

The screenshot shows the HazView mobile application interface. At the top, it displays 'FAULTED HW [240724\_TV\_1]' with a small image of the structure. Below this, there are tabs for 'Active', 'Tarp 2', and 'Geotechnical'. A status indicator says 'Potentially unstable structure' and 'Last Inspected: 25/07/2024'. There is an 'Inspect' button. On the left, a sidebar menu includes icons for Home, Tables, Alerts, and Support. Below the main view, there are sections for 'Properties' and 'Controls'. The 'Properties' section lists several items with dates: 'Increased seepage and crack dilation' (13:05 24/07/2024), 'Structure Mechanism' (13:05 24/07/2024), '4 Major Severity' (13:05 24/07/2024), 'Yes ISA' (13:05 24/07/2024), and 'Faulted HW with seepage and crack dilation' (13:05 24/07/2024). The 'Controls' section lists '15x2m Standoff At Toe B209' and '15m Standoff At Crest B209', both added by 'Tim Vagrovic' on 13:05 24/07/2024.



# HazView.

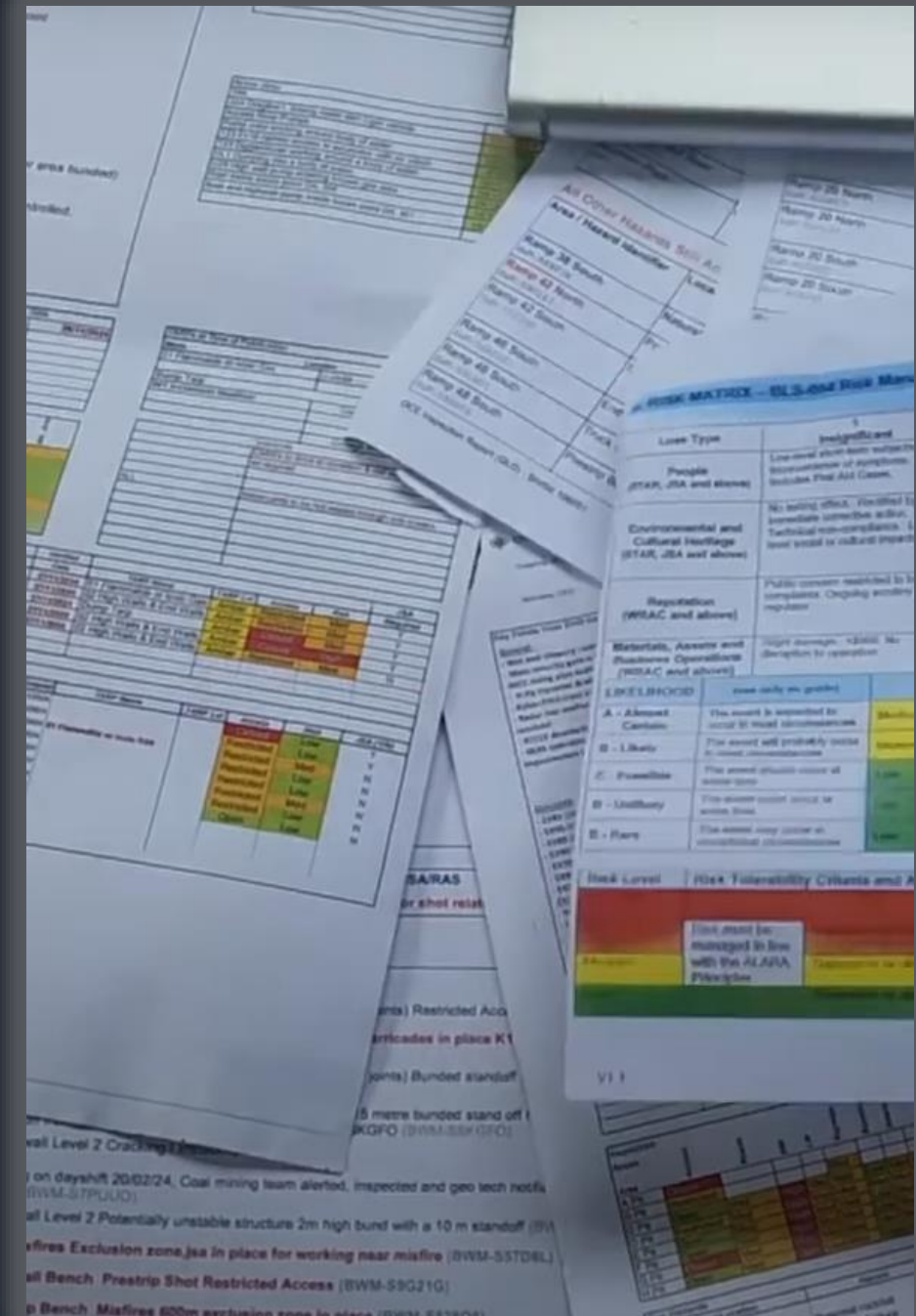
Cross-Platform Ecosystem For Managing Hazards

Questions or contact:  
[support@hazview.com](mailto:support@hazview.com)

## Hazard Reporting at Mines

### Common feedback from workers:

- CMWs often don't read the full OCE report.
  - Typical exposure is during pre-starts.
- Printed documents are **quickly outdated**.
- Text based descriptions aren't easily recognised in the pit.
- Generalised inspection checklists miss key information. **Where is the crack?**
- Difficulty in reporting leads to a lack of reporting. **It has to be simple.**



## Generalised checklists:

Interactions above or below: Are there mining activities occurring above or below that could create a hazard or be in the line of fire? Yes

EX265 is working above Ex261 - controls in place

**Sleeping Shot** Yes

VEL-06-45-OB





Photo 16

## Interactive Hazard Map:

### SLEEPING SHOT

[250220\_TV\_1]



