



**SENTINEL  
COMMERCIAL PROPOSAL FOR  
Stockholms Stad**

25 October 2016

**Sentinel** takes care of monitoring your compliance with noise limits; leaving you free to manage your core business rather than spending time operating a noise monitoring system.

**Sentinel** alerts you immediately should levels exceed predetermined limits giving you the opportunity to take action to reduce noise levels and prevent a breach.

Brüel & Kjær is pleased to submit this firm proposal for continuous noise monitoring around the Stockholms Stad. We proudly offer you our state-of-the-art Sentinel service.

Sentinel has applications in construction, power generation, chemical plants, wind farms and any outdoor situation where long term noise compliance information and threshold alerting is needed.

Sentinel takes a different approach to establishing a noise monitoring program. Instead of supplying equipment in which you must invest resources to operate, manage and support, we provide you with regular, easy-to-use noise level reports on a subscription basis.

By selecting Brüel & Kjær, you have a committed long-term partner and proven technologies. We believe that our solution will provide the best outcome for Stockholm Stad both now and into the future.

This budgetary proposal is in two parts:

- ▶ Proposal – This document
- ▶ Sentinel Overview

# CONTENTS

<b>1</b>	<b>WHO WE ARE .....</b>	<b>3</b>
<b>2</b>	<b>SERVICE DELIVERY .....</b>	<b>4</b>
2.1	What Brüel & Kjær Provides.....	4
2.2	Deliverables and Services.....	4
2.3	Optional Deliverables and Services.....	5
2.4	Subscription Services.....	5
2.5	Customer IT Requirements .....	5
2.6	Customer Obligations.....	5
2.7	Supplier Services at the Conclusion of the Contract.....	6
2.8	Delivery .....	6
2.9	More Information.....	6
<b>3</b>	<b>FEES AND COMMERCIAL TERMS .....</b>	<b>7</b>
3.1	Sentinel Base Service.....	7
3.1.1	Sentinel Optional Service .....	7
3.2	General.....	7
3.3	Taxes and Duties .....	7
3.4	Annual Service Indexation.....	8
3.5	Equipment ownership.....	8
3.6	Limits to Liability .....	8
3.7	Other .....	8

# 1 WHO WE ARE

**Brüel & Kjær is the world leader in sound and vibration equipment and analysis. Our products set the standard to which others are compared. We have a range of services covering environmental solutions for assessment of environmental noise; assessment of noise and vibration at work; calculation of environmental noise and measurement; and, calculation of building and room acoustics.**

Brüel & Kjær Environment Management Solutions (EMS) is a division of Brüel & Kjær focused on outdoor environment management. EMS is the largest supplier of noise monitoring systems, which are deployed in more than 250 of the world's busiest airports and cities.

As well as our world-leading solutions for managing aircraft noise, EMS is directly responsible for delivering and managing urban noise monitoring systems in many cities across the world. Paris, Madrid, London and Copenhagen to mention a few major European cities where our service is currently in use.

Our urban noise monitoring solution not only collects, verifies and manages data but also delivers it to you in a format that is ready to incorporate into your compliance reporting. Furthermore, we have put emphasis on features that enable you to optimize your noisy operations as well as features that help you manage and build up community engagement and tolerance.

Brüel & Kjær's technology is developed and built to the highest quality, designed to save costs by eliminating errors and by saving time for our customers. But the real advantage lies with our ability to supply a complete solution for as long as your project lasts.

– A cost effective, complete and trouble-free noise monitoring solution!

## 2 SERVICE DELIVERY

### 2.1 WHAT BRÜEL & KJÆR PROVIDES

As part of the base services offer, Brüel & Kjær will provide a managed noise monitoring solution, enabling Stockholms Stad staff the ability to monitor all areas. This includes the design, supply, delivery, installation, commissioning, and software maintenance of the Sentinel network.

### 2.2 DELIVERABLES AND SERVICES

The following Sentinel services are proposed for Stockholms Stad.

Brüel & Kjær will establish:

- ▶ Firmware upgrade of the 2 existing 2250 based Noise Monitoring Terminals (NMTs) including replacement batteries
- ▶ One (1) sound calibrator Type 4231 with Accredited Initial Calibration
- ▶ Delivery and installation of two (2) cellular modems
- ▶ Commissioning and setup of permanent NMTs
- ▶ Sentinel software, hosted in the cloud, including:
  - Full access to Sentinel for two (2) users (NS subscription administrator) providing all capabilities including custom reporting and administration<sup>1</sup>
  - Access to view and edit status (RTC admin and edit) for up to five (5) users providing:
    - View and monitor current noise activity
    - View, comment and discard alerts and sound clips
    - Create ad-hoc output files
  - Access to view status (RTC view) for up to five (5) users providing:
    - View and monitor current noise and optional weather activity
    - View alerts and sound clips
  - Access to Stakeholder Web (including Stakeholder Web smartphone and tablet app) – unlimited number of users
- ▶ Automated Daily and Monthly reports and alerts sent to distribution lists of up to 20 users
- ▶ User training delivered remotely

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<sup>1</sup> More can be supported if required at an additional cost

## 2.3 OPTIONAL DELIVERABLES AND SERVICES

- ▶ Loading 1-hour LEQ and Noise events historical data from ENM into the new Sentinel system

