JUMBO BLOCK LOGBOOK

Situation log for crisis teams and incident command



Manual · Version 1.0.0

October 2026

ZANNI GROUP · Andreas Zanni e.K. · Brauhof 12 · 44866 Bochum · jumboblock.org

Contents

1. Overview
2. Basic terms
3. Workflow
4. Creating, opening and locking a log
5. Recording entries
6. Correcting and completing
7. Searching the log
8. Situation and people
9. Submitting messages
10. Message inbox and message key
11. Sub-logs and transfers
12. Report and export
13. File, integrity and settings
14. Interaction with other programs
15. Security and technology
16. Troubleshooting

1. Overview

LOGBOOK keeps the situation log of a crisis team or incident command: situation reports, events, decisions, orders, measures and incoming and outgoing messages – each with time, author and, if desired, photos and documents. The log is the shared, traceable basis of the staff's work and later the most important evidence towards supervisory authorities, insurers and the public.

When committed, entries are chained to the previous entry with SHA-256. After that they can no longer be changed, only corrected by a new entry. Any subsequent manipulation of the file is detected when it is opened.

Fully offline: LOGBOOK runs in the browser, also directly from a USB stick (`file://`). There is no server connection, no account and no cloud. The log file is always encrypted with your password.

Working without a network: other workstations submit messages as encrypted files – by USB stick, network drive or e-mail. Sub-logs of staff sections or operational sectors pass their entries on to the higher-level log.

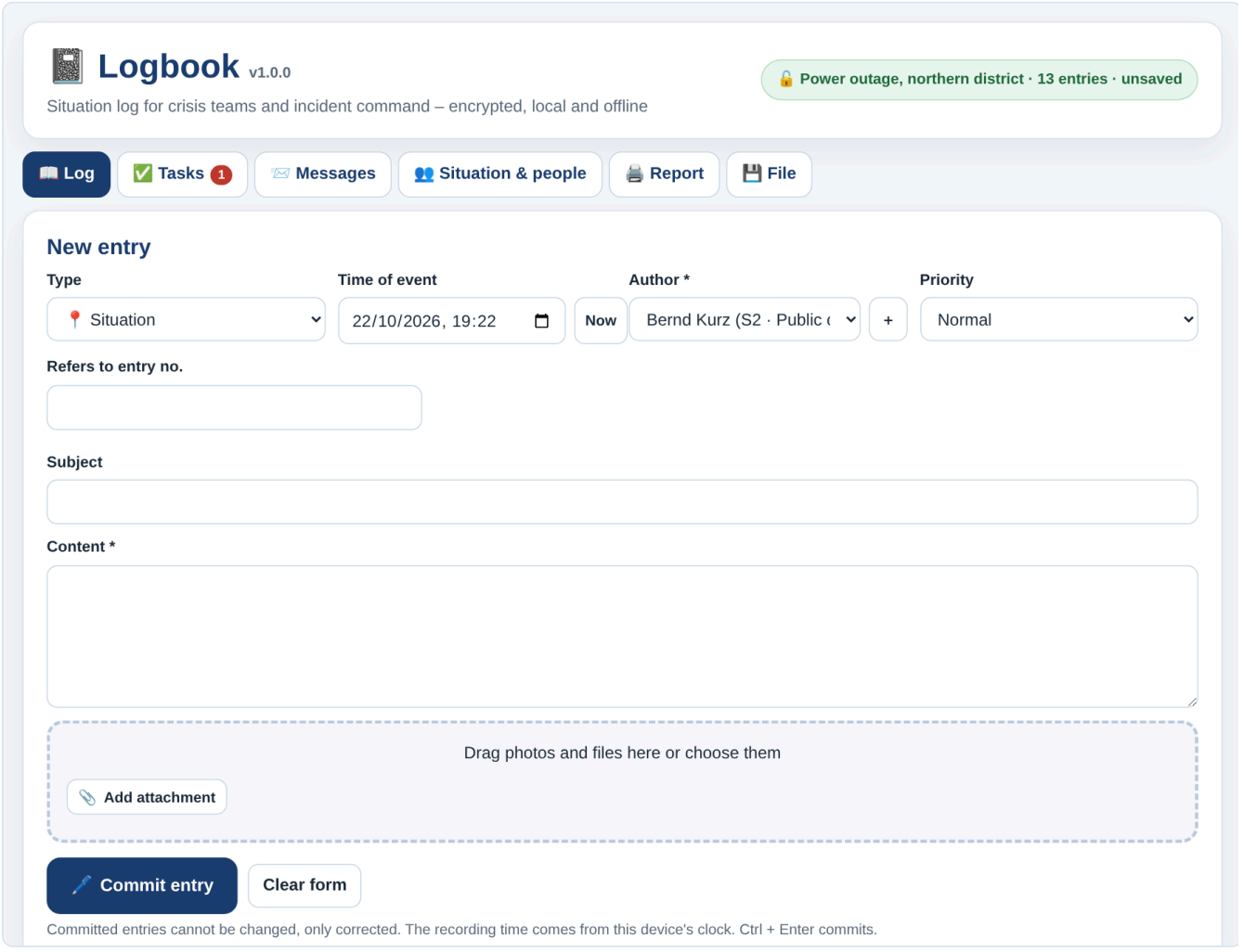


Fig. 1: LOGBOOK work area with its six tabs

Area	Purpose
Log	Record and commit new entries; search, filter and correct all entries
Tasks	Open and completed orders and measures with responsibility and deadline
Messages	Message inbox, message key of the log and transfer to a higher-level log
Situation & people	Situation header (name, level, start, end) and the people with their staff functions
Report	A4 print view or PDF and export of the entries as CSV
File	Save, lock, password, integrity check and settings

The start page additionally offers *Open existing log*, *Create message* for units submitting reports without their own log, and *Create a new log*.

2. Basic terms

Term	Meaning
Log	Encrypted file (.dbm) with situation header, people, all entries, attachments and message inbox
Entry	Consecutively numbered record with type, time of event, recording time, author, subject, content and attachments
Time of event / recording time	The time of event states when something happened; it can be chosen freely. LOGBOOK sets the recording time from the device clock when committing.
Commit	The entry is chained with the hash of the previous entry and is unalterable afterwards.
Hash chain	Every entry contains the SHA-256 hash of its predecessor. If an entry is changed, removed or inserted, the chain is broken from that point.
Correction	New entry replacing an earlier one. The original entry remains visible and is marked “corrected by #…”.
Task	Order or measure with responsibility and deadline. Stays open until an entry of the type “Completion” refers to it.
Log entry	Entry written by LOGBOOK itself, e.g. “Person added”, “Situation header changed” or “Message rejected”
Message (.jbm)	Encrypted file with which other units report to the log without keeping it themselves
Message key (.jbk)	Public key of the log. Only this log can open messages encrypted with it.
Sub-log	Log of a staff section or operational sector that passes its entries on to a higher-level log

Entry types

Type	Use
📍 Situation	Situation report, situation picture, update
⚡ Event	Event that has occurred
⚖️ Decision	Decision of the staff or the head
📌 Order · 🛠️ Measure	Task with responsible party and deadline – appears in the *Tasks* tab
📥 Incoming message · 📤 Outgoing message · ☎️ Contact / conversation	Communication with sender, recipient or conversation partner and channel
✅ Completion	Closes an order or measure (reference required)
✏️ Correction	Replaces an earlier entry (reference required)
🏷️ Custom types	Defined in the settings, optionally as a task

3. Workflow

1. **Create the log** – name the situation, enter yourself as the first person, set a password, save immediately (chapter 4).
2. **Enter people** – everyone who writes entries, with staff function (chapter 8).
3. **Create and distribute the message key** – to operational sectors, departments, plants and sub-logs (chapter 10).
4. **Keep the log** – commit situation reports, decisions, orders and communication continuously (chapter 5); close orders with a completion, fix errors with a correction (chapter 6).
5. **Read in messages** – review submitted messages and adopt them or reject them with a reason (chapter 10).
6. **Back up** – save regularly and keep copies on a second medium (chapter 13).
7. **Report** – print the log or file it as PDF; pass entries to JUMBO BLOCK REPORT if required (chapters 12 and 14).

Give the password to everyone allowed to keep or read the log. Submitting units need no password, only the message key.

4. Creating, opening and locking a log

Creating a new log

1. Name the *Situation / incident*, e.g. “Power outage, northern district”. Organisation, location and start of the situation are optional.
2. Under *First person in the log* enter your name, staff function (LdS, S1 to S6) and a free-text role.
3. Enter a password of at least 12 characters twice.
4. Click *Create log* and save immediately afterwards.