Active Severity 5 Operational

Open drill holes Last Inspected: 21/02/2025

Change Location

Inspect

#### Controls

Add Control

Active Inactive

Control Compliant

Area restricted

Accountable Role OCE

#### Properties


Add Property

All Operational Geotechnical

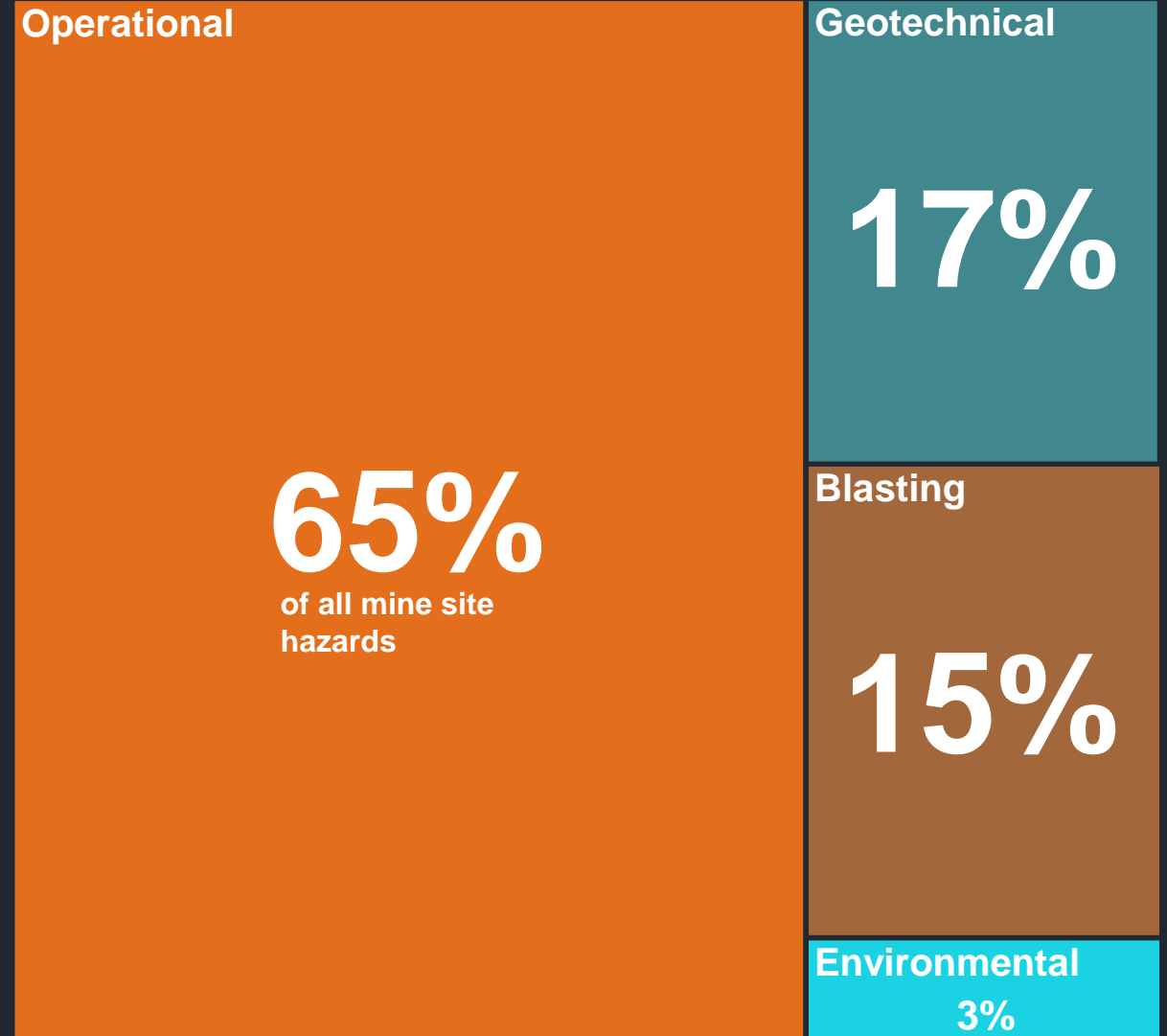
Condition

VEL-06-45-OB

Mechanism



HazView Manages  
**All Hazards** and  
makes reporting  
**Simple.**



## HazView gives every worker an **interactive hazard map**.

The screenshot displays the HazView mobile application interface. At the top, the title "HazView™" and "Staging Test Instance" are visible, along with coordinates:  $-22.06893, 148.25636$  and  $629513.8, 7558830.7$ . The main map area shows an aerial view of a construction site with several hazard markers: a blue diamond labeled "FAULTED HIGH...", a yellow triangle labeled "CLING-ONS", a yellow triangle labeled "R30", and a white circle labeled "CAT1 PADDOC...". A yellow hand icon is pointing at the "R30" marker.

On the left side, there is a navigation menu with icons for Home, Map, Table, Alerts, and Support. The main panel displays details for a hazard named "FAULTED HIGHWALL [240724\_TV\_1]". It includes a "Change Location" button and an "Inspect" button. Below this, there are tabs for "Active" and "Inactive" under the "Controls" section. The "Active" tab shows two control items:

- Control 1:** Status: **Overdue** (red), **Non-Compliant** (red). Description: "Establish and maintain 10x2m bunded standoff from highwall toe B109-110. Extents provided in hazard report." Accountable Role: "Open Cut Examiner", Due Date: "30/11/2024".
- Control 2:** Status: **Compliant** (green). Description: "10m delineated standoff behind crest." Accountable Role: "Open Cut Examiner".

On the right side, there is a settings menu with the following options:

- Inspections
- Text
- Hazard Types
  - Environmental
  - Geotechnical
  - Misfires
  - Area
  - Radar Monitoring
  - Operational
- Hazard Statuses
- Polygon Layers
- Raster Map Tiles
- DEM Map Tiles
- Overlays
- Developer Tools

At the bottom left, the version number "v0.5.1" is displayed. At the bottom right, the map data is attributed to "© Mapbox © OpenStreetMap Improve this map".

## Solution Overview

- HazView is a **cross-platform** app  
Native Apple Mac, Native iOS, Native Android, Native Windows and Web!
- HazView works **with or without internet.**
- Hazard data is **synchronized automatically.**
- HazView is **for everyone.** You get unlimited users with role-based permissions.



