffic control and management is carried out by Banedanmark through various types of interlocking systems which send a visual stop/go signal to the driver in accordance with the 1975 Safety Regulations (SR), or through interlocking systems combined with ETC/CBTC signalling stop/running permit to the engine driver through line radio and driver's cab signal according to the Safety Regulation's Operational Rules ORS/ORF.

Long-distance lines
Control and management of traffic on long-distance lines where the Signalling Programme has been rolled out is carried out by Banedanmark through ERTMS in accordance with the Safety Regulation's Operational Rules (ORF). See roll-out map for the long-distance lines by the link
Fjernbanen | Banedanmark.

S-train lines
Control and management of the S-train traffic is carried out by Banedanmark through CBTC.

For other information, reference is made to Banedanmark's Project Plan:
Anlægsplan 2035 | Banedanmark.

2.3.11 Traffic control systems

Traffic control is performed by using remote control and by using local control of interlocking and block systems. Almost all lines of Banedanmark's infrastructure are remotely controlled. The lines are controlled from larger regional control centres and smaller control centres. Few stations are operated on a local basis. The station interlocking systems, where the control centre is located, are controlled by a local train dispatcher.

The locations and coverage areas of the control centres as well as the stations which are operated on a local basis can be seen in appendix 3.3H.

Horsens station is the only station which in connection with special operations requires local staff (staff from control centres). This is e.g. necessary in connection with working running, or when it is necessary to operate additional trains in connection with big concerts, etc. In ordinary situations of operation traffic is operated in track 2 and track 3, and in these situations the traffic is managed by remote control from the control centre in Skanderborg.

Operating times for local staff are stated in TIB (Banedanmark's route information). If the presence of local staff is requested outside these operating times, this must be ordered from Banedanmark not later than on 15th of the previous month.

Contact points at Banedanmark in this regard:

tjsyd@bane.dk for Horsens

2.3.12 Communication systems

GSMR id applied for radio communication.

The radio channels which can be applied at the individual stations are described in TIB (Banedanmark's route information). Banedanmark's requirements regarding use of GSM-R are described in the infrastructure register.

Radio conversations are recorded, monitored, and applied for detecting causes in connection with safety-related incidents.

Long-distance lines and S-train lines
GSM-R radio (interoperable) is used for oral and data communication to and from the engine drivers. In order to apply this system, the trains must be equipped with a GSM-R radio.

GSM-R can be used for shunting, or portable radios can be used in relation to Point-to-Point. Portable radios must be configured to operate only on allocated channels/frequencies. The responsibility for correct configurations lies with the Railway Undertakings.

2.3.13 Train control systems

According to the Danish Civil Aviation and Railway Authority's "Railway safety regulations BJ no. 5-1-2017 on running on the lines with train control systems" (applies only to ATC lines, i.e. the old signals) and "Executive order no. 863 of 1stJuly 2024 on vehicles' technical compatibility with the rail network" rolling stock to which capacity is allocated on lines equipped with train control systems must be equipped with either interoperable mobile ETCS Level2 Baseline 3 (possibly combined with STM-equipment), mobile ATC or mobile CBTC (on the S-train lines), alternatively ICI. Lines where respectively ETCS and CBTC are placed in service can only be operated by rolling stock equipped with these train control systems. Only ETCS is interoperable. However, it is still required that the trains must also be equipped with a GSM-R radio, cf. Banedanmark's requirements on the application of GSM-R.

The valid traffic information issued by Banedanmark on the handling of the Danish Civil Aviation and Railway Authority's BJ 5-1-2017 contains guidelines for operating rolling stock without the ATC system on lines equipped with ATC.

2.4 Traffic restrictions

2.4.1 Environmental restrictions

According to the Environmental Protection Act the undertaking responsible must when making system arrangements and operations planning ensure that the extent to which the surroundings are exposed to pollution is limited as far as possible.

The Railway Undertaking is obliged to take measures which Banedanmark finds necessary in order to comply with the specific instructions addressed to Banedanmark by the environmental authorities concerning pollution caused by the Railway Undertaking.

The parties are obliged to mutually involve each other in any contact with relevant authorities, if such contact may lead to any of the parties being subject to an enforcement notice according to the Environmental Protection Act and this provision.

Ground pollution

In case of just emerged spillage of oil or other chemicals caused by the Railway Undertaking in areas of Banedanmark the Railway Undertaking must immediately inform the nearest control office.

The railway Undertaking must by a special form for handling spillage of oil and chemicals on Banedanmark's website inform where the spillage took place and about the extent concerned. Upon detection of the spillage the Railway Undertaking must partly stop the spillage, partly initiate clean-up of the oil.

The local council concerned decides which investigations and remedial actions must be taken. Such investigations must be paid by the Railway Undertaking.

The Railway Undertaking must subsequently inform Banedanmark's environmental section about the spillage by completing the form on Banedanmark's website. Link for access to the form: https://www.bane.dk/-/media/Bane/Leverandoer/Miljoe/Haandtering-af-oliespild-og-kemikaliespild.docx.

The completed form must be sent to miljoeogenergi@bane.dk

Noise

The Railway Undertakings must attempt to minimize noise. Environmental legislation employs two different definitions of noise from the railway: noise from passing trains (line noise) and noise from other activities (terminal noise). These definitions are defined in guideline no. 1/1997 "Noise and vibrations from railways" and supplement – Environmental Protection Agency - July 2007.

Noise activities, such as stationary trains idling on reversing tracks and stabling tracks are considered terminal noise, where the guidelines stated by the Danish Environmental protection Agency are limited to max. 35 dB at night in ownership against open and low residential areas. This implies that the engines, compressors, and other noisy components of a train must be switched off at night, when the local council gives instructions to the Railway Undertaking as to apply a limit value.

The environmental legislation does not contain limit values for line noise from existing railways. Running to and from stabling tracks (to and from operations) and reversing tracks is covered by the regulations for line noise.

In addition, the EU's TSI Noise must be complied with, as this is implemented in the Executive order no. 884 of 7th July 2015 on abolition of the Executive order on noise for rolling stock (vehicles) operated on the Danish railway network.

However, the rolling tcock manufacturers' compliance with the limitations in TSI NOISE provides no guarantee for the Railway Undertakings being able to comply with the Environmental Protection Agency's limitation of 35 dB on stabling tracks near accommodation.

Noise caused by trains in stabling tracks, including idling trains, is covered by the rules regarding noise from companies and can be regulated by the local councils.

Air pollution
The Environmental Protection Agency does not state any limit values for air pollution caused by railway operations. However, limit values applying to new locomotives and motor coaches are laid down in appendix 4 of the Ministry of Environment ad Foods's Executive order no. 1335 of 17.06.2021 Nonroadbekendtgørelsen (retsinformation.dk).

2.4.2 Dangerous goods

On the Danish Civil Aviation and Railway Authority's website, there is information on the rules for transporting dangerous goods, including special information on transporting dangerous goods via the Great Belt and Oeresund railway tunnels.

RID-regulations on transport of dangerous goods
Prior to arrival from another infrastructure, dispatch or placing of goods on Banedanmark's infrastructure and/or areas the Railway Undertaking must provide Banedanmark with all necessary information in a format approved by Banedanmark, thus RID 1.4.3.6 and the valid Executive order on risks, Safety Regulations (SR), Safety Instructions (SIN) as well as Operational Rules for S-trains (ORS) and Operational Rules for Long-distance lines (ORF) are complied with.

Provisions in this regard are referred to in the standard access contract.

Fredericia Marshalling yard
Fredericia Marshalling yard is subject to the regulations for column 3-undertakings stated in the Executive order on control of risk for major accidents and dangerous goods. Due to Banedanmark's environmental approval and status as a column-3-undertaking it is only possible for the Railway Undertakings to apply the marshaling yard for temporary placing and parking and short-time storage of certain dangerous substances, taking into account the following rules:

Dangerous goods mut be placed in track group 200 and must be in accordance with the gudelines in SIN-L instructions 23.1, point 3.3, wagons supplied with hazard labels, as well as 3.3.1 and 3.3.2.
Wagons with dangerous goods gods (hazard classes 3-9) must temporarily be placed in track group 200, if the storage is of more than five hours.
Wagons in hazard class 1, 2, 6.2 and 7 may as a maximum be placed for five hours and not more than 35 hours per month. Wagons with UN 1017 must

always be placed in track 211 North and for a maximum of five hours and not more than 35 hours per month.
All hazard classes can be placed in the marshalling yard. However, hazard classes 3-9 and UN 1017 can only be placed temporarily. Such placement is subject to other guidelines.
Track group 200 consists of different tracks. These tracks are designed based on temporary placement of various hazard classes. These hazard classes must therefore be placed on predetermined tracks. Reference is made to the Safety Instructions, (SIN)-L-instruksen.

According to the environmental approval wagons (both loaded and unloaded) with the following RID-hazard classes can be placed temporarily a limited number of times per year:

- RID-hazard class 2 (Klor UN 1017): Up to 70 temporarily placed wagons per year.
- RID-hazard class 3 (Flammable liquids): Up to 120 temporarily placed wagons per year.
- RID-hazard class 4.2 (Pyrofort solid substance): Up to 50 temporarily placed wagons per year.

If the above-mentioned quantities are exhausted, it will be possible for Banedanmark to limit the application of capacity in the marshalling yard for relevant dangerous substances. Thus, the quantity stated in the environmental approval can be complied with.