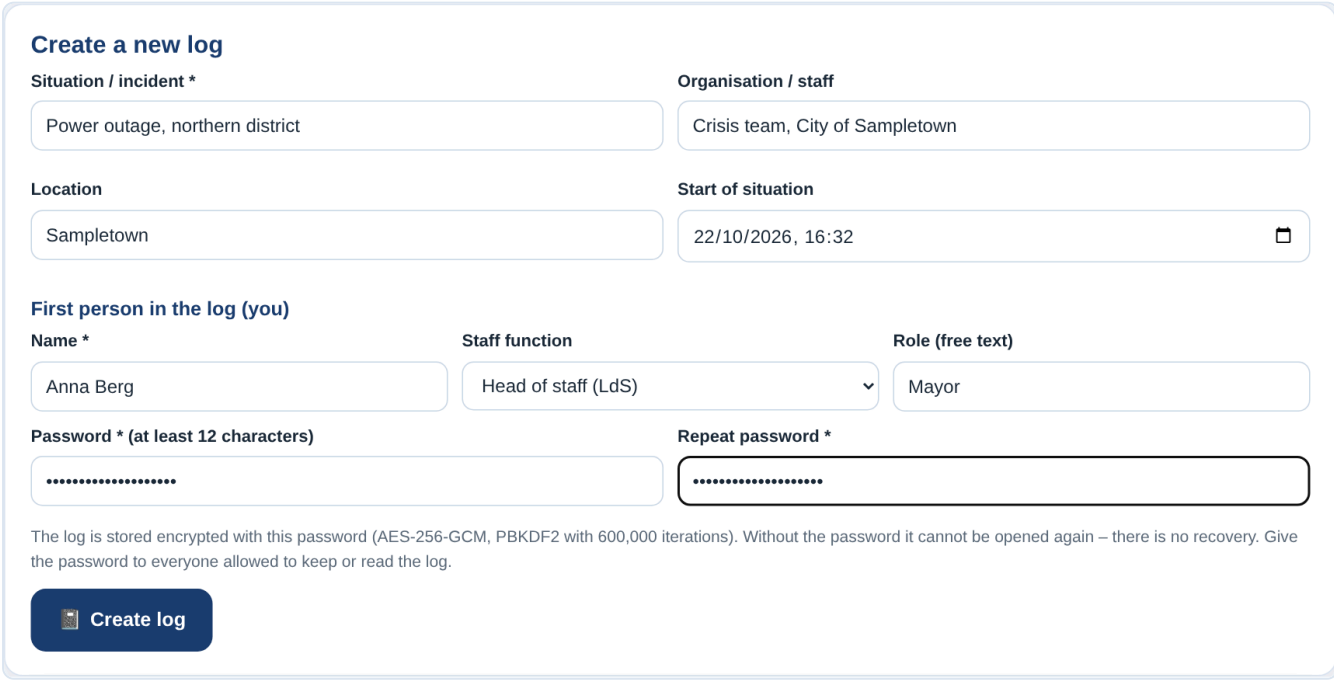


Fig. 2: Creating a new log

> Without the password the log cannot be opened again – there is no recovery. Keep the password separately, e.g. sealed in the emergency folder.

Opening an existing log

Open existing log selects the file. LOGBOOK first verifies the file checksum and then asks for the password. On unlocking, the entire hash chain including all attachments is verified as well.

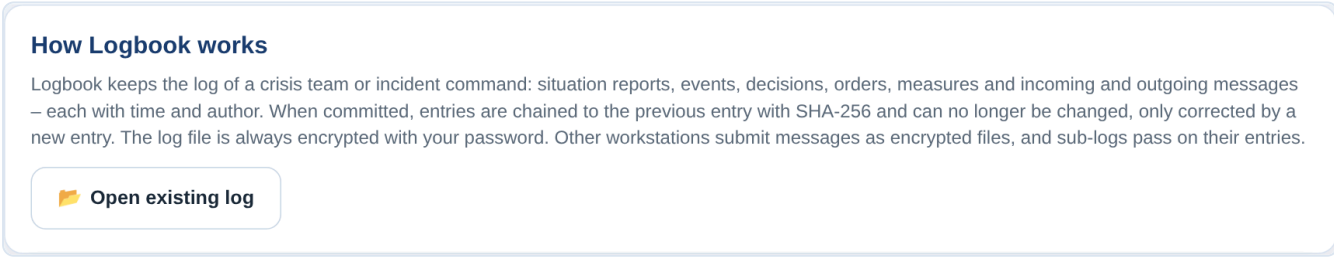


Fig. 3: Start page: opening an existing log

Locking and automatic locking

Lock in the *File* tab removes the key from memory. Unsaved changes and a started entry are kept; the password is enough to continue. After the configured time without input (default 15 minutes) LOGBOOK locks itself.



Fig. 4: Locked log

Unsaved working state

Until saved, LOGBOOK additionally stores the working state encrypted in the browser. If the browser is closed or the computer crashes, the start page offers the state for restoration. The password is required for this.

5. Recording entries

The *Log* tab starts with the *New entry* form.

1. Choose the *Type*. Depending on the type, further fields appear: for orders and measures *Responsible* and *Deadline*, for messages and contacts *From*, *To* or *Conversation partner* and *Channel*.
2. Check the *Time of event*; *Now* sets the current time.
3. Choose the *Author*. *+* adds a new person.
4. If required, set the *Priority* (Normal, High, Immediate) and *Refers to entry no.*
5. Enter *Subject* and *Content*.
6. Click *Commit entry* – or press `Ctrl` + `Enter`.

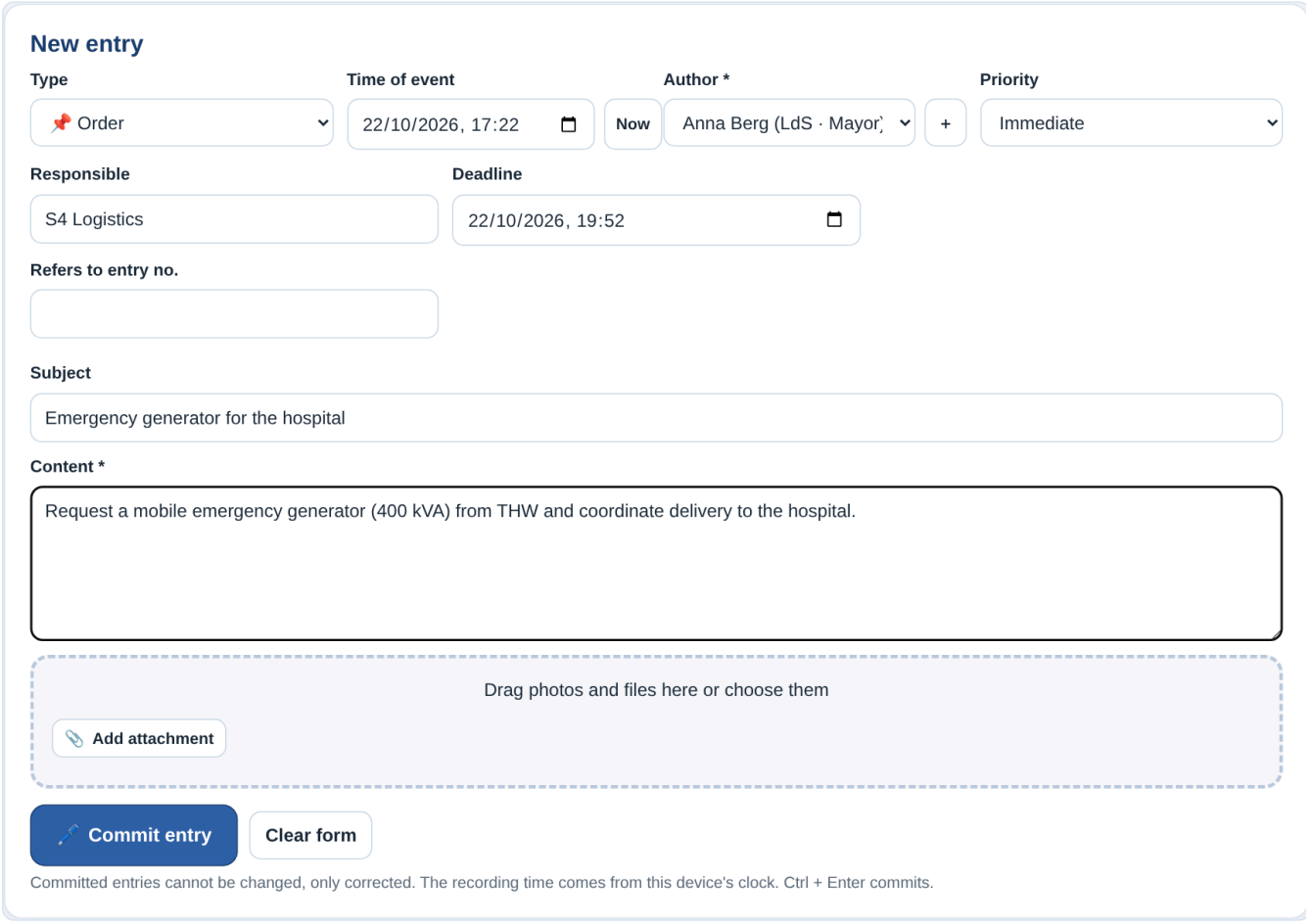


Fig. 5: Order with responsibility, deadline and priority “Immediate”

A started entry is not lost: it is kept when switching tabs, when locking and in the unsaved working state.