**Easy**  
**Set**  
**Up**

 **Turnkey - We'll set it up!**

HazView will reduce your workload – not add to it!

 **Instant access from any browser!**

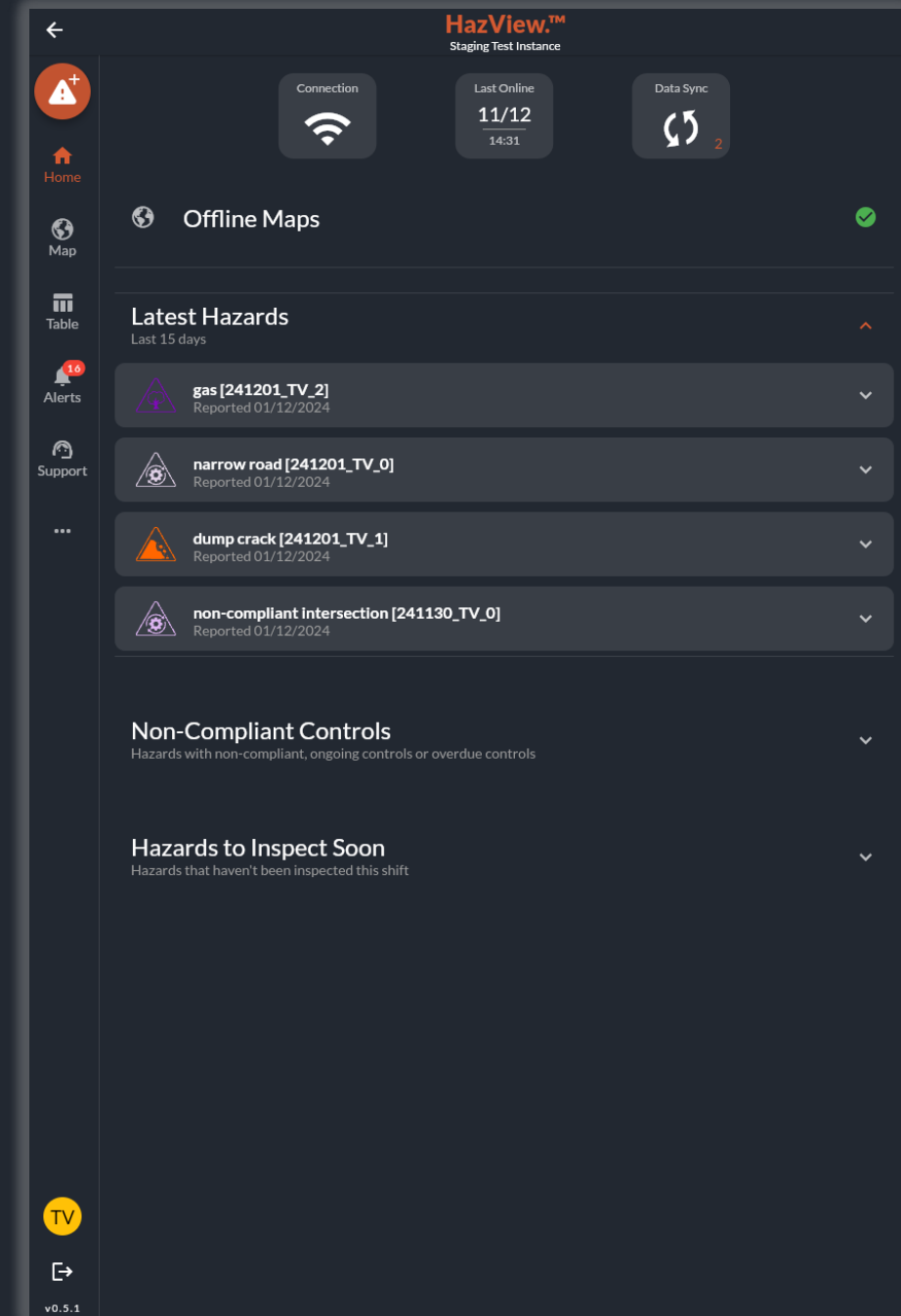
We don't need to spend time installing software on every new users computer.

 **Easy to learn**

Simple and intuitive UI so you can get up and running in 5 minutes

## HazView. Home Page

- **Connection status** – Am I online?
- **Last updated** – Do I have the latest data?
- **Data sync** – Is HazView updating right now?
- **Update maps** – Get the latest site imagery
- **Latest hazards** – What's new?



## Quick and Easy Hazard Reporting

1. Press the “**Report Hazard**” button
2. Fill out the name
3. Select a location
4. Draw an area (if applicable)
5. Add the required properties
6. Add photos, videos or documents
7. Submit!