## 2.4 SUBSCRIPTION SERVICES

The following subscription services are provided by Brüel & Kjær throughout the life of the service:

- ▶ Customer access to and the use of Sentinel
- ▶ Data collection monitoring on behalf of the Customer
- ▶ Daily checks on data transfers and rectification where possible
- ▶ Ongoing performance and infrastructure monitoring
- ▶ Communication through the public 3G/4G network
- ▶ Storage, backup and protection of all data
- ▶ Alerting to system faults to designated contact
- ▶ Software support service

## 2.5 CUSTOMER IT REQUIREMENTS

The following are the minimum customer IT requirements for Sentinel:

- ▶ Web access via Port 80
- ▶ Online web-conferencing service access for training

## 2.6 CUSTOMER OBLIGATIONS

Under this proposal the Customer is required to provide the following services throughout the life of the subscription:

- ▶ Determine the location of each monitoring location
- ▶ Rental/planning permission/permits or other costs associated with the locations of the monitoring hardware
- ▶ Site works if required at each monitoring location
- ▶ Provision of power to all NMT monitoring locations
- ▶ NMTs support
- ▶ Access to monitoring locations as and when required by Brüel & Kjær
- ▶ Repair or replacement of equipment for events that cannot be reasonably foreseen by Brüel & Kjær, such as theft, vandalism or lightning strike
- ▶ Standard PC and Web Browser to access the server

- ▶ Remote access to Sentinel services via high-speed Internet link
- ▶ Access to suitable online web-conferencing service for training

## 2.7 SUPPLIER SERVICES AT THE CONCLUSION OF THE CONTRACT

At the conclusion of the contract all recorded data and reports are returned to the customer and the system decommissioned.

## 2.8 DELIVERY

The timely delivery of this service is dependent on receiving a purchase order. This will allow for Sentinel configuration and service activation to be completed within the required timeframes.

Monitoring can commence 8-10 weeks after contract signature. This timing is subject to site access and suitable weather conditions to permit installation. Exceedance alerts and daily and monthly compliance reports will commence immediately after commissioning of the monitors and the customer will be able to access Sentinel for noise measurements.

The optional 1-hour LEQ and Noise Events historical data loading from ENM into Sentinel will be available 3 months after contract signature with earliest delivery by March 2017.

## 2.9 MORE INFORMATION

Please refer to the Sentinel Product Data sheet supplied with the Sentinel Overview for further information.

## 3 FEES AND COMMERCIAL TERMS

This proposal is subject to final credit review and approval.

### 3.1 SENTINEL BASE SERVICE

Brüel & Kjær will build, and operate all infrastructure delivered to **Stockholms Stad**. The table below describes the components and services offered to meet the noise monitoring requirements of this Base Service offer.

Item	Sentinel Base Service	Price (EUR)
1	Setup Fee	10,000
2	Annual Subscription Fee	13,620
	Total (Setup + Annual Subscription Fee x 5 Years)*	78,100

\*Excludes annual indexation in the Annual Fee that applies from Year 2, in accordance with clause 3.4.

#### 3.1.1 SENTINEL OPTIONAL SERVICE

Item	Sentinel Optional Service	Price (EUR)
1	Loading of 1-hour LEQ and Noise Events historical data from ENM into Sentinel (One time Fee)	5,500

Setup Fee and One time Fee is payable in full on contract signature or customer purchase order.

Annual Subscription Fee is payable quarterly in advance from first day of live operation.

### 3.2 GENERAL

- ▶ All prices are quoted in Euro (EUR) and valid for 60 days
- ▶ Prices quoted are based on a minimum contract period specified in the pricing options above

### 3.3 TAXES AND DUTIES

All prices quoted exclude taxes related to goods and services, sales tax, fees for permits, and similar charges applicable to goods and services provided which shall be paid by the Customer in addition to any other charges. Any such payments made by Brüel & Kjær shall be reimbursed as additional costs by the Customer.



### 3.4 ANNUAL SERVICE INDEXATION

Annual Subscriptions Fee increases annually after Year 1 by CPI or 4% whichever is greater. For the purpose of annual price escalation, CPI is calculated as the average CPI over the immediate 12 month period to each anniversary date. Should the calculated CPI be negative, Brüel & Kjær agrees to waive any fee increase for the next 12 month period.

### 3.5 EQUIPMENT OWNERSHIP

All equipment supplied (sound calibrator and 2 Cellular modems) remains the property of Brüel & Kjær and will be removed from site at the end of the service period.

### 3.6 LIMITS TO LIABILITY

With the exception of death, personal injury, property loss or damage, the total liability of the Supplier to Customer will be limited to the value of the price paid by the Customer to the Supplier during the 12 month period immediately preceding the event which gave rise to the liability. Neither Party will be liable to the other Party in any circumstances for indirect, special or consequential loss or damage.

### 3.7 OTHER

Unless stated otherwise in this **Error! No text of specified style in document.** quotation, Brüel & Kjær standard terms and conditions apply.

The products and services described in this proposal will be delivered under the terms and conditions of the Brüel & Kjær Sentinel Services Agreement.

Software delivered in this proposal will be licensed to customer under the standard Brüel & Kjær End User License Agreement.