Attaching photos and files

Photos and documents are dragged into the field or chosen via *Add attachment*. They are stored in the log with their SHA-256 checksum and are part of the hash chain.

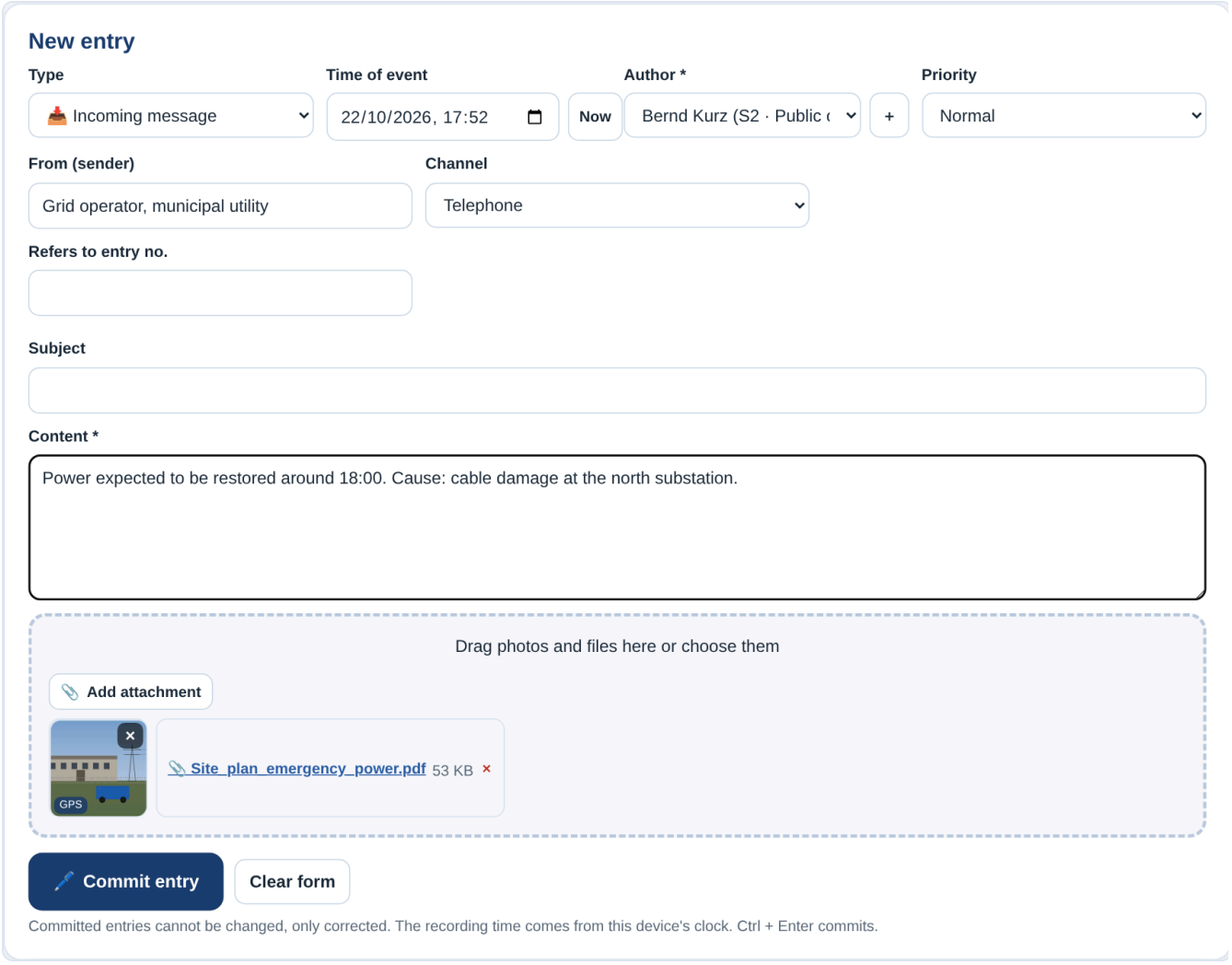


Fig. 6: Incoming message with photo and PDF document

- JPEG photos are downscaled if desired (settings). Capture time, camera and GPS position from the EXIF data are kept; photos with a position carry the *GPS* label.
- Other images and files are embedded unchanged. For files over 25 MB LOGBOOK asks for confirmation because the log becomes large and slow.
- Before committing, attachments can be removed again with ×.

If the time of event lies more than five minutes in the future, LOGBOOK rejects the entry. Then also check the device clock – the recording time comes from it.

6. Correcting and completing

Correction

Committed entries cannot be changed. If an entry is wrong or incomplete, click *Correct* for that entry in the list. The form is filled with the previous content; adjust it and commit.

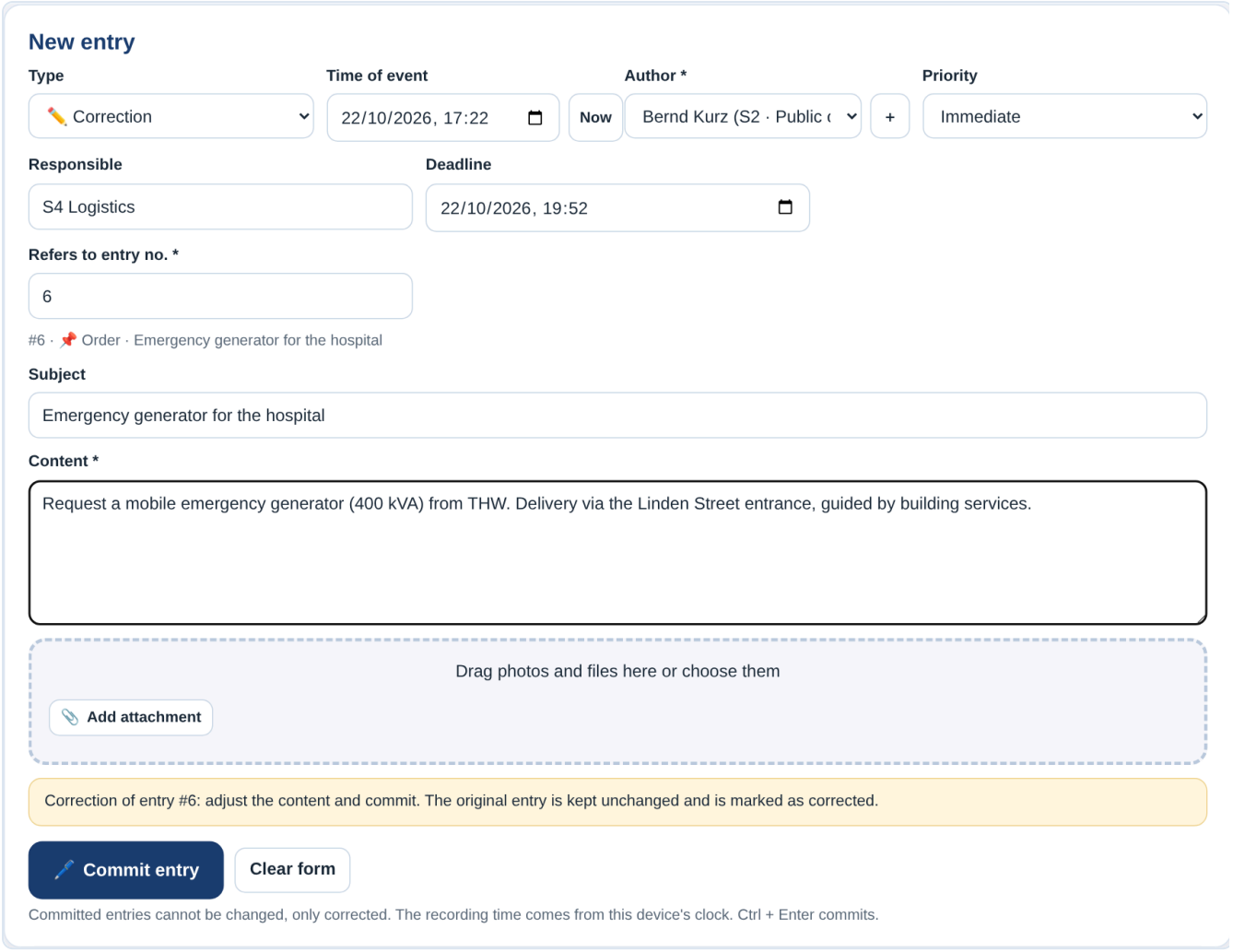


Fig. 7: Correction of an order

- The original entry is kept unchanged and is marked “corrected by #…”.
- For tasks the latest version applies: responsibility and deadline of the correction appear in the *Tasks* tab.
- An entry that has already been corrected is corrected via its latest version; LOGBOOK points this out.