Report Hazard

Hazard Name  
**Low Bund**

Suggested Name  
**Subsidence**

Place Hazard Location Marker

Site  
**Poitrel**

Hazard Type  
**Operational**

Hazard Subtype  
**Subsidence**

Hazard Rating  
**TARP 1**

Condition  
**Low bund**

Report Link

Root Cause

Mechanism  
**Maintenance post rainfall**

Description  
**Bunding post rainfall too low. Requires remediation**

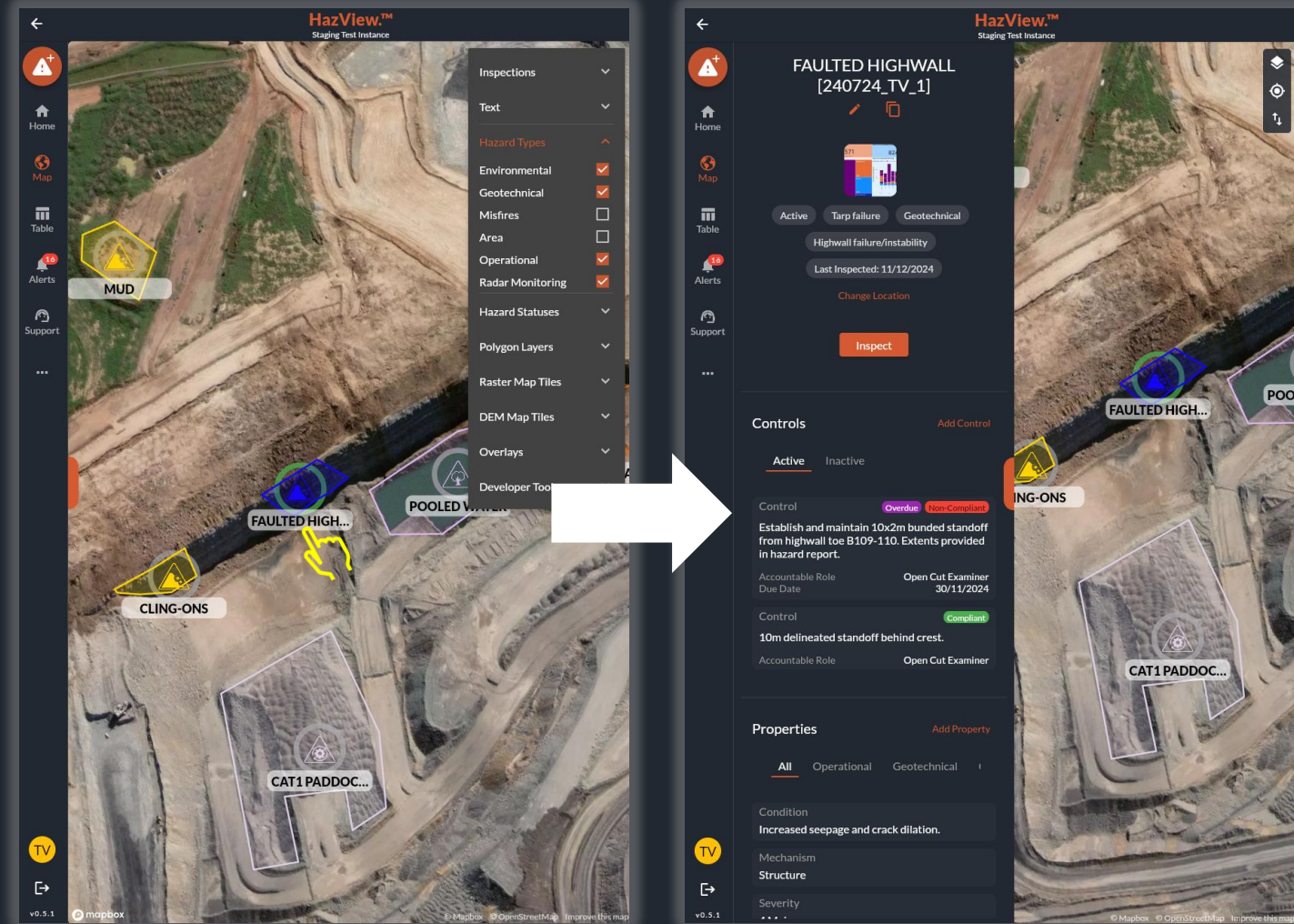
Keypoint

Severity

v0.2.8

## Hazard Map

- Your site imagery
- Hazard-type specific markers
- Hazard inspection status
- Click to see hazard properties
- Toggle layers
- Export to DXF



Click on a hazard marker to reveal the side bar!

## Hazard Page

- Hazard ratings
- Location and area
- Controls
- Properties
- Inspections
- Comments
- Media + files
- Full changes history!

**HazView™**  
Staging Test Instance

**FAULTED HIGHWALL [240724\_TV\_1]**

Active | Tarp failure | Geotechnical | Highwall failure/instability | Last Inspected: 11/12/2024

Map view showing hazard annotations: MUD, CLING-ONS, FAULTED HIGH..., POOLED WATER, CRACKING.

**Controls** Add Control

Active | Inactive

Control Overdue Non-Compliant

Establish and maintain 10x2m bunded standoff from highwall toe B109-110. Extents provided in hazard report.

Accountable Role: Open Cut Examiner  
Due Date: 30/11/2024

Control Compliant

10m delineated standoff behind crest.

Accountable Role: Open Cut Examiner

**Properties** Add Property

All | Operational | Geotechnical | General | Test

Condition

Increased seepage and crack dilation.


v0.5.1

## Hazard Table

- Query and filter all hazards (active and resolved)
- Arrange columns in a convenient way
- Hide columns
- Sort columns
- Export to .csv