2.4.3 Tunnel restrictions

There are certain restrictions related to operating with diesel-operated trains under the Great Belt and Oeresund. In addition, passenger trains must fulfil certain requirements in order to carry passengers in the Great Belt and Oeresund tunnels. Permission to carry passengers in the tunnels must appear from the Authorisation for Placing in Service (APIS) of the rolling stock. Similar restrictions apply to other tunnels/covered areas.

For further information, reference is made to Øresundsbro Konsortiets Trafiksikkerhedsforskrift (Oeresund Bridge Consortium Partnership's Traffic Safety Regulations) as well as Banedanmark's Safety Regulations (SR and ORF).

2.4.4 Bridge restrictions

Certain wind restrictions apply related to rail traffic on the Great Belt Bridge and the Oeresund Bridge. For further information, reference is made to Øresundsbro Konsortiets Trafiksikkerhedsforskrift (Oeresund Bridge Consortium Partnership's Traffic Safety Regulations) as well as Banedanmark's Safety Regulations (SR), ORF, Safety Instructions (SIN), and traffic information.

2.5 Availability/limitations of the availability to the infrastructure

There are three important factors which can restrict availability to the infrastructure: capacity restrictions, access to sidings, and the ETCS onboard equipment's compatibility with the infrastructure

Capacity restrictions
Banedanmark performs infrastructure works and capacity limitations based in the following superior considerations:

Signalling Programme:

- Principally track possessions - evening/night
- In connection with test and and placing in service, longter track posseions will occur.

Electrification Programme:

- Primarily long track possessions at night (up to nine hours). However, track possessions of all tracks for a longer period can occur

Renewal projects:

- Single track operations on double track lines; possession of all tracks will occur
- Renewal is performed based on the life circle of the lines.

Investment and third-party projects – including speed upgrades:

- Are as far as possible coordinated with renewal projects

The works are coordinated with the purpose of ensuring the best possible timetable tables for the applicants. Thus, cancellations and changes can still occur after the allocation of capacity.

In appendices 3.5A and 3.5B the planned capacity restrictions in K26 and K27 for long-distance lines as well as S-train lines are stated. The standard access contracts (Appendix 2.3C and 2.3.D) moreover outline when and how Railway Undertakings must be notified of other infrastructure works/capacity limitations, which are not included in the Network Statement.

For further information, reference is made to section 4.3.2.

Access to sidings
Access to and use of sidings, including extended use, can only take place by prior agreement with the Infrastructure Manager/Infrastructure Owner. The agreement may contain special restrictions including limited access, reduced speed, reduced axle load etc.

In addition, reference is made to section 7.3.4 on marshalling yards and train formation facilities, including shunting facilities, as well as section 7.3.5 on storage sidings for parking.

No infrastructure charges are levied for operations or parking on sidings or storage sidings.

The ETCS onboard equipment's compatibility with the infrastructure
On lines where ETCS is applied as train control system the performance of an ETCS System Compatibility test is required for the ETCS onboard equipment applied. An overview of the lines equipped with ETCS appear from appendix 3.3I.

Banedanmark makes test facilities and test staff available for the performance of the necessary compatibility tests of the Railway Undertaking's ETCS onboard equipment.
Test cases sand information on the test process can be found on Banedanmark's website.

2.6 Infrastructure development

This section comprises a description of major development projects with regard to the infrastructure. The dimension of time for the projects may be longer than the validity period of the Network Statement.

The Signalling Programme

In line with the political agreement on green transport policies of 29 January 2009, the Danish parliament decided that the signalling systems on the long-distance lines and the S-train lines would be exchanged. On the long-distance lines, a signalling system is implemented based on the European train control standard ERTMS level 2, baseline 3. The Signalling Programme rollout is expected to be completed in 2033 on the long-distance lines.

Long-distance lines
For the main and regional lines, contracts are signed for the signalling infrastructure on the east of the Little Belt with Alstom, and on the west of the Little Belt with a consortium consisting of Thales and Strukton. The new signalling infrastructure will be brought into use on one line at a time.

S-train lines
The new signalling infrastructure, CBTC, is totally rolled out on the S-train lines. Maintenance of the signalling infrastructure is performed by Siemens.

Read more about the Signalling Programme on Banedanmark's website.

Electrification Programme

On 29 May 2015, Banedanmark entered into a contract on the electrification of the majority of the Danish rail network with a consortium consisting of Aarsleff-Siemens. At the same time as the electrification, Banedanmark is conducting a range of major preparatory work including the reconstruction of several hundred bridges around Denmark, as part of the overall electrification programme.

Read more about the Electrification programme on Banedanmark's website .

3 Access conditions

3.1 Introduction

The following sections describe the terms and conditions related to Railway Undertakings' access to the railway infrastructure in Denmark, including license and safety certificate requirements.

3.2 General access requirements

Access to Banedanmark's infrastructure is regulated by a number of acts and Executive orders, the Railway Act as well as specific regulations on licenses, safety certification and authorisation which can be found on the Danish Civil Aviation and Railway Authority's website.

3.2.1 Requirements on applicants applying for capacity

Applications for allocation of capacity on Banedanmark's infrastructure as well as possible connection with other countries' connected infrastructure must be submitted to Banedanmark.

Allocated capacity may not be transferred, hired or sold to a third party.

The terms and conditions for operating a Railway Undertaking do not have to be complied with at the time of capacity application. Third parties, for example other countries' OSSs (One Stop Shops), may apply for train paths on behalf of a Railway Undertaking.

Non-RU applicants for capacity can enter into an agreement with Banedanmark in order to apply for and to be allocated capacity on Banedanmark's infrastructure.

For further information on requirements for non-RU-applicants, contact can be directed Coordination & Processes, by mail: t-kp@bane.dk

In connection with allocation of capacity the applicant must within 30 days inform with which Railway Undertaking an agreement is entered into on performance of operations.

3.2.2 Conditions for access to the railway infrastructure

For Railway Undertakings operating in Denmark a permit (license) and a safety certificate issued by the Danish Civil Aviation and Railway Authority or the European Union Agency for Railways (ERA) are required, see sections 3.2.3-3.2.4.

In case capacity has been allocated to the Railway Undertaking, a valid and legal liability insurance is required, see section 3.2.5.

3.2.3 Licenses to operate as a Railway Undertaking

The Danish Civil Aviation and Railway Authority issues licenses to operate as a Railway Undertaking in Denmark.

The Danish Civil Aviation and Railway Authority's guidelines on license applications can be found on the Danish Civil Aviation and Railway's website.

Licenses issued in other EU member states as well as in Norway and Switzerland are also valid in Denmark provided that the party in possession of the license has a valid and legal liability insurance in accordance with relevant legislation. For further information, reference is made to section 3.2.5.

3.2.4 Safety certificate

The Danish Civil Aviation and Railway Authority and the European Union Agency for Railways (ERA) issues safety certificates to Danish and foreign Railway Undertakings which comply with the relevant requirements.

For more detailed information, see the Danish Civil Aviation and Railway Authority's website. For further information on ERA's isssue of a safety certificate, reference is made to ERA's website

3.2.5 Insurance

Railway Undertakings must have a legally required liability insurance, in accordance with the requirements of the valid Executive order on liability insurance for Railway Undertakings and Infrastructure Managers.

For further information, reference is made to the Danish Civil Aviation and Railway Authority's website

3.3 Contractual agreements

3.3.1 Framework agreements

According to the valid Executive order on allocation of railway infrastructure capacity (paths) etc. an applicant can on certain conditions enter into framework agreements with Banedanmark on utilizing infrastructure capacity for a period longer than the timetable period of 1 year.

At the moment, Banedanmark does not apply any framework agreements.

3.3.2 Contracts for Railway Undertakings

Standard access contracts for the usage of Banedanmark's infrastructure

Prior to using Banedanmark's infrastructure, it is mandatory for the Railway Undertaking to enter into an agreement with Banedanmark in the form of a standard access contract (Appendix 2.3C).

The standard access contract establishes cooperative relations, reciprocal rights and duties, conditions etc. for the use of Banedanmark's infrastructure.

If required due to special circumstances related to the Railway Undertaking, the standard access contract may be supplemented by individual appendixes and addendums.

Standard access contracts for the usage of the infrastructure of Øresundsbro Konsortiet
Prior to use of the infrastructure of the Øresundsbro Konsortiet (Oeresund Bridge Consortium Partnership) located in Denmark, it is mandatory for the Railway Undertaking to enter into an agreement with Banedanmark in the form of a standard access contract with Banedanmark on behalf of the Øresundsbro Konsortiet (Appendix 2.3D).

The standard access contract is not a prerequisite for applying for paths.

For further information on services delivered by Banedanmark, reference is made to section 5.

3.3.3 Contracts for anon-RU applicants

A non-RU applicant must be approved by Banedanmark in order to be able to apply for capacity.

The non-RU applicant enters into a mandatory agreement with Banedanmark, which states the conditions for applying for capacity. This includes the obligation to provide a guarantee for the payment of 50.000 DKK (Appendix 2.3E).

For further information on Standard access contracts for Railway Undertakings and an agreement for the reservation of infrastructure capacity (paths) for other applicants, contact can be directed to Traffic Operations, Management Secretariat by mail l-sektrafik@bane.dk

3.3.4 General terms and conditions

RNE and the International Rail Transport Committee (CIT) have prepared a joint draft for general terms and conditions for all contractual conditions with regard to railway transport (E-CGTC-I).