Completion

Orders and measures stay open until an entry of the type *Completion* refers to them. In the *Tasks* tab, *Completed* opens the form with the correct reference; briefly describe what was done.

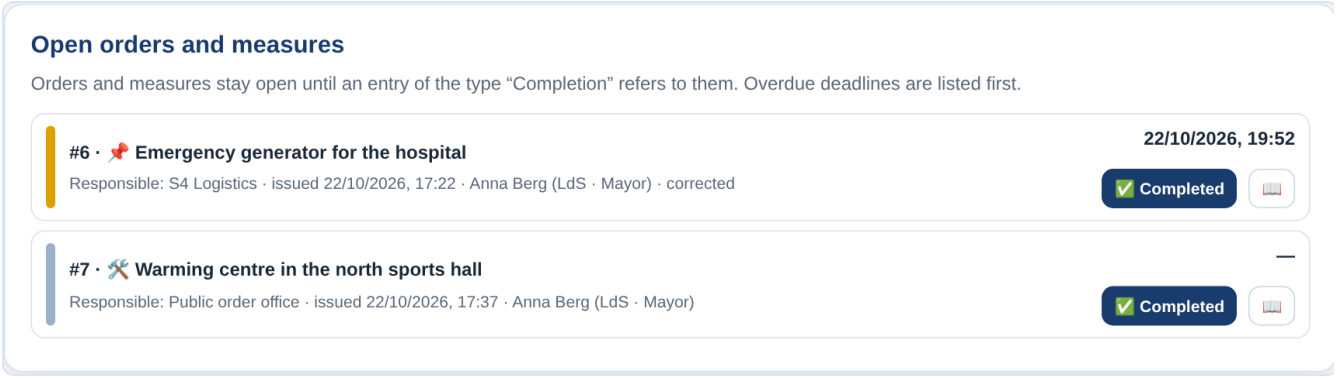


Fig. 8: Open orders and measures

Overdue deadlines are listed first and marked red. The number of open tasks appears on the tab. Completed tasks are listed below with a reference to the completion.

7. Searching the log

All entries are listed below the form. Above them the chain bar shows whether the hash chain is intact, the number of entries and the chain head (hash of the last entry).

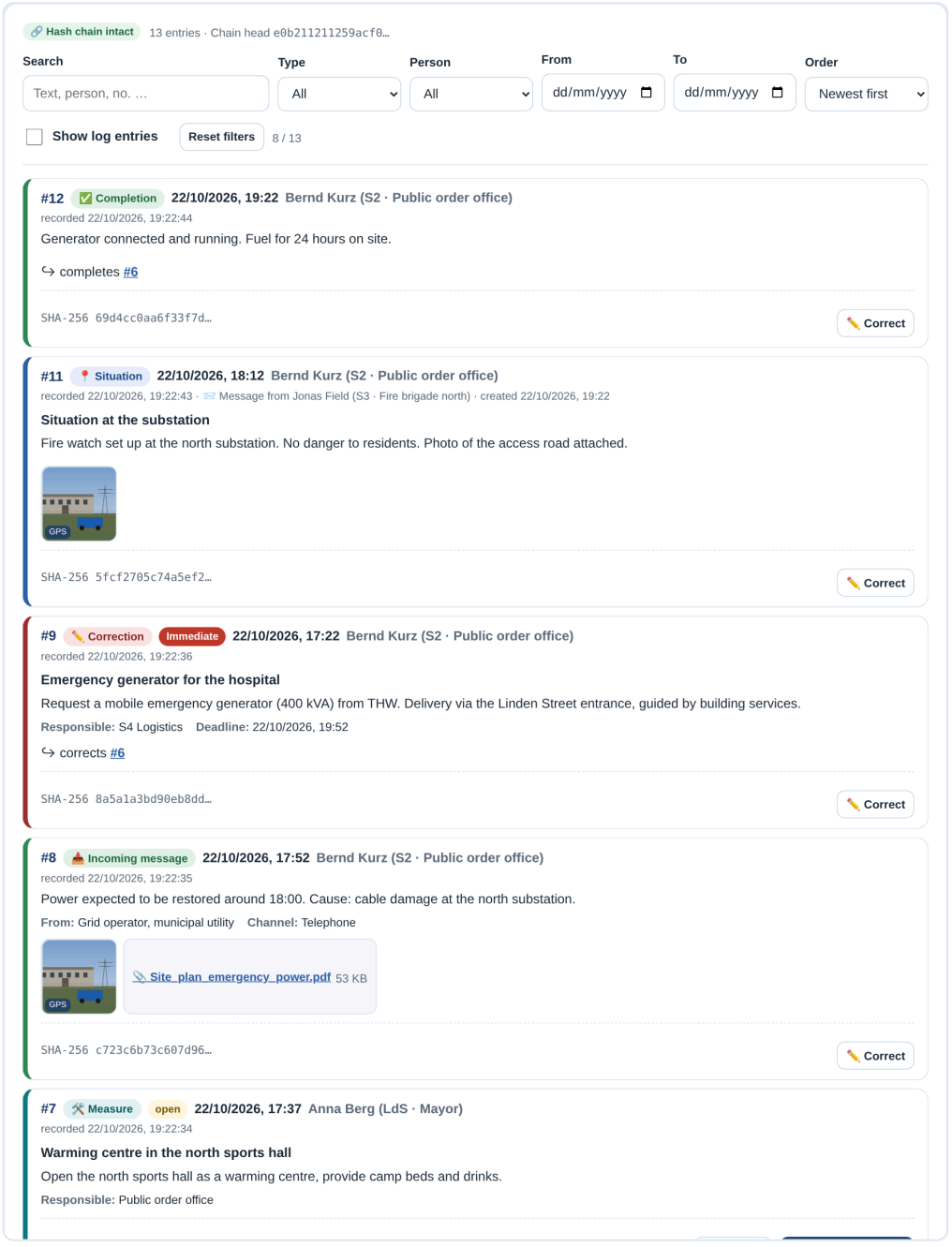


Fig. 9: Entries with chain bar and filters

Filter	Effect
Search	Full text in subject, content, people and numbers
Type	One entry type or “Open tasks”
Person	Entries a person wrote, is responsible for or communicated with
From / To	Period by time of event
Order	Newest or oldest first
Show log entries	Shows or hides the log entries written by LOGBOOK

Every entry shows number, type, time of event and recording time, author, references (e.g. “completes #6”, “corrected by #9”), origin for adopted messages, attachments and the beginning of its hash value. References such as *#6* jump to the entry.

A click on a photo or attachment opens the view with EXIF details and checksum; the file can be downloaded from there.



Fig. 10: Photo with capture time, GPS position, direction and checksum

8. Situation and people

Situation header

In the *Situation & people* tab you maintain name, organisation, location, identifier for transfers, situation or alert level, start, end and description of the situation. *Apply situation header* commits every change with old and new value as a log entry.