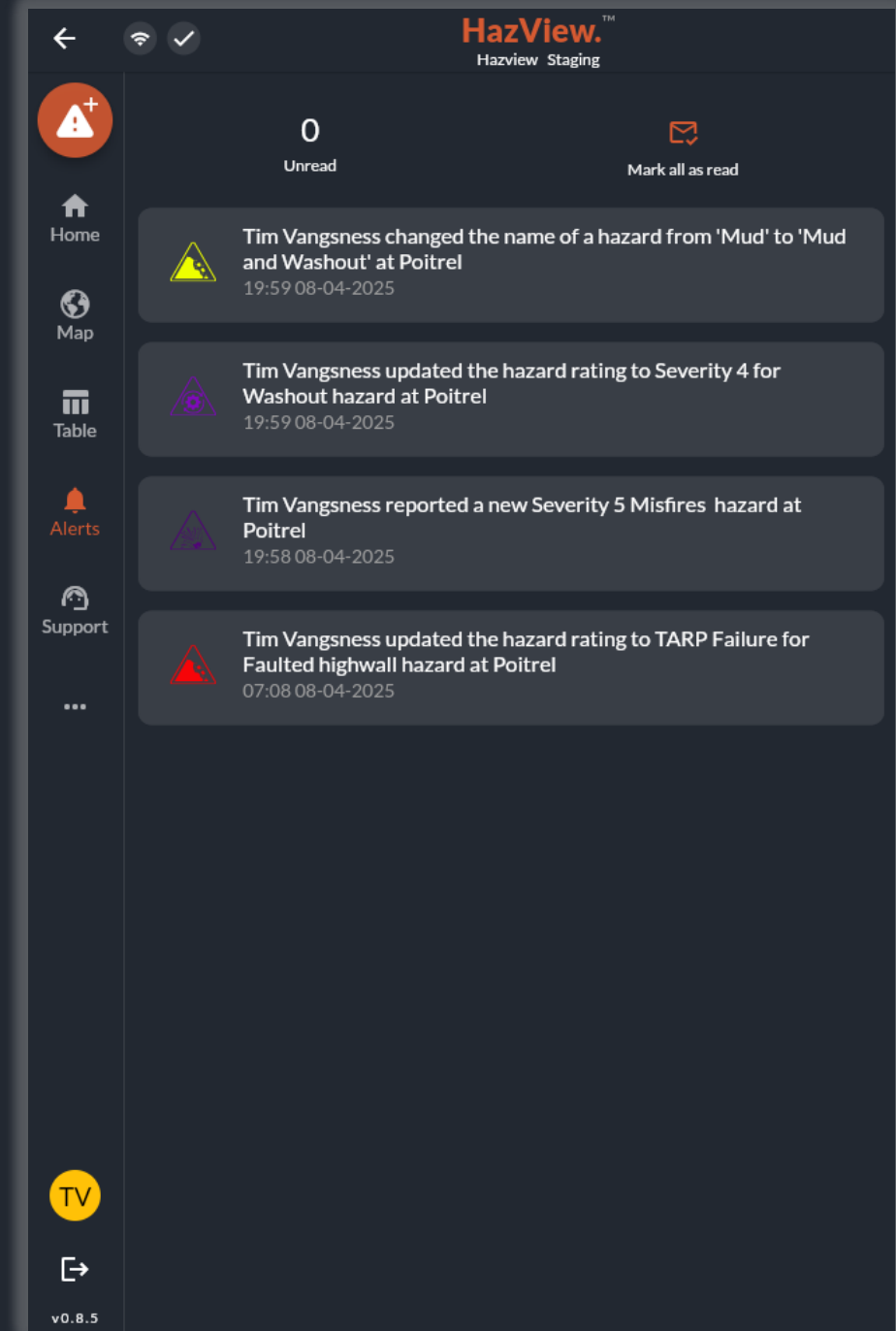
HazView.™  
Staging Test Instance

| Name                  | Quick Id     | Date Reported    |                                |
|-----------------------|--------------|------------------|--------------------------------|
| Contains              | Contains     | Contains         |                                |
| HW.Fault              | null         | 17:15 14-01-2024 |                                |
| Test                  | 240520_SH_0  | 12:06 20-05-2024 |                                |
| R40N_S28_0            | null         | 17:19 14-01-2024 |                                |
| Pooled water          | 241007_TV_0  | 17:33 07-10-2024 |                                |
| DUMP:A_0              | null         | 16:38 07-01-2024 |                                |
| Ramp.B.flooded.bit    | 241101_TV_0  | 09:07 02-11-2024 |                                |
| Radar.SSR443          | 240711_TV_12 | 17:18 11-07-2024 | Highwall monitoring            |
| R10N_S39_0            | null         | 12:25 15-01-2024 | Potentially unstable structu.  |
| Mud                   | 240519_TV_0  | 12:38 19-05-2024 | Dump mud                       |
| test                  | 240616_TV_0  | 08:08 17-06-2024 | Test                           |
| R30NB_S30_0           | null         | 11:13 16-01-2024 | Mine operation interactions    |
| Dozer.push            | 240421_TV_0  | 17:01 21-04-2024 |                                |
| Hot.Tire              | 241102_TV_0  | 15:30 02-11-2024 | Testing                        |
| Car.park.construction | 240321_TV_0  | 15:58 21-03-2024 |                                |
| Test                  | 240612_SH_2  | 21:44 12-06-2024 | Test                           |
| R10                   | 240711_TV_1  | 16:45 11-07-2024 | R10 area                       |
| Water.Dam             | 240711_TV_6  | 16:52 11-07-2024 | Full after rain                |
| R10S_S25_0            | null         | 12:36 15-01-2024 | Undercut / over steepened .    |
| TN_CrestCracking_0    | null         | 20:22 20-02-2024 |                                |
| HW.jointing           | null         | 12:33 15-01-2024 | Cracking / instability         |
| R10S_32_4_0           | null         | 12:08 03-02-2024 | Slumping                       |
| R30NB-Gas_0           | null         | 11:51 03-02-2024 | Gas density getting worse      |
| R10                   | 240711_TV_0  | 16:44 11-07-2024 | R10 area                       |
| Cracking              | 241013_SH_0  | 22:17 13-10-2024 | To be monitored                |
| Cling-ons             | null         | 17:11 14-01-2024 | Cling-on.                      |
| HW.Wedge              | null         | 12:30 15-01-2024 | Rockfall / excessive ravelling |
| testarea_0            | 240327_TV_1  | 21:32 27-03-2024 |                                |
| R30S_S39_0            | null         | 11:21 16-01-2024 | Spontaneous combustion         |
| Test                  | 240425_SH_1  | 15:34 25-04-2024 |                                |
| Test.hazard           | 240612_SH_0  | 10:32 12-06-2024 | Test                           |
| R20                   | 240711_TV_4  | 16:49 11-07-2024 | R20                            |

Export to CSV  Count: 153

## Notifications

- **In-app notifications** are generated for all substantial hazard changes
- **Email notifications** are sent out based on user-roles
- **Custom settings** to determine which user types get what notifications



## Inspections

- Set-up **your own inspection schedule** (multiple per day, daily, weekly etc.)
- Inspections can be restricted to **pre-defined user roles**
- **Visual corona** to see what hazards have been inspected.
- **Custom inspection types** (Environmental, Geotechnical e.g.)