Banedanmark does not apply E-CGTC-I on the railway infrastructure.

3.4 Specific access requirements

3.4.1 Rolling stock

Rolling stock, including locomotives, train sets, passenger coaches, freight wagons, infrastructure works vehicles and vintage trains, must be approved in the form of an authorisation to put into service (APIS) issued by the Danish Civil Aviation and Railway Authority, or an Authorisation for Placing on the Market (APROM) issued by the European Union Agency for Railways (ERA), and must be registered in the National Vehicle Register (NVR).

Rolling stock with an authorisation to place in service (APIS) Authorisation for Placing on the Market may only be operated on the infrastructure by a certified Railway Undertaking, including building contractors on their own certificate or by Banedanmark. In this regard reference is made to Executive order no. 1581 of 05/12/2023 on approval of vehicle within the railway sector, and its requirements on the establishment/issue of compatibility certificate (RKA).

Information on authorisation to place in service (APIS) for rolling stock can be found on the Danish Aviation and Railway Authority's website.

Rail or road vehicles as well as other specific vehicles which operate at a speed of under 25 km/h and which are used during possessions must be approved by Banedanmark, cf. Executive order no. 1581 of 05/12/2023 on approval of vehicle within the railway sector, § 15, before being placed on the track.

For further information, reference is made to Banedanmark's website

3.4.2 Staff acceptance

The Danish Civil Aviation and Railway Authority performs approval of the Railway Undertakings' internal education of staff with functions requiring safety certificates.

Further information is available on the Danish Civil Aviation and Railway Authority's website

3.4.3 Exceptional transport

The issuing of transportation permits for exceptional transports is carried out by Banedanmark, Traffic Operations, Timetable Corrections. Enquiries should be sent to ut@bane.dk.

Processing and issuing take place according to the Instructions for Exceptional Transports (UT instructions). The instructions also contain a definition of exceptional transports. The instructions can be found on Banedanmark's website.

Banedanmark endeavours to complete an application for an exceptional transport within a period of 14 working days. However, the completion period for an application may in some cases be longer than 14 working days, if it is necessary to collect further information/permits.

Gauges applicable in Denmark can be seen in appendix 2.5. For further information on line classifications (axel load and meter load), reference is made to section 2.3.5.

For information on application for capacity related to exceptional transports, see section 4.8.

Permanent transportation permits
In order to expedite and simplify the processing, the Railway Undertaking which applies for a renewal of a permanent transportation permit is requested to contact ut@bane.dk with regard to a renewal. Such contact must be directed not later than three months before expiry of an applicable transportation permit.

Intermodal operations
Loading units which are to be transported on rolling stock must be constructed and marked according to the requirements in UIC 596-5 and 596-6.

In Denmark, it is possible to use the infrastructure up to P/C 80 or P/C 410 as exceptional transports.

Permanent transportation permits are issued for transportation between the intermodal terminals (see section 7.3.3.) and for transit traffic between the Padborg border and Perberholm. Issuing of transportation permits is performed by Traffic Operations, Coordination & Processes. Enquiries can be made to ut@bane.dk.

Overview of loading units with relevant exceptional transport numbers:

- P/C 45 = BDK 8100-22
- P/C 60 = BDK 8101-22
- P/C 80 = BDK 8102-22
- P/C 369 = BDK 8103-22
- P/C 375 = BDK 8104-22
- P/C 400 = BDK 8105-22
- P/C 410 = BDK 8110-22

3.4.4 Dangerous goods

The Danish Civil Aviation and Railway Authority controls the transportation of dangerous goods by rail in Denmark and carries out inspections to ensure that Railway Undertakings and Infrastructure Managers comply with the rules for the transportation of dangerous goods on the infrastructure. Information on inspection areas and the scope of inspection can be found in the valid directive

on inland transportation of dangerous goods. More information can be found on the Danish Civil Aviation and Railway Authority's website.

The transportation of dangerous goods on the infrastructure in national traffic and international freight corridors is governed by the Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). These regulations can be seen in annex 1 to appendix B of the Convention Concerning International Carriage by Rail, COTIF, with appendixes CIM and CIV, as well as the rules stipulated by the Ministry of Transport or the Danish Civil Aviation and Railway Authority.

RID is, according to order no. 919 of 16 December 1998 exempted from inclusion in "Lovtidende" (the Danish Law Gazette). A Danish translation of the regulations can be seen on the Danish Civil Aviation and Railway Authority's website.

Banedanmark is at all times responsible for providing details of the quantity and type of dangerous goods in areas which are Banedanmark's responsibility. Therefore, all Railway Undertakings and others transporting dangerous goods must at all times inform Banedanmark on quantity and location of dangerous goods, including information on high risks RID 1.10.3.1.2.) during transport as well as at end points in connection with shunting for signals on Banedanmark's infrastructure. This is performed by electronic notification of wagon lists to Banedanmark's RID database in valid format in order to ensure that rules are complied with, including the requirements in RID as well as the valid Executive order no. 372 of 25/04/2016 on control of risk for major accidents and dangerous goods.

3.4.5 Test trains and other special trains

Can be ordered according to the same procedure as applicable for ad-hoc paths requests, see section 4.6.3.

4 Capacity allocation

4.1 Introduction

In this chapter the process and the conditions for capacity application and path allocation are described.

4.2 General description of the process

An applicant is allocated capacity to Banedanmark's infrastructure in accordance with the guidelines in section 4.6.

Applications for allocation of capacity must be submitted in a format authorised by Banedanmark. If an applicant requests capacity for stabling tracks, this must be stated along with the application for capacity. It must appear from the request for stabling tracks at which stations stabling track capacity is requested. This includes actual wishes for track numbers. Allocation of stabling tracks will be communicated in writing as a supplement to the capacity allocation.

For further information on application for allocation of capacity, reference is made to Appendix 4.3, Timetable for capacity allocations or to Banedanmar's website.

Railway Undertakings applying for capacity for international traffic must use the joint European timetable planning system, PCS (Path Coordination System). More information can be found on RNE's website

Banedanmark, Traffic Operations, Capacity Development, offers free basic training in using PCS.
Further information can be obtained by contacting Capacity Development by mail: trafikkudvikling@bane.dk

In addition, capacity can be allocated for ad-hoc usage of the infrastructure.

4.3 Reservation of capacity for temporary capacity restrictions

4.3.1 General principles

During these years Banedanmark renews and develops the railway infrastructure to an extent not seen before. These renewal and development projects are performed along with existing traffic being handled.
The complexness of the investment and renewal projects implies that Banedanmark needs to be able to introduce capacity restrictions on the lines effected by these projects. Consequently, the paths normally available for

handling the traffic will be reduced. In connection with especially complicated and extensive projects the reduction of paths normally available will be of an extent which will mean that it will only be possible to handle traffic by applying a reduced number of paths during one hour. Additionally, in case total possessions no traffic can be handled.

For further information, reference is made to section 4.9.2.

4.3.2 Deadlines and information provided to applicants

Capacity restrictions
Capacity restrictions refer to infrastructure works which result in restrictions for the railway. Regular maintenance and upgrade of the railway network require possessions of specific track sections. This can reduce the available capacity and have an effect on the traffic planning.

The capacity restrictions are categorized based on threshold values which appear from Appendix VII of Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 on establishing a common European railway area, as amended by the Commission's delegated decision (EU) 2017/20175 of 4 September 2017 with regard to replacing the Annex to Directive 2012/34.

These thresholds are categorized as stated below and are established with respect to the duration of the capacity restrictions and the traffic impact. Respites of notice are stated by months, where X constitutes the date of beginning of a timetable year during which the capacity restriction is expected to be performed.
The respite notices appearing from Executive order no. 1245 on allocation of railway infrastructure capacity (paths) etc. of 10 November (with later changes) also appear from the diagram stated in italics

Deadline	**Description**	**Referencce to law and other comments**
X-24	Publication of capacity restrictions of more than seven coherent days and cancellation/replanning/replacement of more than 30 % of the estimated traffic volume on a railway line per day [High] and preliminary results of the consulting process for the applicants, to the extent the information is available. 2) If the capacity restrictions have an effect on more than one network, the capacity restrictions must be coordinated between the Infrastructure Managers concerned 3) The Infrastructure Manager implements a consulting process for	Point 8,10, and 11 of the appendix

	the applicants and the most affected operators of the service facilities concerning the capacity restrictions. (The information to be presented by the Infrastructure Managers are stated below the diagram). 4) If it becomes necessary with a new coordination process, due to the fact that the capacity restriction has an effect on more than one network, the consulting process for the applicants and the most affected operators of the service facilities concerning the capacity restrictions must be implemented once more, and before the updated publication of the capacity restrictions not later than X-12 months.	
X-24 months	*Announcement of deadlines for applications for paths in Statstidende (State Journal) and on Banedanmark's website*	*Executive order § 3, point 1*
X-18 months	End of coordination process between the Infrastructure Managers concerning the capacity restrictions which result in cancellation/replanning/replacement of more than 50 % of the estimated traffic volume on a railway line per day for a period of more than 30 coherent days [Major]. (The information to be presented by the Infrastructure Managers and the criteria to be settled by the Infrastructure Managers in connection with this type of restrictions are stated below the diagram).	Point 11 of the appendix
X-13 months and 15 days	End of coordination process between the Infrastructure Managers concerning the capacity restrictions which result in: 1) cancellation/replanning/ replacement of more than 30% of the estimated traffic volume on a railway line per day for a period of more	Point 11 of the appendix

	than seven coherent days [High]. 2) cancellation/replanning/replacement of more than 50% of the estimated traffic volume on a railway line per day for a period of more than seven coherent days [Medium]	
X-12 months	Publication of capacity restrictions of more than seven coherent days and cancellation/replanning/replacement of more than 30 % of the estimated traffic volume on a railway line per day [High] and preliminary results of the consulting process for the applicants in updated form.	Point 8 of the appendix
X-11 months	Establishment of preliminary international paths in cooperation with other relevant Infrastructure Managers.	Point 4 of the appendix and *§ 4 of the Executive order*
X-8 months.[1]	Respite for presenting applications for infrastructure capacity	Pointe 3 and 6 of the appendix. Applications received after the respite will also be taken into account by the Infrastructure Manager; the Infrastructure Manager will make a decision as to these applications pursuant to a procedure which is announced in the Network Statement (see section 4.6.2). According to *§ 5 of the Executive order* the Infrastructure Manager makes a decision as to allocation of paths based on the applications received *8*