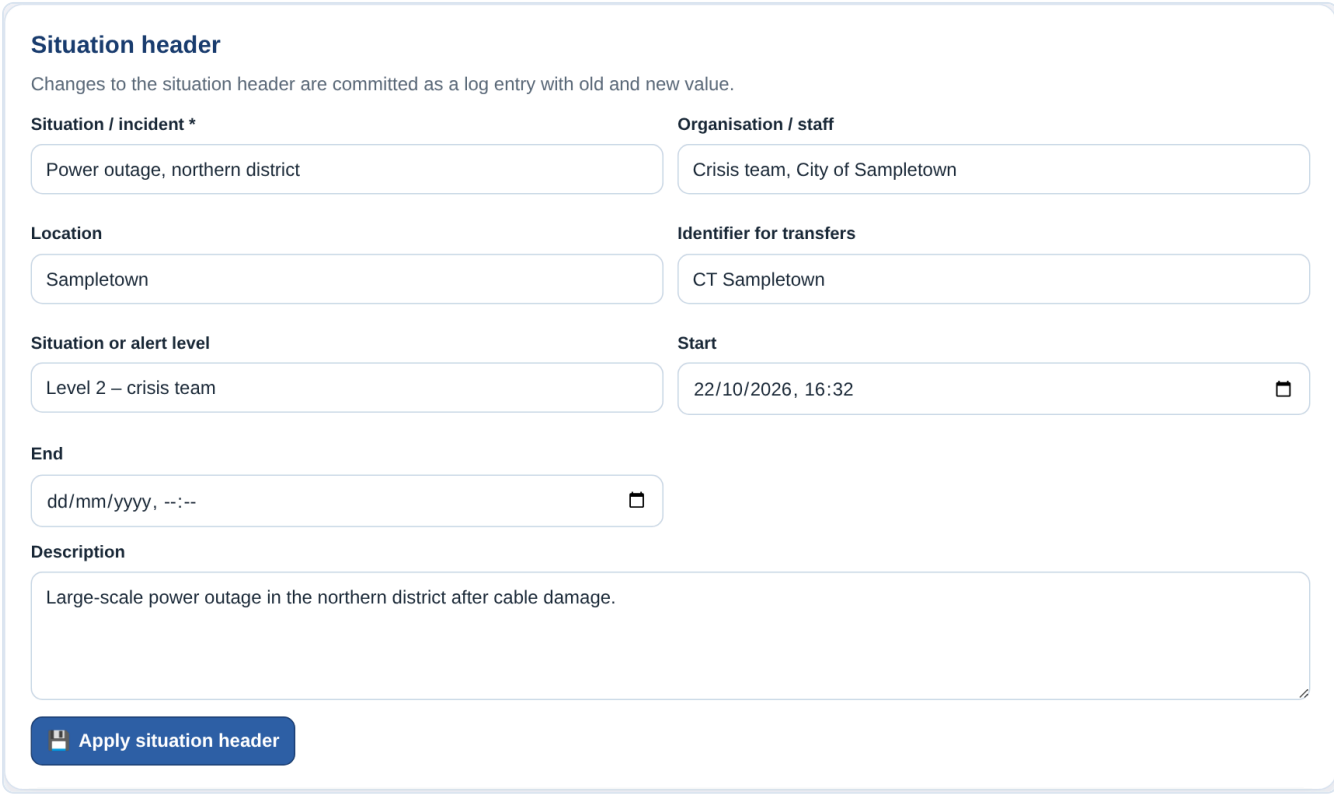


Fig. 11: Situation header

People and staff functions

Everyone who writes entries is listed with name, staff function, role and contact details. The staff functions follow the usual German staff structure: LdS (head of staff), S1 personnel / internal services, S2 situation, S3 operations, S4 logistics, S5 press and media, S6 information and communication.

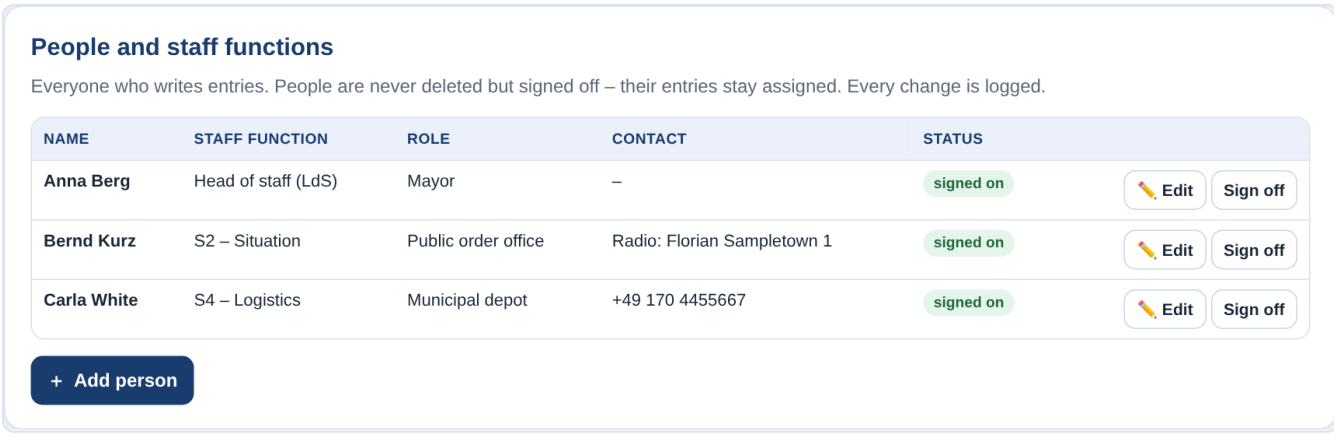


Fig. 12: People and staff functions

- People are never deleted but *signed off* – their entries stay assigned. Signed-off people can be signed on again.
- At least one person always remains signed on.
- Every change (added, changed, signed on or off) is logged.

9. Submitting messages

Anyone who reports to the crisis team without keeping the log – fire brigade, depot, public order office, water works – uses *Create message* on the start page. No log password is needed for this.

1. *Load message key (.jbk)*: you receive the key from the crisis team. LOGBOOK shows the log, organisation and fingerprint – compare it by phone when possible. The key is remembered on the device.
2. Enter the *Sender*: name, unit, staff function, contact. With *Remember sender on this device* the form is filled in next time.
3. Fill in the *Message*: type, time of occurrence, priority, possibly a reference to an entry number, subject, content and attachments.
4. Click *Encrypt and save message* and hand the file over to the crisis team – by USB stick, network drive, e-mail or chat.



Fig. 13: Loaded message key with fingerprint

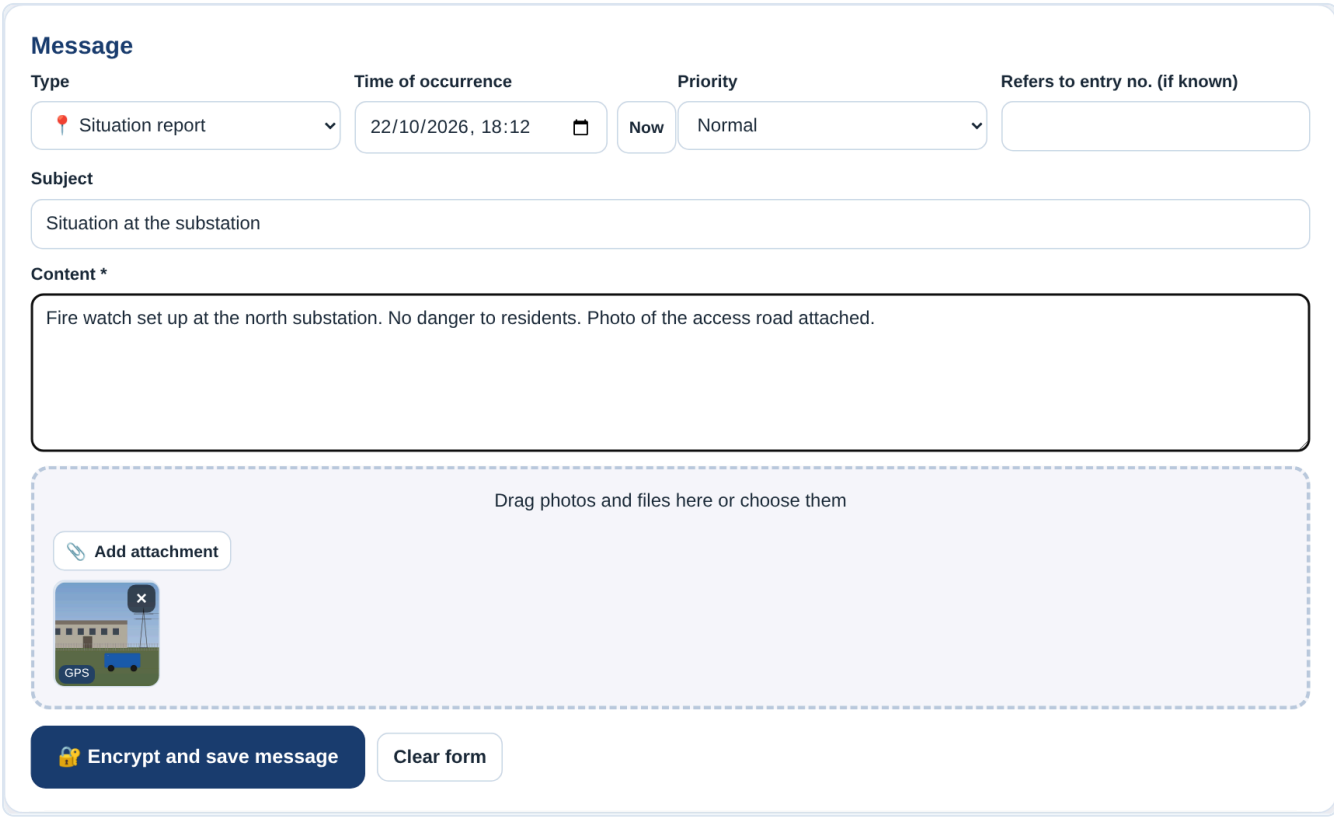


Fig. 14: Situation report with photo

Message type	Suggested in the log as
Situation report	Situation
Event	Event
Message / information, request / request for support	Incoming message
Feedback on an order	Completion, if the reference points to an open order

Encrypted messages can only be opened by the log – not even by the sender. The messages created in the session are listed below the form.