The screenshot displays the HazView mobile application interface. At the top, it shows 'HazView.™ Staging Test Instance'. The main screen is titled 'CLING-ONS [NULL]' and features a navigation sidebar on the left with icons for Home, Map, Table, Alerts, and Support. The central panel includes a 'Last Inspected: 29/11/2024' timestamp, a 'Change Location' link, and a prominent orange 'Inspect' button with a hand cursor icon. Below this is a 'Controls' section with tabs for 'Active' and 'Inactive', and an 'Add Control' button. A list of controls is shown, including '10x2m bunded standoff at highwall toe' (Compliant), 'Dragline to scale highwall' (Ongoing), and 'Example' (Non-Compliant). The 'Properties' section at the bottom shows details for a 'Cling-on' condition, such as 'Cline-on left oost DRE exposure of highwall' and 'Design - Structure'. On the right, a map view shows an aerial image of a construction site with various hazard markers: a yellow triangle labeled 'MUD', a blue triangle labeled 'FAULTED HI', a yellow triangle labeled 'CLING-ONS', and a yellow triangle labeled 'CAT1 PA'. A yellow hand cursor is also visible on the map near the 'CAT1 PA' marker.

## Controls

- Add controls to hazards when necessary
- Mark the controls as **Non-compliant, Ongoing or Compliant**
- Assign an **Accountable Role**
- Assign a **Due Date**

The screenshot displays the HazView mobile application interface. The top right corner shows the app name "HazView.™" and the subtitle "Staging Test Instance". The left sidebar contains navigation icons for Home, Map, Table, Alerts, and Support. The main content area is divided into three sections: Controls, Properties, and Inspections.

**Controls Section:** A table lists three controls, with the first one highlighted by a red box. The table has columns for "Active" and "Inactive" status, and a "Compliant" status indicator.

| Control  | Compliant             |
|--|-----------------------|
| 10x2m bunded standoff at highwall toe.<br>23/11/24 1240am<br>Accountable Role: Open Cut Examiner | Compliant             |
| Dragline to scale highwall<br>Accountable Role: Open Cut Examiner                                | Ongoing               |
| Example<br>Accountable Role: Survey<br>Due Date: 10/12/2024                                      | Overdue Non-Compliant |

**Properties Section:** A dropdown menu is set to "Geotechnical". The properties listed are:

- Root Cause: Design - Structure
- Mechanism: Highwall - Toppling
- Runout Angle: 31

**Inspections Section:** A list of three inspections by "Tim Vangsness" with timestamps: 16:31 29/11/2024, 15:08 28/11/2024, and 12:17 24/11/2024.

**Map View:** The right side of the screen shows an aerial map with several hazard markers: "MUD", "CLING-ONS", "FAULTED HI", and "CAT1 PA".

## HazView Report Generator

- HazView generates shift-based reports with the **click of a button**.
- The format is **completely customisable**.
- PDF is updated **live and automatically**
- Submitted reports are **archived in the cloud**
- Inspectors automatically signed on
- Updates with inspection schedule
- Easily manage keypoints

**HazView™**  
OCE Report Generator

**Report Not Submitted**    **Submit Report**    **Print Report**    **Download PDF**

**Open Cut Examiners - Inspection Report**    **Example Mine Site**    **H.**  
11/12/2024 Day Shift

**Outgoing Examiners (This Shift)**    **Incoming Examiners (Next Shift)**

| Name         | Signature | Date and Time    | Name            | Signature | Date and Time |
|--------------|-----------|------------------|-----------------|-----------|---------------|
| Tim Vangness |           | 11/12/2024 14:52 | Tim Vangness    |           | 11/12/2024    |
|              |           |                  | Support Hazview |           | 11/12/2024    |

**LEGEND**

- Hazard with JSA
- Hazard is misfire or shot related

**Key Points**

- Example key point with a JSA
- Example keypoint with associated tag
- Test keypoint
- JSA required (240711\_TV\_0)
- Here is a test basic keypoint. I have now updated it
- Here is another keypoint
- Here is a third keypoint. Edited
- Here is a test keypoint. Edited
- JSA required (240711\_TV\_0)
- DPP of Tertiary material JSA required with potential cracking and subsidence. (240711\_TV\_11)
- This is a keypoint. Here is some additional text
- Keypoint for a geotechnical failure. (240810\_LL\_0)
- Mud has been dumped historically and post heavy rainfall has been wet up. This will be a hazard for future dumping in the area. (241123\_TV\_0)

| Area Description | Status | Inspected | Area Description | Status | Inspected | Area Description | Status | Inspected |
|------------------|--------|-----------|------------------|--------|-----------|------------------|--------|-----------|
| R10              | Yes    | Yes       | R40              | Yes    | Yes       | Stockpile B      | Closed | Yes       |
| R20              | Yes    | Yes       | R45 Dump         | Yes    | Yes       | Walker Dam       | Closed | No        |
| R25              | Yes    | Yes       | R50              | Yes    | Yes       |                  |        |           |
| R30              | Yes    | Yes       | Stockpile A      | Yes    | Yes       |                  |        |           |

**Hazards Identified This Shift**

| Name | Location | Type and Subtype | Description | Severity or TARP | JSA/JSA/BAS | Access | Last Inspected |
|------|----------|------------------|-------------|------------------|-------------|--------|----------------|
|      |          |                  |             |                  |             |        |                |

**Hazards Resolved This Shift**

| Name | Location    | Type and Subtype             | Description | Severity or TARP | JSA/JSA/BAS | Access | Last Inspected                    |
|------|-------------|------------------------------|-------------|------------------|-------------|--------|-----------------------------------|
| test | 241119_LL_1 | Environmental Gas            | test        | Severity 2       |             |        | 11/12/2024 12:37 Sam Hildop Lynch |
| test | 241128_LL_0 | Environmental Cattle on Road | Test        | Severity 2       |             |        | 7/12/2024 12:37 Sam Hildop Lynch  |