[1]According to Directive (EU) 2012/34 of the European Parliament and of the Council of 21 November 2012 on establishing a single European railway area, as changed by Commission Delegated Decision (EU) 2017/20175 of 4 September 2017 replacing the Annex VII to Directive 2012/34, point 3, the respite is not more than 12 months before X. See also the column "Reference to law and other comments".

		months before commencement of the allocation period. (This falls within the stipulation of the directive as to a deadline which is not X more than 12 months before X.) Applications received lather can be complied with, if capacity is available.
X-8 months	Establishment and publication of a draft for a timetable	Point 5 of the appendix
X-7 months	*Reservation of paths for infrastructure works taking into due account the applications for paths on railway lines which will be subject to infrastructure works*	*§ 6 of the Executive order*
X-7 months	*In the event of conflicting requests for allocation of capacity on a railway line: Banedanmark will invite the relevant applicants to coordinated negotiations.*	*§ 15, section 1, of the Executive order*
X-6 months and 15 days	If the Infrastructure Manager not later than at that time is aware of capacity restrictions of seven coherent days or less and cancellation/replanning/replacement of more than 10 % of the estimated traffic volume on a railway line per day (i.e. in the coming timetable period commencing X) [Minor], the applicants affected must be consulted in this regard.	Point 12 of the appendix
X-5½months	*Information to applicants for allocation of paths with reservations for minor changes and adjustments; a draft for a timetable is made available for consulting among all parties affected (respite of consulting: 1 month).*	*§ 7, section 1, of the Executive order*
X-4 months	Publication of capacity restrictions of seven coherent days or less and cancellation/replanning/replacement of more than 10 % of the estimated traffic volume on a railway line per day (i.e. in the coming timetable period commencing X) [Minor]. The Infrastructure Manager presents more detailed information as to the offered paths for passenger trains. More detailed information as to	Point 12 of the appendix

	freight trains is presented X-1 month. (See below):	
X-3 months.	*Information for applicants on final path allocation*	*§ 7, section 2, of the Executive order*
X-1 month	The Infrastructure Manager presents more detailed information as to the offered paths for freight trains in relation to the capacity restrictions of seven coherent days or less and cancellation/replanning/replacement of more than 10 % of the estimated traffic volume on a railway line per day (i.e. in the coming timetable period commencing X) [Minor].	Point 12 of the appendix
X-1 month	Update of the draft for the timetable in order to include the paths allocated after the respite of the application in (X-12).	Point 6 of the appendix
X	Change of the timetable / Transition to new timetable	Point 2 of the appendix

Information to be provided by the Infrastructure Manager in the Network Statement (or by a link in the Network Statement), in connection with capacity restrictions er (cf. point 15 of the appendix)

a) the planned date,
b) time, as soon as this can be stated, for the commencement and the end of the capacity restriction,
c) the line section affected by the restriction, and
d) if relevant, the capacity on alternative lines.

Information also to be provided by the Infrastructure Manager in connection with the consulting period for capacity restrictions of more than 50 % of the estimated traffic volume on a railway line for a period of at least 30 coherent days (cf. clause 16 of the appendix)

A comparison of the circumstances to be expected in connection with at least two alternatives for capacity restrictions. The Infrastructure Manager must prepare these alternatives based on input from the applicants at the time of their requests and together with these.
The comparison must for each alternative at least include:
a) duration of the capacity restriction,
b) estimated recommended infrastructure charges,
c) capacity on alternative lines,
d) alternative routes available and
e) recommended travel times.
Before choosing between alternatives for capacity restrictions the Infrastructure Manager must consult the applicants concerned and take into account the consequences of the various alternatives for the applicants concerned and for the users of the services.

Further criteria to be settled by the Infrastructure Manager in connection with capacity restrictions of more than 50 % of the estimated traffic volume on a railway line for a period of at least 30 coherent days, cf. clause 17 of the appendix).

Which trains within each type of railway in service o be replanned, taking into account the commercial and operational limitations of the applicant, unless the operational limitations concerned are due to decisions made by the applicant with regard to management or organization, and also without it having an effect on the objective of the Infrastructure Manager on reducing the costs in accordance with article 30, clause 1, of the directive.

The Infrastructure manager publishes these criteria in the Network Statement accompanied by a preliminary distribution of the remaining capacity to various kinds of railway service, when the Infrastructure Manager acts in conformity with clause 8 (i.e. in connection with capacity restrictions of more than seven coherent days and cancellation/replanning/replacement of more than 30 % of the estimated traffic volume on a railway line per day).
After conclusion of the consulting process and without it having an effect on the Infrastructure Manager's obligations as stated in clause 3 of appendix IV of the directive, the Infrastructure Manager must, based on the replies from the applicants, present a recommended distribution of the remaining capacity according to the type of railway service related to the Railway Undertakings concerned.

When distributing the remaining capacity in connection with possessions during major capacity restrictions of more than 30 coherent days and of more than 50 % of the estimated traffic volume on a railway line, cf. point 17 of Annex VII, Banedanmark take the priority as stated in the Executive order no. 1245 of 10/11/2015 (with later changes) on allocation of railway infrastructure capacity (paths) etc., § 19, as a staring point. This means that in the first place capacity for freight trains is allocated in the predefined international paths for freight traffic. Thereupon capacity is allocated for traffic performed as public service, and finally capacity is allocated for traffic performed as free traffic. In case of equivalent applicants capacity is allocated to the Railway Undertaking performing the greatest transport volume in the individual path on the line/part line concerned.

The threshold values of the capacity restrictions are calculated based on the following method:

$$\text{Percentage impact on traffic} = \frac{Affected\ paths}{Numer\ of\ paths\ on\ a\ normal\ day}\ x\ 100$$

Capacity restrictions implemented in connection with maintenance works on the railway are given notice of in accordance with notice deadlines as stated in appendix VII and Executive order no. 1245 of 10/11/2015 (with later changes) on allocation of railway infrastructure capacity (paths) etc. See diagram above.

Banedanmark can any time introduce special restrictions with regard to the application of Banedanmark's infrastructure based on the condition of areas and lines.

In case already allocated capacity cannot be applied due to capacity restrictions, the Railway Undertaking(s)/applicant(s) concerned as well as adjacent Infrastructure Managers enter into a dialogue with Banedanmark as to how to handle this challenge. Such dialogue includes an investigation of the possibilities of adjusting the capacity restrictions, possibly by allocating capacity on alternative lines.

According to § 7.1 of the standard access contract Banedanmark arranges meetings on an ongoing basis with the Railway Undertakings concerning the cooperation between the parties. Capacity restrictions and timetables are subjects to be discussed at these meetings. The dialogue meetings i.a. include directors' meetings, cooperation meetings, operations meetings, timetable-study meetings and freight panel meetings.

Railway Undertakings/applicants can in this connection request that Banedanmark presents alternative possession scenarios for the capacity restrictions given notice of in the Network Statement in accordance with the above diagram.

If one or more of the Railway Undertakings affected or an adjacent Infrastructure Manager have objections to the withdrawal of the capacity, a written consulting process must be implemented.

If Banedanmark withdraws capacity already allocated, a management process will be initiated. Such a process will be concluded by a decision.

4.4 Impacts of framework agreements

At the moment, Banedanmark does not apply any framework agreements.

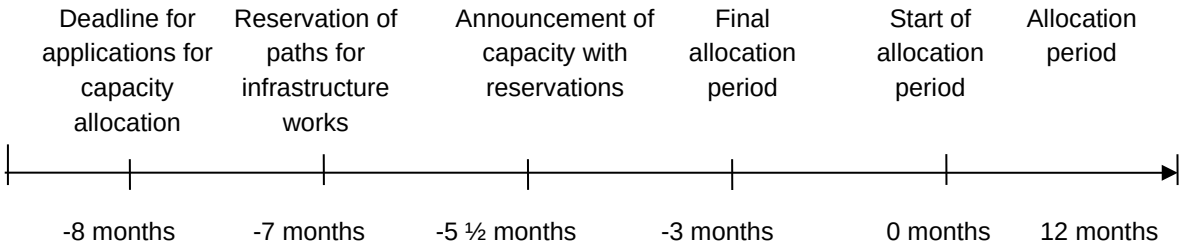
4.5 Timetable studies

If a Railway Undertaking wants to investigate the possibility of operating traffic during a given period, contact can be directed to Banedanmark with a request for attending timetable studies in PCS.