10. Message inbox and message key

Creating and distributing the message key

In the *Messages* tab, *Create message key* generates the log's key pair. *Download message key (.jbk)* saves the public part for distribution. It contains the name and organisation of the log, but no content and no password.

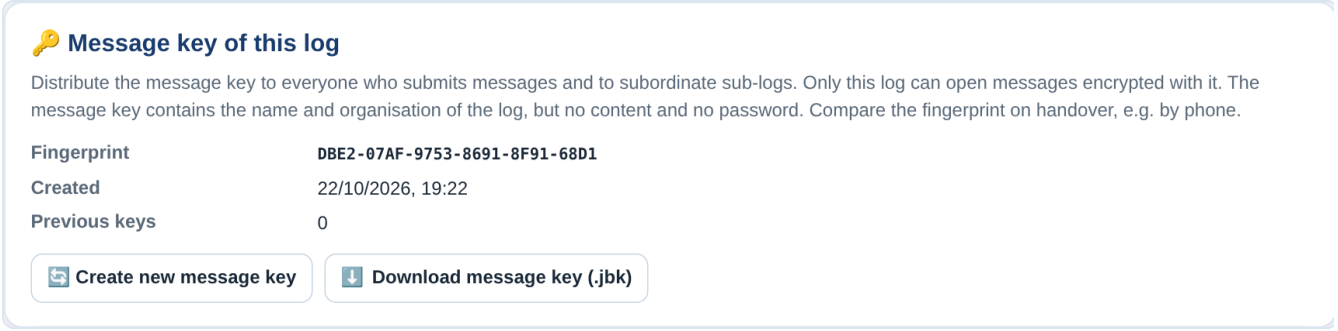


Fig. 15: Message key of the log with fingerprint

A new message key replaces the previous one for new messages; earlier keys are kept for opening older messages. Then distribute the new key to everyone who submits.

Reading in and reviewing messages

Read in messages or dragging into the field takes one or more .jbm files into the inbox. LOGBOOK decrypts, verifies checksum and attachments and shows the message with sender, creation time and read-in time.

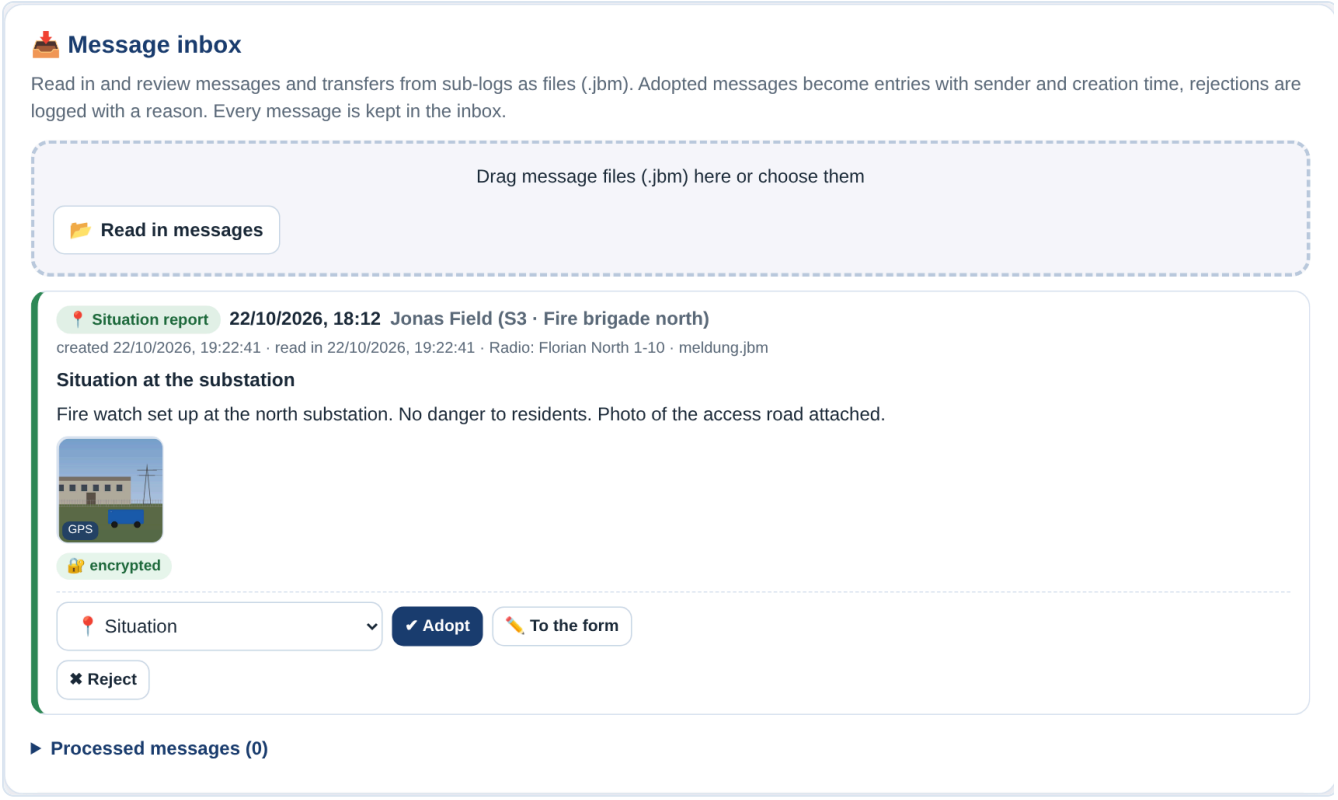


Fig. 16: Open message in the inbox

Button	Effect
Adopt	Commits the message as an entry of the chosen type – with sender, creation time and attachments as proof of origin
To the form	Fills the form with the message so that it can be completed before committing (e.g. for corrections)
Reject	Requires a reason and logs the rejection

Every message is kept in the inbox; processed messages are listed under *Processed messages* with a reference to the resulting entries. Files read in twice are recognised.

> Other programs also submit messages: JUMBO BLOCK CHECK (check results) and JUMBO BLOCK INVENTORY (recovery status).

11. Sub-logs and transfers

Larger situations are managed in staff sections or operational sectors with their own sub-logs. These pass their entries, including attachments and chain record, on to the higher-level log.

In the sub-log

1. Set an *Identifier for transfers* in the situation header, e.g. “S3” or “Sector north”.
2. In the *Messages* tab, under *Transfer to a higher-level log*, load the target's message key and compare the fingerprint.
3. *From entry no.* is set to the first entry not yet passed on. Log entries can be included.
4. Click *Create transfer file* and hand the file over.