**Hazards Re-Inspected This Shift**

| Name               | Location    | Type and Subtype                          | Description   | Severity or TARP | JSA/JSA/BAS | Access | Last Inspected                |
|--------------------|-------------|---|---|------------------|-------------|--------|-------------------------------|
| Ramp B Flooded pit | 241118_TV_0 | Geotechnical Wet/Boggy                    | Flooded pit is flooded  | TARP 1           | Yes         |        | 11/12/2024 14:52 Tim Vangness |
| Flooded highwall   | 240726_TV_1 | Geotechnical highwall failure/instability | Flooded pit with seepage and crack dilation. This is an example of a large amount of text which is expanded when the user selects the box or places their cursor over it. | TARP Failure     | Yes         |        | 11/12/2024 14:54 Tim Vangness |
| Ramp Dump Failure  | 240506_TV_0 | Geotechnical                              | Dump failure due to overnight dumping and weak foundations  | TARP 2           |             |        | 11/12/2024 14:52 Tim Vangness |
| Spillage rail      |             | Geotechnical highwall failure/instability | Best spillage from presplit shot. Tertiary material actively travelling onto highwall bench   | AMP 1            |             |        | 11/12/2024 14:52 Tim Vangness |

Report Generated With HazView 11/12/2024 14:52 By Tim Vangness    Page 1 of 3

**Open Cut Examiners - Inspection Report**    **Example Mine Site**    **H.**  
11/12/2024 Day Shift

| Name         | Location     | Type and Subtype                       | Description                                       | Severity or TARP | JSA/JSA/BAS | Access | Last Inspected                |
|--------------|--------------|--|---|------------------|-------------|--------|-------------------------------|
| Radar SBR443 | 240711_TV_32 | Radar Monitoring Background Monitoring | Radar monitoring of #20 highwall during operation | Critical         | Yes         |        | 11/12/2024 14:52 Tim Vangness |

**All Other Hazards Still Active**

| Name        | Location    | Type and Subtype                      | Description   | Severity or TARP | JSA/JSA/BAS | Access | Last Inspected               |
|-------------|-------------|---------------------------------------|---|------------------|-------------|--------|------------------------------|
| BAS         | 241201_TV_2 | Environmental Gas                     | gas smell leaking during night shift. area requires further investigation with gas monitors | Severity 4       |             |        | 1/12/2024 11:38 Tim Vangness |
| Basin cove  | 241201_TV_1 | Geotechnical Dump failure/instability | excavate  | AMP 2            |             |        | 1/12/2024 11:54 Tim Vangness |
| narrow road | 241201_TV_0 | Operational Cattle on Road            | cattle limiting road width, expected to remain for multiple days                            | Severity 1       |             |        | 1/12/2024 11:13 Tim Vangness |

To zoom in on a page, double tap on the page and the pinch or scroll. Double tap in the grey area to exit zoom.

v0.3.1

# HazView Data Interoperability

Pull data into HazView – Export data from HazView

## Map Sources

- HazView can accept and display **multiple map sources**
- Add both **raster** (flyover mosaic) and **digital-elevation-model** (DEM)
- Selectively cache map sources for offline viewing
- **Customise** Online and Offline quality

The screenshot displays the HazView web application interface. At the top, the logo 'HazView™ Staging Test Instance' is visible. The navigation menu includes 'Staff', 'Hazards', 'Inspections', 'Company', 'API', 'Maps and GIS', and 'HazView Admin'. The 'Maps and GIS' section is active, showing 'Map Servers' and 'Map Layers' management options.

**Map Servers**  
Add, edit, or remove map servers. These servers are used to display map tiles on the map.

| Id                         | Name     | Type     | Cache By Default |
|----------------------------|----------|----------|------------------|
| Contains                   | Contains | Contains | Contains         |
| eefd6a19-9ffb-4945-8ef5... | Basemaps | Raster   | true             |

**Map Layers**  
Add geojson layers to the map. These layers can be used to display auxiliary data on the map.

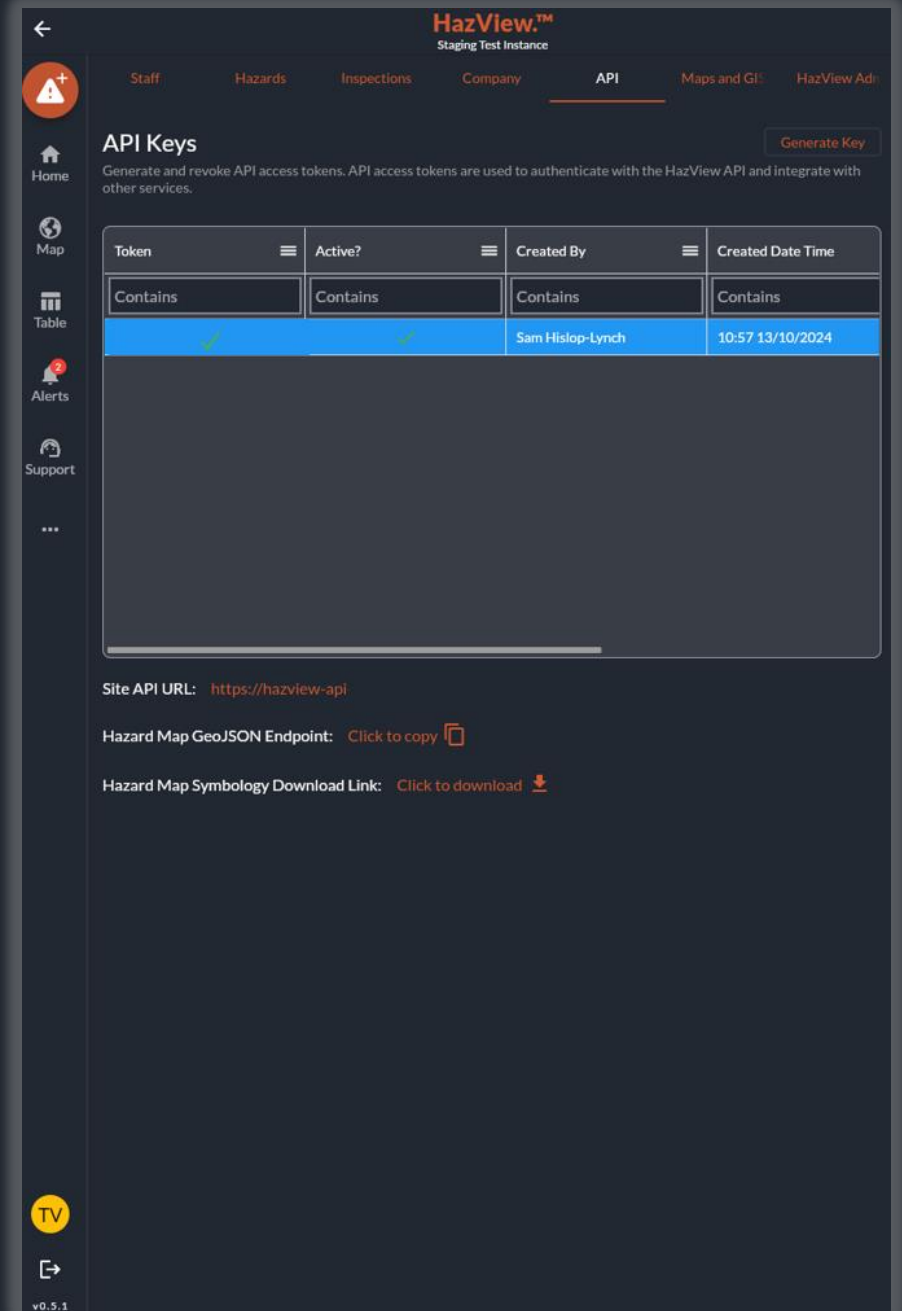
| Id       | Layer Name | Feature Count | Delete Layer |
|----------|------------|---------------|--------------|
| Contains | Contains   | Contains      | Contains     |