Thereupon Banedanmark will inform whether it will be possible to comply the with the requests stated by a Railway Undertaking. The applicant is not obliged to accept the offer. However, if a Railway Undertaking accepts the offer, Banedanmark must take such acceptance into consideration in connection with preparing the timetable.

4.6 Path allocation process

Capacity allocation on Banedanmark's infrastructure follows the procedure and the deadlines stated below:



4.6.1 Annual timetable requests

Based on applications received eight months before the start of the allocation period Banedanmark makes a decision as to allocation of capacity. In the event of more than one application for allocation of the same capacity, Banedanmark will, with the applicants' consent,take the initiative to allocate the optimum capacity, and allocate it to the applicant that can best document a concrete need.

Seven months before the start of the allocation period Banedanmark will reserve capacity for infrastructure works, taking received capacity applications into account.

Banedanmark will allocate capacity with reservations at least 5½ months before the start of the allocation period, and the final capacity allocation will be announced at least 3 months before the start of the allocation period.

An overview of the deadline dates for K26 can be seen in appendix 4.3.

4.6.2 Late annual timetable path requests

Applications for path allocation for the annual timetable which are received after expiry of respite of the application can be included in the annual timetable. However, these applications cannot be processed until processing of all applications received in due time have been finished, and after the applicants having forwarded requests within the respite having had the possibility to raise objections to the capacity allocation with any reservations.

If it is necessary to rearrange a path which has already been allocated in order to comply with requests received after expiry of the respite of the request, this will only be possible, if this is necessary in order to ensure that all requests for

paths to the greatest extent possible are complied with, and if this is approved by the applicant to whom the path has been allocated.

4.6.3 Ad-hoc path requests

Ad-hoc path applications mean requests for capacity allocation for an ongoing timetable period.

Applications for occasional capacity allocation for vintage trains must be received by Banedanmark at least 30 days before the date of planned running. It is recommended that other Railway Undertakings submit applications at least 5 working days before the date of planned running. Banedanmark handles the allocation of capacity and replies to requests within five working days after receipt of an application. Charges are calculated based on the valid tariffs at that time.

Applications should be sent in writing to korrtoga@bane.dk or via PCS during the period X-2 to X+12.

In case of applications for path allocation less than three working days before planned date of running an order must be sent to Banedanmark's operations centre (DCDK) by mail tlp@bane.dk.

4.6.4 Coordination process

In the event of conflicting requests for allocation of capacity on the same line, Banedanmark will invite the relevant applicants to coordinated negotiations. Applicants who choose not to participate in negotiations or who display passivity at negotiations will risk being down prioritised, despite the order of priority. If a solution cannot be found through negotiation, Banedanmark will make the final decision on allocation.

Allocation of capacity always adheres to the valid Executive order on allocation of railway infrastructure capacity (paths) etc.

4.6.5 Dispute resolution process

Complaints regarding the allocation process should be made in writing to:

Danish Rail Regulatory Body (*Jernbanenævnet*)
Carsten Niebuhrs Gade 43
DK-1577 København V
DENMARK
info@jernbanenaevnet.dk

Complaints must be submitted in writing to the Danish Rail Regulatory Body not later than four weeks after the decision to which complaints are made being communicated to the applicant concerned.

Information on fees and deadlines is available on the Danish Rail Regulatory Body's website.

4.7 Congested infrastructure

When it is not possible to meet an application for capacity in spite of coordination and subsequent consultation, the infrastructure is declared to be congested. An overview of utilization of capacity in K26 can be seen in appendix 4.4.

If a line is declared to be congested, capacity allocation is carried out according to the principles described in the Executive order on allocation of railway infrastructure capacity (paths) etc.

When applying for allocation of capacity on congested infrastructure, the applicant must prioritise paths in order to enable Banedanmark to draw up principles for operations at reduced capacity.

In case a line is declared to be congested infrastructure, Banedanmark produces a capacity analysis and a capacity improvement plan according to applicable rules in in the valid Executive order on allocation of railway infrastructure capacity (paths) etc.

4.8 Exceptional transports and dangerous goods

Exceptional transports
When applying for the allocation of capacity for exceptional transports, applicants must provide information in this regard and must obtain a transport permit prior to application (for more information, see section 3.4.3). When transport permit has been granted, capacity can be allocated.

Dangerous goods
If an applicant intends to transport dangerous goods, quantity and placement of dangerous goods must at any time be announced to Banedanmark. For further information in this regard, reference is made to sections 2.4.2 and 3.4.4.

4.9 Rules after path allocation

4.9.1 Rules for adjustment of path allocation requested by the applicant

Change requests for the allocated capacity are handled equally, as long as they are received within the respite of submitting complaints regarding the temporary path allocation.

A change request which implies changes of the timetable is handled as an ad-hoc application. See section 4.6.3.

4.9.2 Rules for modification of path allocation requested by the Banedanmark

Changes of allocated capacity in connection with capacity restrictions are in practice handled by Banedanmark performing corrections of the annual timetable. Banedanmark, Timetable Correction, always endeavours to reach an agreement with the Railway Undertakings concerned regarding the distribution of the capacity available during the capacity restriction.

In case of no agreement, the corrections are handled according to the superior principles stated below:

1. Priority is given to passenger traffic in rush hours, whereas priority is given to international freight traffic during the night hours.
2. Outside the rush hours priority is given to international freight traffic in therail freight paths of the ScanMed corridor.
3. Thereupon, second priority is given to passenger traffic, succeeded by other traffic.

In each individual case it is assessed as to how far the concrete situations imply circumstances to be taken into special account. If e.g. a national rail freight path has an interval of 14 days, and therefore – based on the above – cannot form part of a project with a duration of 6-8 weeks. In such a case it could make sense to ensure that this concrete path is settled in a correction, even though this might be to the disregard of either international rail freight traffic or passenger traffic.

4.9.3 Rules for non-usage of allocated capacity

The Railway Undertaking is on its own initiative obliged to cancel allocated capacity which the Railway Undertaking is not going to make use of.

In connection with trains crossing from one network to another and arriving with an expected delay of max. 18 hours, the Railway Undertaking will still be entitled to make use of the capacity, unless the Railway Undertaking informs Banedanmark that the Railway Undertaking does not want to preserve the right to use the capacity. Banedanmark provides as soon as possible the Railway Undertaking with the necessary information as to the updated or the new path.

If a Railway Undertaking for a period of at least one calendar month has not made use of 75 % of the capacity of the allocated path, Banedanmark may make use of the provision on withdrawal of paths. This provision gives Banedanmark authority to decide whether a path is to be withdrawn for the remaining part of the timetable year.

The capacity released as a consequence of the withdrawal will be made available as ad-hoc capacity and can be requested by all Railway Undertakings/applicants on equal conditions.

In connection with the cancellation of paths for an entire year such paths will be withdrawn and released as ad-hoc capacity.

For further information concerning the process for withdrawal of allocated paths, reference is made to kplan@bane.dk.

4.9.4 Rules for cancellation of allocated capacity

Paths can be cancelled for a fee. The deadlines for cancellation and the level of fees are regulated in the valid Executive order on infrastructure charges etc. for the rail network.

4.10 Timetabling Redesign for Smart Capacity Management (TTR)

4.10.1 Objectives of TTR

RailNetEurope (RNE) and Forum Train Europe (FTE), supported by the European Rail Freight Association (ERFA) are working on the so-called Time Tabling Redesign for Smart Capacity Management (TTR). The objective of TTR is improve the utilization of the existing capacity. This is to be performed through more long-term planning of timetables, by which the need for cancellation of paths can be minimized, and by which it is ensured that the capacity for which arrangements are made are allocated to the Railway Undertakings. It must e.g. be far more simple to book paths through digital platforms.

TTR is planned to be fully implemented for K25 provided that it is supported by the European and national legal framework.

For the freight transport TTR will mean more and better possibilities of booking different types of capacity products than it is the case today. It will e.g. be possible to apply for capacity on a short-term basis ensuring the quality, no matter which railway product in question. This increases the possibilities of complying with needs of the final customers and implies more flexibility for the Freight Railway Undertakings.

For the passenger transport it will mean that the final timetable will be available earlier than it is the case today. Moreover, it will be possible for passengers to purchase tickets earlier and on a more reliable basis. Thus, TTR satisfies the needs of the Passenger Railway Undertakings for stable the timetables, while at

the same time the Freight Railway Undertakings' wishes for more flexibility of allocated capacity is are are met.

Detailed information on the project can be found on RNE's website and on FTE's website.

4.10.2 Process description

During the capacity allocation process within the framework of TTR ongoing planning is implemented.
Ongoing planning is initiated by a capacity strategy five years prior to the implementation of the timetable coming (X-60). Thereupon the capacity y model is issued three years (X-36), which is a modelling of the capacity available. The model is Banedanmark's overview of possibly operations and not of what is operated through concrete paths. Such capacity will be put out to tender one and a half year (X-18) before the final timetable. The tender implies that it will be possible for Railway Undertakings and other undertakings with an interest in using railway capacity to submit a tender for applying the capacity. This is performed by "Capacity Needs Announcement". The last element of TT is the capacity supply plan which provides an overview of the concrete paths for which applicants and Railway Undertakings can submit a tender. Both the capacity model and the capacity supply plan take into account inputs from applicants. Thus, the capacity planning will to a greater extent reflect wishes and needs of the market. The capacity supply plan is issued X-11,5 before the timetable coming into force.