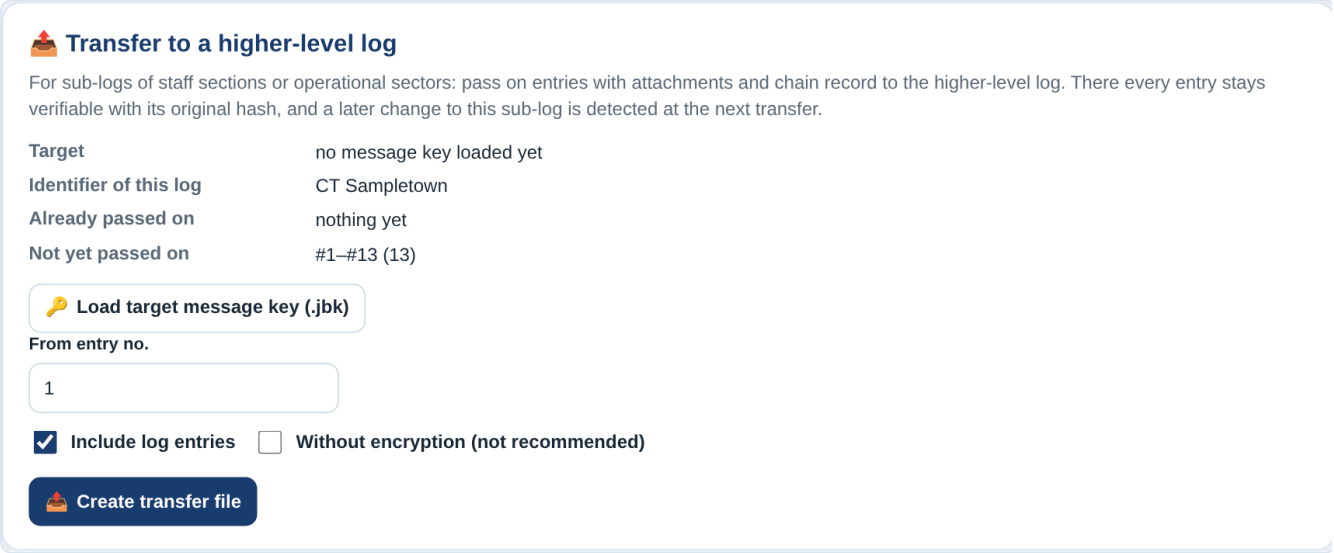


Fig. 17: Transfer to a higher-level log

In the higher-level log

The transfer is read in like a message. LOGBOOK verifies every entry against its original hash and the chain record and compares it with earlier transfers from the same sub-log. *Adopt all entries* commits them with their origin (identifier and original number); references between the entries are converted to the new numbers.

- Entries already adopted are skipped.
- If an entry differs from an earlier transfer, the sub-log was changed afterwards. LOGBOOK shows this clearly and does not adopt differing entries.
- If earlier entries of the sub-log are missing, LOGBOOK points this out; transfers should be adopted in their order.

12. Report and export

The *Report* tab creates an A4 print view that can be printed or saved as PDF via *Print / PDF*.

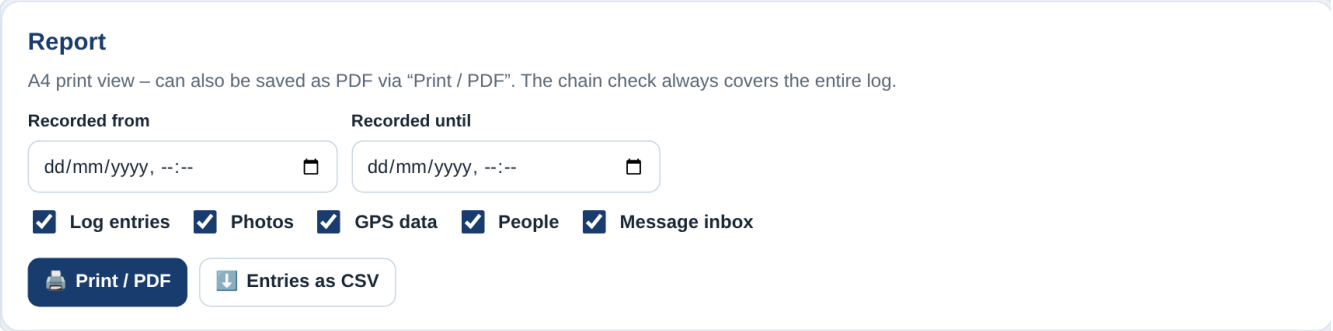
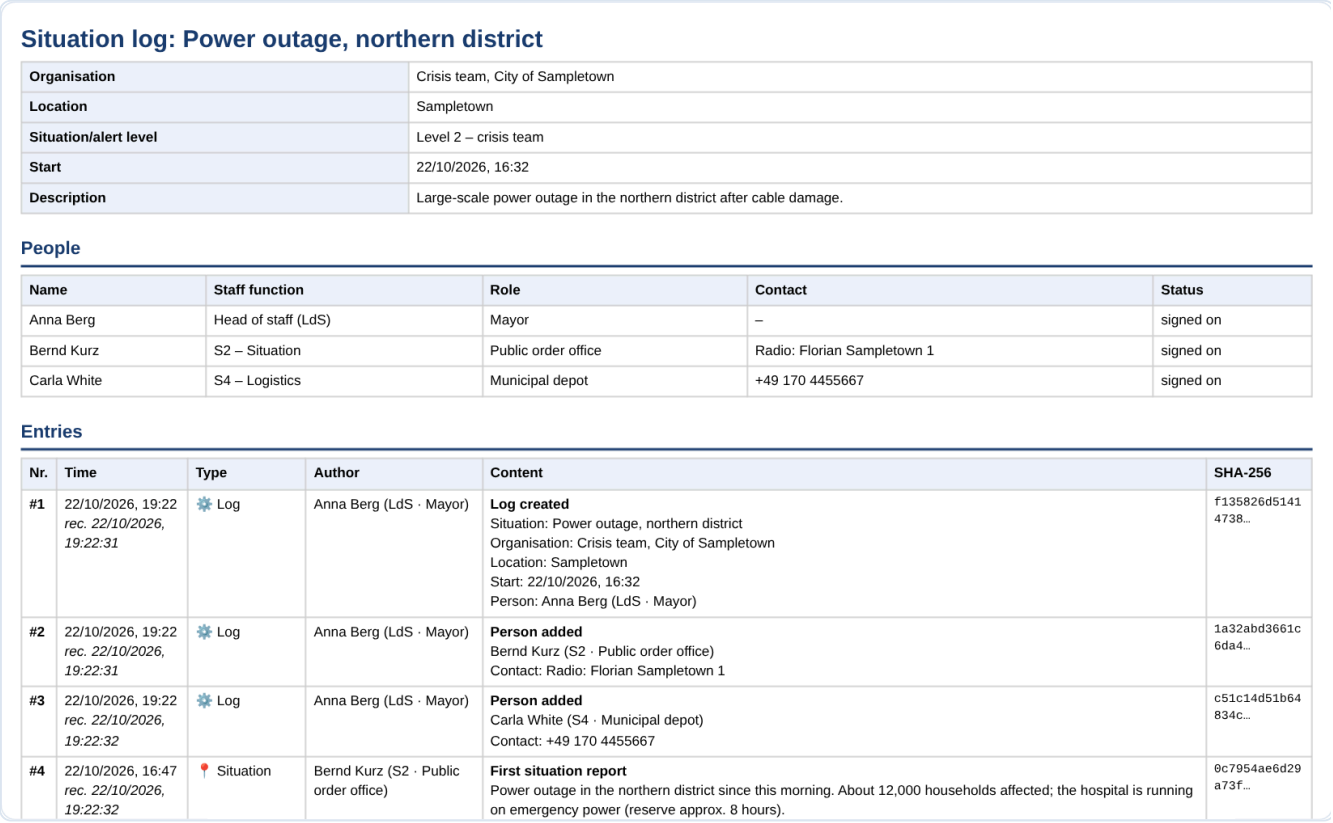


Fig. 18: Selection for the report

- *Recorded from / until* limits the report to a recording period, e.g. a shift.
- Log entries, photos, GPS data, people and message inbox can be shown or hidden – GPS data, for example, for a publication.



Situation log: Power outage, northern district

Organisation	Crisis team, City of Sampletown
Location	Sampletown
Situation/alert level	Level 2 – crisis team
Start	22/10/2026, 16:32
Description	Large-scale power outage in the northern district after cable damage.

People

Name	Staff function	Role	Contact	Status
Anna Berg	Head of staff (LdS)	Mayor	–	signed on
Bernd Kurz	S2 – Situation	Public order office	Radio: Florian Sampletown 1	signed on
Carla White	S4 – Logistics	Municipal depot	+49 170 4455667	signed on

Entries

Nr.	Time	Type	Author	Content	SHA-256
#1	22/10/2026, 19:22 *rec. 22/10/2026, 19:22:31*	⚙ Log	Anna Berg (LdS · Mayor)	**Log created** Situation: Power outage, northern district Organisation: Crisis team, City of Sampletown Location: Sampletown Start: 22/10/2026, 16:32 Person: Anna Berg (LdS · Mayor)	f135826d51414738…
#2	22/10/2026, 19:22 *rec. 22/10/2026, 19:22:31*	⚙ Log	Anna Berg (LdS · Mayor)	**Person added** Bernd Kurz (S2 · Public order office) Contact: Radio: Florian Sampletown 1	1a32abd3661c6da4…
#3	22/10/2026, 19:22 *rec. 22/10/2026, 19:22:32*	⚙ Log	Anna Berg (LdS · Mayor)	**Person added** Carla White (S4 · Municipal depot) Contact: +49 170 4455667	c51c14d51b64834c…
#4	22/10/2026, 16:47 *rec. 22/10/2026, 19:22:32*	📍 Situation	Bernd Kurz (S2 · Public order office)	**First situation report** Power outage in the northern district since this morning. About 12,000 households affected; the hospital is running on emergency power (reserve approx. 8 hours).	0c7954ae6d29a73f…

Fig. 19: Print view with situation header, people and entries

The report contains the situation header, people, all selected entries with hash value, photos with EXIF details, the message inbox, the open tasks and a verification section with the result of the chain check and the chain head. The chain check always covers the entire log.