In addition to the strategic capacity planning, a new form of capacity, called "rolling planning", is introduced. Rolling planning implies that the Infrastructure Manager is obliged to withhold a part of the entire capacity available in order for this to be allocated later. This residual capacity can then be allocated as needed, thus enabling Railway Undertakings and other interested undertakings to request capacity with a shorter timeframe of planning. This capacity is released on an ongoing basis, 4 months before operations, and it is allocated based on the 'first come, first served' principle. Moreover, it will still be possible to submit a tender for ad-hoc capacity, in case capacity is free up to the time of operations.

For a more detailed description of the TTR processes, reference is made to RNE's website.

Banedanmark's capacity strategy can be found here.

4.10.3 Implementation

Banedanmark has initiated the following implementation activities within the TTR project:

Nordic Pilot Project
TTR is implemented on an ongoing basis both at national, regional, and European level. As a precursor to TTR a cooperation has been established between Norway, Sweden, and Denmark with regard to a Scandinavian

implementation pilot project.

The participation in the Nordic TTR pilot project implies that Banedanmark develops and issues both capacity strategies and capacity models. These issues are intended for public information as well as for data basis for working with TTR at European level.

Further information on the Nordic Pilot Project can be obtained by contacting Traffic Operations, Coordination & Processes, by mail
t-kp@bane.dk.

TTR
Within the framework of TTR there is an ongoing work on implementation of corresponding IT platforms. In this connection there is special focus on the implementations of ECMT (European Capacity Management Tool), in which the capacity model forms part as a core element. Banedanmark follows and participates in the development of the track possession tool "TCR Tool" (Temporary Capacity Restrictions) as well as in the development from PCS to PCS – Capacity Broker:

5 Services and charges

5.1 Introduction

Banedanmark delivers a range of services to Railway Undertakings against payment of infrastructure charges. Moreover, Banedanmark delivers a number of services against separate payment.

Banedanmark's services are divided into four categories in accordance with EU directive 2012/34 annex II. Not all services described in the directive are offered by Banedanmark.

5.2 Charging principles

Infrastructure charges

For running on Banedanmark's infrastructure train kilometre charges and bridge charges for the passage of the Great Belt and the Oeresund are paid.

Train kilometre charges and bridge charges are in total designated as infrastructure charges. These infrastructure charges are collected monthly in arrears by Banedanmark based on actual operations during a given timetable.

Banedanmark regulates the tariffs of infrastructure charges annually based on development in general prices and salary indexes. The regulated tariffs are stipulated in the valid Executive order on infrastructure charges etc. for the rail network.

Train kilometre charge

The Railway Undertakings pay train kilometre charges based on kilometric performance on Banedanmark's infrastructure. The train kilometre charges are settled as the costs incurred as a direct result of operating the train service.

Applicable tariffs of train kilometres and bridges appear from the valid Executive order on infrastructure charges for the rail network.

In connection with the statement of train kilometre charges the line lengths, which appear from appendix 6.6, apply. A line length is measured from the middle of a given station to the middle of another given station.

Environmental subsidy

Under a range of circumstances, Railway Undertakings may receive an environmental subsidy from Banedanmark based on a consignment note for freight transport. The environmental subsidy is paid to national and international (import/export) freight transport as well as to intermodal transport (trailer, detachable body, or container) transiting through Denmark and reloading to or from a lorry either at the beginning or at the end of the transportation. Further conditions are contained in the Executive order on

railway charges and environmental subsidies for freight transportation on the rail network.

5.3 Minimum access package and charges

In general terms, Banendanmark's minimum access package provides applicants and Railway Undertakings with the opportunity to be allocated capacity and to use the infrastructure. Banedanmark is obliged to provide the minimum access services on an equal, non-discriminatory basis.

In DIRECTIVE (EU) 2012/34 annex II point 1 the following minimum access services are stated:

a) Handling of requests for railway infrastructure capacity;
b) The right to utilise capacity which has been allocated;
c) Use of the railway infrastructure, including points and changing points;
d) Train control including signalling, regulation, dispatching and the communication and provision of information on train movement;
e) Use of electrical supply equipment for traction current, where available;
f) All other information required to implement or operate the service for which capacity has been allocated.

Banedanmark's standard access contract (Appendix 2.3C) contains a more detailed description of Banedanmark's minimum access services as well as the reciprocal conditions, rights and duties which Banedanmark and the Railway Undertaking are subject to in connection with delivery or use of the minimum access services.

5.4 Additional services and charges

Payment for additional services as defined in Annex II of Directive 2012/34/EU is performed after prior agreement.

Traction current
Traction current usage is charged based on consumption as described below. Charging of traction current does not generate income for Banedanmark.

Traction current for trains with a traction current metre on board which sends the data to be used to calculate charges via Erex:

- Traction current charge is calculated according to the valid tariff at that hour for electricity on the spot market (Nord Pool Spot) with the addition of an electricity-trading tariff.
- The charge depends on the location and consumption in charging areas DK1 and DK2.
- The electricity tariff is supplemented with the State's up-to-date electricity tariffs, PSO, network loss, contribution to administration of traction current calculations and VAT.

There may be minor variations in the calculated charges for operations on the Oeresund Bridge as the supply switches between Swedish and Danish power supply.

Traction current for trains without a traction current metre on board:

- Traction current charge is calculated based on the month's average tariff for DK1 and DK2 with the addition of an electricity-trading tariff.
- Charges are based on the reported number of kilometres performed in the period multiplied by a number of kWh/km. KWh is calculated differently for each class of rolling stock. The calculated number of kWh is used to calculate the charge.
- The calculated charge comprises the electricity tariff, which is supplemented by the State's up-to-date electricity tariffs, PSO, network loss, maintenance, administration of traction current calculations and VAT.

Train pre-heating and other electricity to trains via external power supply
Electrical current for train pre-heating (standby current) supplied via the train's pantograph is calculated and charged in connection with the charging of traction current.

Electrical current consumption from external power supply made available by Banedanmark will be calculated at cost price including tariffs etc.

For other information, reference is made to Executive order on Banedanmark's supply of traction current on Retsinformation.

Water for preparation of trains
For information on calculation of charges for water for preparation, see Banedanmark's standard access contract in appendix 2.3C.

Exceptional transports
For information on calculation of charges in respect of permits for exceptional transports, see Banedanmark's standard access contract in appendix 2.3C.

5.5 Ancillary services and charges

Upon request, Banedanmark can supply a number of ancillary services defined in Annex II of Directive 2012/34/EU to the Railway Undertakings. Payment for ancillary services is performed after prior agreement.

Access to telecommunication network
The law on establishing a joint utilisation of masts for radio communication purposes, etc. (The Mast Law) entitles telecommunication companies involved in public mobile communication have the right to lease aerial space in existing masts and on tall buildings. Therefore, Banedanmark can offer aerial space in

Banedanmark's masts and on Banedanmark's buildings under comparable leasing conditions as are offered to telecommunication companies.

5.6 Financial penalties and incentives

5.6.1 Penalties for adjustment of allocated capacity requested by the applicant

Banedanmark does not levy charges for request for adjustment of an allocated capacity.

Reference is made to the Executive order on infrastructure charges etc. for the railway network.

5.6.2 Penalties for modification of allocated capacity

At the moment, Banedanmark does not levy charges for paths not used.

Reference is made to the Executive order on infrastructure charges etc. for the railway network.

5.6.3 Penalties for non-usage of allocated capacity

Reference is made to the valid Executive order on infrastructure charges etc. for the rail network.

5.6.4 Charges for scarcity of capacity

In accordance with the valid Executive order on infrastructure charges etc. for the rail network the infrastructure charges may include a charge which reflects the scarcity of capacity on an identifiable section of the infrastructure during periods of congestion.

At the moment, Banedanmark does not levy a supplementary charge which reflects scarcity of capacity.

5.6.5 Penalties for path cancellation

If an applicant or a Railway Undertaking does not wish to use an allocated path, the path concerned must be cancelled. If an applicant or a Railway Undertaking cancels one or more paths at a time less than 49 days before planned operations, 50 % of the charge for the cancelled path or the first of cancelled paths during the cancellation period are paid. If the path is cancelled less than 8 days paid before planned operations, the entire charge for the path concerned is paid as described in the Executive order.

As a supplement to these penalties Banedanmark levies a mandatory cancellation fee per month, if a Railway Undertaking during the month for which statements are made, does not utilize the paths of parts of them corresponding

to a utilization of less than 75 percent of the planned and extra kilometres of the Railway Undertaking concerned during the months concerned.

The mandatory penalty is calculated as stated below:

$$\frac{(\text{Planned + extra km}) - \text{cancelled km} * 100}{(\text{Planned + extra km})}$$

Basically, Banedanmark takes the kilometres which the Railway Undertaking has planned for a given month or – after settlement of the annual timetable -has announced as extra kilometres by ordinary passenger trains or freight trains and empty trains. The sum of kilometres cancelled by the Railway Undertaking is to be deducted from the sum of the Railway Undertaking's planned kilometres and announced extra kilometres of the month concerned. The figure obtained in this regard is to be divided by the sum of planned kilometres and announced extra kilometres in the month concerned and is finally to be divided by 100. On that basis a percentage is generated which indicate the percentage share of planned kilometres and announced extra kilometres which are performed in the month concerned and not cancelled by the Railway Undertaking. If this percentage share is less than 75 percent, Banedanmark will levy a penalty for the month concerned from the Railway Undertaking.

The percentage limit of 75 percent reflects the provision in the Network Statement, section 4.9.3, which is applied in connection with decisions as to withdrawal of paths from the Railway Undertakings: "If a Railway Undertaking for a period of at least one calendar month has not made use of 75 % of the capacity of the allocated path, Banedanmark may make use of the provision on withdrawal of paths. This provision gives Banedanmark authority to decide whether a path is to be withdrawn for the remaining part of the timetable year."

The compilation method only includes operations on the landside and not operations on the fixed connections across the Great Belt and Oeresund. This is because train kilometre charges are levied on the landside. These train kilometre charges are settled based on the kilometric performance, whereas for the fixed connections bridge access charges are levied. These bridge access charges are levied based on the number of passages of the connections and not on the kilometric performance.

Reference is made to the Executive order on infrastructure charges etc. for the railway network.

5.6.6 Incentives/discounts

Banedanmark does not grant any discount on infrastructure charges.

5.7 Performance scheme

In accordance with the Executive order on Banedanmark's duties and powers and the Executive order on infrastructure charges etc. for the railway network

Banedanmark has established a mandatory performance scheme. The objective of the performance scheme is to encourage Infrastructure Managers and Railway Undertakings to minimise disruption on the infrastructure and therefore improve the infrastructure's efficiency.

The performance scheme is settled in the Executive order on infrastructure charges etc. for the railway network.

5.8 Change to charges

As far as possible, all changes to charges, other than the on-going tariff regulation, will be announced by Banedanmark at least 12 months prior to implementation of the changes concerned. Any changes will be indicated to Railway Undertakings at hearings followed by publication of an amendment to an Executive order.

The tariff for the environmental subsidy can be changed at one month's notice via an Executive order issued by Banedanmark.

5.9 Billing arrangements

Infrastructure charges and penalties for cancellation
Infrastructure charges are payable to Banedanmark monthly in arrears with a payment deadline of 30 days net, in accordance with the rules in the valid Executive order on infrastructure charges etc. for the rail network.

Prior to issuing the invoice for infrastructure charges, Banedanmark forwards documentation stating the infrastructure charges to be paid by the Railways Undertaking. The documentation is forwarded to the Railway Undertaking monthly and comprises a specification of the individual settlements.

The objective of forwarding the documentation stating the infrastructure charges to be paid by the Railway Undertaking is to make it possible for each individual Railway Undertaking to review the settlements before the invoice being issued

Failure to pay infrastructure charges before a deadline stated to the Railway Undertaking may result in Banedanmark revoking allocated capacity.

All penalties for cancellation are settled and levied on a monthly basis by Banedanmark in connection with the monthly settlements for infrastructure charges.

Traction current
Payment for traction current is charged monthly in arrears with a payment deadline of 30 days net.

Train pre-heating and other electricity to trains via external power supply

Consumption of electricity used for pre-heating of trains and other electricity via mains sockets is charged monthly in arrears with a payment deadline of 30 days net.

Water for preparation of trains
For further information on invoicing for water for preparation, reference is made to Banedanmark's standard access contract, appendix 2.3C.

Exceptional transports
For further information on invoicing for exceptional transports, reference is made to Banedanmark's standard access contract, appendix 2.3C.

6 Operations

6.1 Introduction

This section contains an overview of Banedanmark's rules for performing train operations, including shunting.

6.2 Operational rules

Banedanmark's traffic regulations are published in pursuance of the Railway Act and apply to all who either perform train operations or are moving within Banedanmark's infrastructure.

The Regulation can be found on Banedanmark's website

Course in cross-border operations
Banedanmark can provide a course in Danish rail traffic regulations for engine drivers of Railway Undertakings only operating between Germany and the border stations of Padborg or Tønder.

6.3 Operational measures

6.3.1 Principles

In connection with the production of the working timetable, a "Principper for afvikling" of the timetable ("Operational Code") is also produced, which describes how traffic should be operated in case of traffic irregularities, with or without reduced capacity. "Principper for afvikling" includes a number of arrangement rules and a large number of arrangements plans. Banedanmark may deviate from the "Operational Code" for the long-distance lines if required in order to normalise operations. The "Operational Code" for operating the timetable is available in Banedanmark's Operations Information System (DIS).

Access to DIS can be requested by directing an inquiry to dcdkom@bane.dk

For further information, reference is made to Banedanmark's standard access contract, appendix 2.3C.

6.3.2 Performance of operations in case of disturbances

In case of unforeseen situations Driftcenter Danmark (Operations Centre Denmark) has the overall responsibility of handling the capacity available in cooperation with the Railway Undertakings and the local traffic control offices),

Regional Remote Control Centres (RFC), control offices and other infrastructure managers, etc.). On lines equipped with ERTMS the arrangements are made according to Traffic Control Centre West (TKC-V) and Traffic Control Centre East (TKC-Ø). For the S-train lines, arrangements are handled by Traffic Control Centre S-train (TKC-S).

Moreover, Banedanmark releases traffic information and instructions in connection with specific weather conditions.

Banedanmark's contingency plan also covers the Great Belt link as well as the Copenhagen H/Vigerslev – Copenhagen Airport Kastrup Line. The line between Copenhagen Airport Kastrup and Peberholm is, however, managed by Øresundsbro Konsortiet (Oeresund Bridge Consortium Partnership) in accordance with Trafiksikkerhedsforskrift (TF – Traffic Safety Regulations).

In accordance with the valid Executive order on allocation of railway infrastructure capacity (paths) etc. Banedanmark can demand that Railway Undertakings place e.g. rolling stock which Banedanmark finds appropriate at the disposal of Banedanmark in order to normalise railway traffic as quickly as possible.

In emergency situations and in the case of breakdowns which make the infrastructure inaccessible, Banedanmark can close allocated capacity during repairs.

Winter arrangements
Every year Banedanmark implements winter arrangements which are effective from 15 November to 15 April.

The winter arrangements are anchored in a traffic statement (*"Winter arrangements"*), which is divided into guidelines applying to long-distance lines and guidelines applying to S-train lines. *"Winter arrangements"* are available on Banedanmark's website.

Traffic operations during winter are performed based the special winter arrangement plan. This plan is divided partly into phases/levels depending on the severity of the weather, partly in geographic areas depending on which railway lines being affected by the winter weather. Each phase/level is i.a decisive for which point switches are to be given priority, and for where and how the winter arrangements are to be performed in general. Each phase/level is proportional to which traffic can operate. It is up to Banedanmark to decide when to progress from one phase/level to the next.

Arrangements in case of storms
Banedanmark implements arrangements in case of storms. Operating the railway traffic is based on a special storm arrangement plan. This plan is divided partly into phases/levels depending on the severity of the storm, partly in geographic areas depending on which railway lines being affected by the storm. Each phase/level is proportional to which traffic can operate. It is up to Banedanmark to decide when to progress from one phase/level to the next.

Leaf all arrangements
Every ear Banedanmark issues information to all Railway Undertakings on leaf fall and any arrangements to be made in this regard.

Active participation
The Railway Undertakings will be invited by Banedanmark to actively participate in the preparation of winter arrangements, arrangements in case of storms as well as leaf fall arrangements in good time prior to the winter, storm and leaf fall seasons.

Incidents with international impact

If large incidents with significant international impact occur, international coordination of incident management is needed.

For international disruptions longer than 3 days with a high impact on international traffic, RNE's International Contingency Management Handbook applies to the greatest extent possible. However, Banedanmark may make other arrangements if the situation so requires.

6.4 Tools for train information and monitoring

Traffic information for passengers
Banedanmark's standard access contract (Appendix 2.3C) includes a detailed description of the delivery of passenger information. The following provides a more general description of Banedanmark's delivery of passenger information.

By arrangement with and in collaboration with Railway Undertakings, Banedanmark delivers visual and auditory passenger information on long-distance lines via Banedanmark's media at stations and MitTog (My Train) on web and app. Banedanmark's delivery of passenger information depends on Banedanmark having access to the necessary data on Railway Undertakings' operations.

Passenger information is delivered via various media according to the relevant service standard and depending on various operational situations and customer needs.

The precise provision is determined in the *"Service Standard for Passenger Information"*. The agreement is currently adjusted, but generally, the passenger information services include the following as a minimum:

During normal train operations
Banedanmark's information screens at stations and on platforms are updated with information on departures and arrivals. Banedanmark gives customers notice about upcoming planned changes in traffic via information screens and loudspeakers.

During changes to train operations
Banedanmark's information screens at stations and on platforms are updated with information on trains' up-to-date departure times, changes to the

timetable and information about the train. Audio information on changes in traffic and advice for customers is given by announcements over Banedanmark's loudspeakers at stations and on platforms.

In addition
Banedanmark supplies data for the web based *Rejseplanen* (Journey Planner) with trains' up-to-date arrival and departure times, platform numbers, cancellations, and extra trains on the long-distance lines.

Banedanmark provides a nationwide telephone service for blind and visually handicapped customers, which provides an audio version of departure and arrival information.

Real time data usage for passenger information
To ensure that passenger information is consistent and updated, Banedanmark has established data services. The objective of these services is to collect planned and real time data about train operations from its own sources and other linked Railway Undertakings' real time data.