Entries as CSV saves all entries for further processing in a spreadsheet.

13. File, integrity and settings

Log file

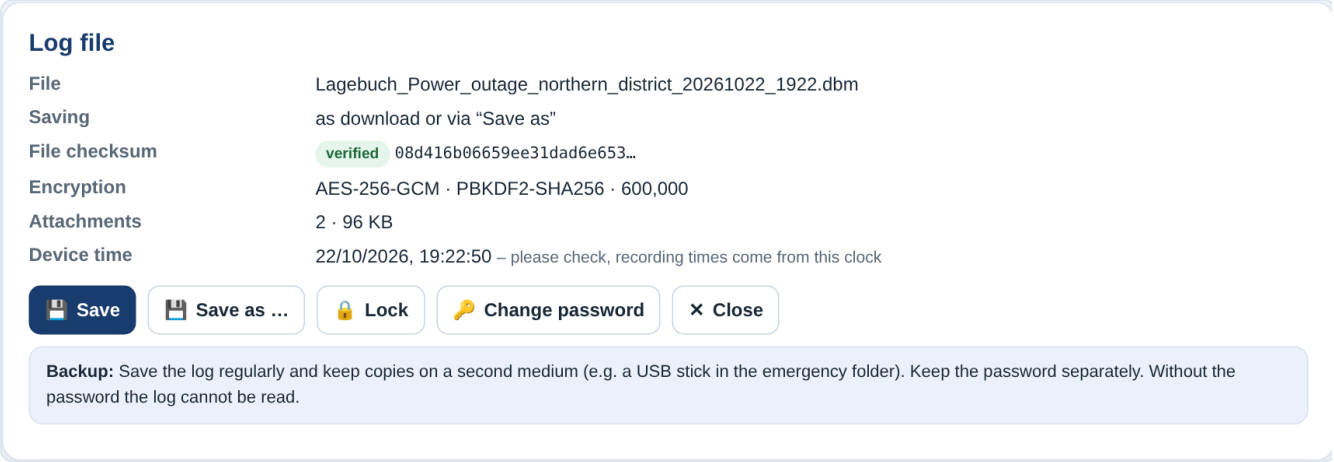


Fig. 20: Log file

Button	Effect
Save	Saves to the opened file. In Chrome and Edge the file is overwritten directly; in other browsers a download is created.
Save as …	Saves under a new name, e.g. as a backup copy on a second medium
Lock	Locks the log (chapter 4)
Change password	Set a new password; this is logged. Then save and tell everyone authorised.
Close	Closes the log; LOGBOOK asks if there are unsaved changes

The *Device time* line is a reminder that all recording times come from this device's clock.

Backup: save the log regularly and keep copies on a second medium (e.g. a USB stick in the emergency folder). Keep the password separately.

Integrity

The *Integrity* area shows the result of the chain check, the number of entries, the chain head, the state of the attachments and whether the recording times are consecutive. *Verify now* repeats the check.



Fig. 21: Integrity check

Settings

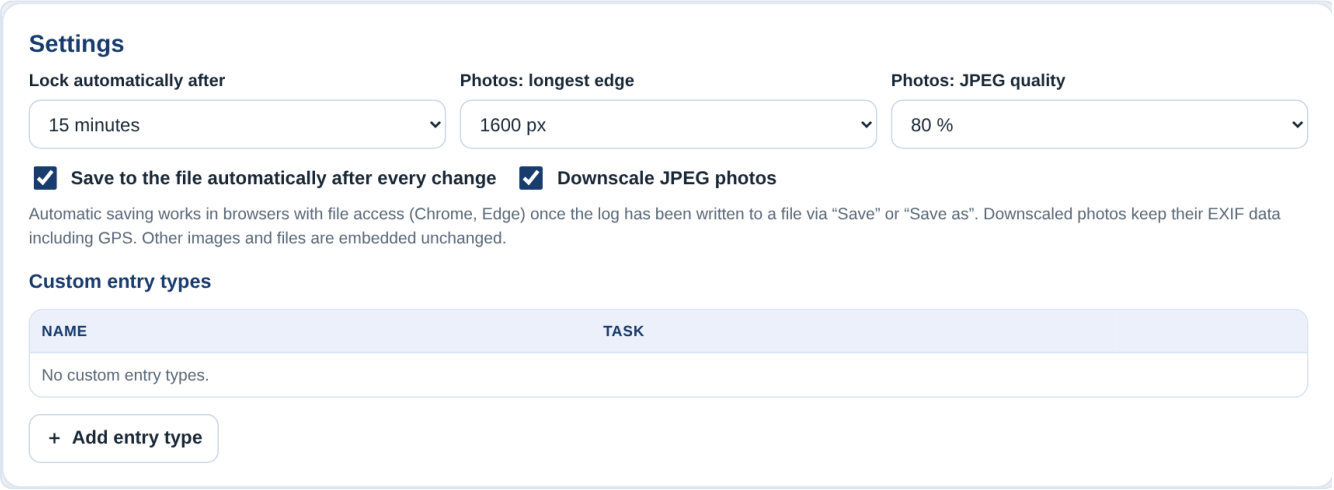


Fig. 22: Settings and custom entry types

Setting	Effect
Lock automatically after	Never, 5, 10, 15, 30 or 60 minutes without input
Save to the file automatically after every change	In Chrome and Edge, once the log has been written to a file via “Save”
Downscale JPEG photos, longest edge, quality	Keeps the log small; EXIF data including GPS is kept
Custom entry types	Additional types, e.g. “Press release” or “Water level”; optionally as a task with responsible party and deadline

14. Interaction with other programs

Program	Interaction
JUMBO BLOCK REPORT	Imports selected entries from the log with number and hash as proof of origin into the timeline of an incident file. The log is only read.
JUMBO BLOCK CHECK	Sends check results and manifest checksums as a message (.jbm) to the log
JUMBO BLOCK INVENTORY	Reports the status of a recovery as a message (.jbm) to the log

All these programs use the log's message key (.jbk). Their messages are reviewed and adopted in the message inbox like any other message.

15. Security and technology

Area	Implementation
Log file	AES-256-GCM, key derived from the password with PBKDF2-SHA-256 and 600,000 iterations; additional SHA-256 checksum of the file
Hash chain	SHA-256 per entry over the canonically ordered content including the predecessor's hash; attachments included via their SHA-256 checksum
Messages and transfers	ECDH P-256 with an ephemeral key, HKDF-SHA-256 and AES-256-GCM for the log's message key
Fingerprint	SHA-256 over the public message key, the first 96 bits in groups of four
Working state	Cached encrypted in the browser until saved
Privacy	No network connection, no telemetry

Limits

- The hash chain proves changes. However, anyone who has the file and the password could create an entirely new log. Therefore pass the chain head outside regularly – in the printed report, to a higher-level log or in REPORT messages.
- Recording times come from the device clock. Times going backwards are shown as a warning.
- Several people working in the same file at the same time is not intended. Other workstations submit messages or keep sub-logs.
- When opened over the network, the browser only provides the Web Crypto API via HTTPS. From a USB stick (`file://`) and via jumboblock.org, LOGBOOK works without restriction.

16. Troubleshooting

Problem	Cause and solution
“The password is incorrect or the file is damaged”	Check upper/lower case and keyboard layout. If the file is damaged, use the last backup.
“Hash chain broken from entry #…”	The file was changed outside LOGBOOK. Compare with a backup copy and document the incident.
File checksum does not match, chain intact	The file was touched outside LOGBOOK, but the content is unchanged. Save again.
“Recording time goes back”	A device clock was set incorrectly. Correct the clock; the affected entries remain marked.
Message “intended for another message key”	The message was created with another log's key. Ask the submitting unit to load the correct message key.
Completion is rejected	The reference does not point to an order or measure, or it has already been completed.
Automatic saving does not work	Only in Chrome and Edge and only after a first “Save”. In other browsers save manually at regular intervals.
Log becomes large and slow	Have photos downscaled; do not attach large videos, store them separately and describe them in the entry.
Transfer “differs from earlier transfers”	The sub-log was changed afterwards. Clarify with the staff section; differing entries are not adopted.