This information is used by Banedanmark and linked Railway Undertakings as well as other interested parties in a full range of systems and interfaces. The objective is that customers experience the same passenger information regardless of which media they use. The data service can be provided to all Railway Undertakings via a standard interface.

In order for Banedanmark to be able to provide correct and actual passenger information it is necessary that the Railway Undertakings performing passenger transport deliver i.a. GPS positions, train formation data and stopping pattern/destination outside Banedanmark's infrastructure for own trains in real time. See appendix 5 in the standard access contract.

6.5 Train Information System – TIS

TIS is managed by RNE and is a web-based application that supports international train management by delivering real-time train data concerning international trains. The relevant data are obtained directly from the Infrastructure Managers' systems and all the information from different IMs is combined into one train run from departure or origin to destination. In this manner, a train can be monitored from start to end across borders.

Railway Undertakings and terminal operators may also be granted access to the TIS and they can join the RNE TIS Advisory Board. Access to TIS is free of charge. However, a user agreement must be entered into in this regard. For further information, reference is made to http://tis.rne.eu

7 Service facilities

7.1 Introduction

The service facility operator must according to EU Commission's Implementing regulation 2017/2177 of 22 November 2017 on access to service facilities and rail-related services prepare a description of the service facility and the services for which the service facility operator is responsible.

The description of the service facility must comply with the requirements laid down in article 4 (2) of EU Commission's Implementing regulation 2017/2177 of 22 November 2017 on access to service facilities and rail-related services. Servicefacilitetsforvalterne skal i henhold til Kommissionens

7.2 Servicefaciliteter – overblik

Service facility operators are, cf. the Executive order no. 1503/2021 on rail-related service facilities and services (with later changes), § 12, clause 2, obliged to inform Banedanmark about the number of paths for which the service facility can provide capacity during the following year[2].

RNE has developed a template for the description of the service facilities at free disposal. This template can be found on RNE's website. The template is prepared in compliance with the requirements for the description of the service facilities which appear from EU Commission's Implementing regulation 2017/2177 of 22 November 2017 on access to service facilities and rail-related services.

The service facility operator is obliged to publish the description of the service facilities on its own website via a joint web portal with the necessary information. In this connection Banedanmark can refer to the respective service facility operators' websites below.

Intermodal terminals

Intermodal Terminal Høje Taastrup managed by af DB Cargo: Terminal Hoeje Taastrup (dbcargo.com)
Intermodal Terminal Taulov managed by DB Cargo: Terminal Taulov (dbcargo.com)
Intermodal Terminal Padborg at the moment managed by TX Logistik.

[2] Railway infrastructure in private property solely arranged for the infrastructure owner's own freight operations, are not covered by the Executive order and the obligation to provide information.

Intermodal Terminal Hirtshals is managed by Hirtshals Havn: Hirtshals Havn (hirtshalshavn.dk)
Intermodal Terminal Esbjerg is managed by Esbjerg Havn: Port of Esbjerg | (portesbjerg.dk)

Privately owned terminals
Taulov Container and Rail Terminal
www.fredericiashipping.dk

Port terminals
For further information on the ports and services in this regard, reference is made to the individual ports and the managers of the ports by the links stated below. If a manager is not stated, the management is performed by the port concerned.

Fredericia Havn is managed by ADP
Frederikshavn Havn
Kolding Havn
Køge Havn
Thyborøn havn
Vejle Havn
Aalborg Havn
Århus Havn www.apmterminal.com

Service facilities and services for which DSB is responsible can be seen by applying the link: https://www.dsb.dk/om-dsb/virksomheden/rapporter-og-regnskab/servicefaciliteter/

7.3 Service facilities managed by Banedanmark

7.3.1 Common provisions

Information in this section is prepared based on available data/information.

7.3.2 Passenger stations

An overview of all passenger stations and stopping points on Banedanmark's infrastructure as well as guideline information on platform lengths and heights can be seen in appendix 3.6.

An overview of all passenger stations and stopping points on Banedanmark's infrastructure after the roll-out of the ETCS system on the lines, where ETCS is expected to be implemented in 2025, as well as guideline information on platform lengths and heights can be seen in appendix 3.6.

7.3.2.1 General information

Banedanmark does not supply any information on ticket systems at passenger stations.

Passenger-related facilities at stations situated on Banedanmark's infrastructure are managed by the Railway Undertakings according to their transport contracts.

7.3.3 Intermodal terminals

Banedanmark owns the intermodal terminals at Høje Taastrup, Taulov, and Padborg, but the terminals are operated by a third party. Banedanmark allocates capacity at intermodal terminals according to the rules in the Executive order on rail-related service facilities and services.

All Railway Undertakings have access rights to the terminals and the services delivered by the terminal operators in accordance with the valid Executive order on rail-related service facilities and services.

7.3.4 Marshalling yards and train formation facilities, including shunting facilities

The Railway Undertakings can perform shunting on sidings. An overview of stations with sidings available for freight and passenger trains can be seen in appendix 3.2A,

There is no guarantee that all sidings can be applied for shunting.

Applications for capacity for parking of engines and coaches must be made to Banedanmark, Traffic Operations, Coordination & Processes.

Further information on Banedanmark's sidings can be found in Banedanmark's infrastructure register, BaneGISX:

http://banedanmark.maps.arcgis.com/apps/webappviewer/index.html?id=6541fbc0cbba499b861e4d7fe23b10b6

It should be noted that data in BaneGISX are intended as a guide. Railway Undertakings and others can contact Banedanmark for further details and/or a confirmation of the data contained in BaneGISX.

7.3.5 Storage sidings for parking

Railway Undertakings can park (store rolling stock for a period of more than 72 hours) on sidings. An overview of stations with sidings available for freight and passenger trains can be seen in appendix 3.2A.

There is no guarantee that all storage sidings can be used for parking.

Applications for capacity for parking must be made to Banedanmark, Traffic Operations, Coordination & Processes, by mail kplan@bane.dk

Applications for parking tracks can be made either in connection with the annual timetable process, see section 4.2, or by ongoing ad-hoc applications, see section 4.6.3.

On certain sidings available for parking Banedanmark offers access to mains sockets for power supply. For this purpose, Banedanmark supplies main sockets at three voltages:

- 1500 V (single-phase)
- 1000 V (single-phase)
- 400 V (three-phase)

Establishment main sockets is initiated as a third-party project. The costs in this regard are covered by the Railway Undertakings themselves. The Railway Undertakings can contact the executive administrator responsible for the line concerned by mail arealer@bane.dk

Further information on Banedanmark's storage sidings can be found in Banedanmark's infrastructure register, BaneGISX:

http://banedanmark.maps.arcgis.com/apps/webappviewer/index.html?id=6541fbc0cbba499b861e4d7fe23b10b6

It should be noted that data in BaneGISX are intended as a guide. Railway Undertakings and others can contact Banedanmark for further details and/or a confirmation of the data contained in BaneGISX.

Attention is drawn to the fact that the rules for placing of dangerous goods are subject to the Executive order on control of risk for major accidents and dangerous goods.

No infrastructure charges are levied for operating or parking on storage sidings.

7.3.6 Facilities for maintenance of rolling stock

Banedanmark does not offer facilities for maintenance of rolling stock to Railway Undertakings.

7.3.7 Other technical facilities

Banedanmark does not offer facilities for cleaning or washing of rolling stock.

Facilities for monitoring wheel and axel loads on trains in operation

Banedanmark monitors wheel and axel loads on trains in operation. For this purpose, Axel load Checkpoint's facilities of the type of ATLAS FO are used. Banendanmark's ATLAS FO facilities are placed in the infrastructure as follows:

TIB-line/Route information	**Track no.**	**Placement (centre of ATLAS FO facility in the track)**
1	H	14,191
1	V	14,191
1	H	181,974
1	V	181,980
26	2. main track	85,983
820	5	2,391

Banedanmark handles violations of applicable thresholds for wheel and axel loads in accordance with BN2-205.

Banedanmark offers access to measuring data from Banendanmark's ATLAS FO facility to the Railway Undertakings. For further information, contact ALC-drift@bane.dk.

Facilities for monitoring pantographs on trains in operation
Banedanmark monitors pantographs on trains in operation. For this purpose, PantoInspect facilities are used. Banedanmark's PantoInspect facilities are placed in the infrastructure as follows:

TIB-line	**Track no.**	**Placement**
1	H	12,708
1	V	12,721
26	H	25,60
26	V	25,60
820	H	2,251
820	V	2,251
880	H	4,071

Vehicle weigh bridges
Banedanmark owns a number of vehicle weigh bridges. The locations of these vehicle weigh bridges are shown below:

City	**Bearing capacity**	**Weight-ID**
Kolding	50 t	23362
Fredericia	2 of 50 t each	23363
Køge	60 t	23364

Turntables
Banedanmark owns turntables at Padborg and Nykøbing F.

7.3.8 Port facilities

Banedanmark allocates capacity to and from port rails. A survey of port rails can be seen in appendices 3.2B and 3.2C.

7.3.9 Emergency services

Services are supplied pursuant to an agreement with Emergency Services Banedanmark.

For further information, reference is made to Banedanmark's website: Beredskab Banedanmark | Banedanmark

7.3.10 Refuelling facilities

Banedanmark does not provide facilities for diesel refuelling.