No records to show.

**GIS Projections**  
Transform map data to different projections. This is used for exporting hazard data and determining hazard positions.

## HazView REST API

- **Extend** your existing software with the HazView REST API
- Retrieve hazard data **on-demand**
- **Protected** read-only **endpoint** with token authentication
- **Create and revoke** tokens for added security



The screenshot displays the HazView REST API management interface. The page title is "API Keys" and it includes a "Generate Key" button. Below the title is a table with the following columns: Token, Active?, Created By, and Created Date Time. The table contains one row with the following data: Token: Contains, Active?: Contains, Created By: Sam Hislop-Lynch, Created Date Time: 10:57 13/10/2024. Below the table, there are links for "Site API URL: https://hazview-api", "Hazard Map GeoJSON Endpoint: Click to copy", and "Hazard Map Symbology Download Link: Click to download". The interface also features a sidebar with navigation options: Home, Map, Table, Alerts, and Support.

| Token    | Active?  | Created By       | Created Date Time |
|----------|----------|------------------|-------------------|
| Contains | Contains | Sam Hislop-Lynch | 10:57 13/10/2024  |

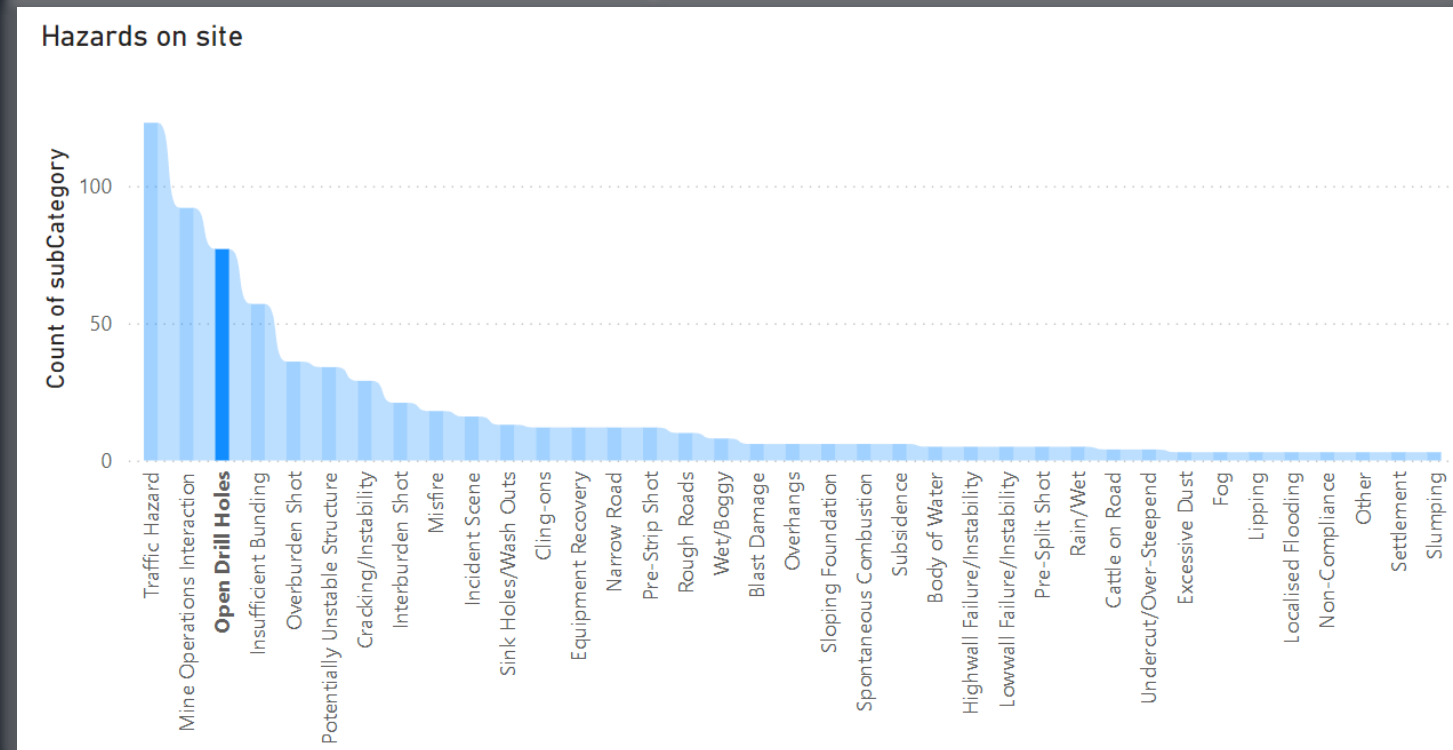
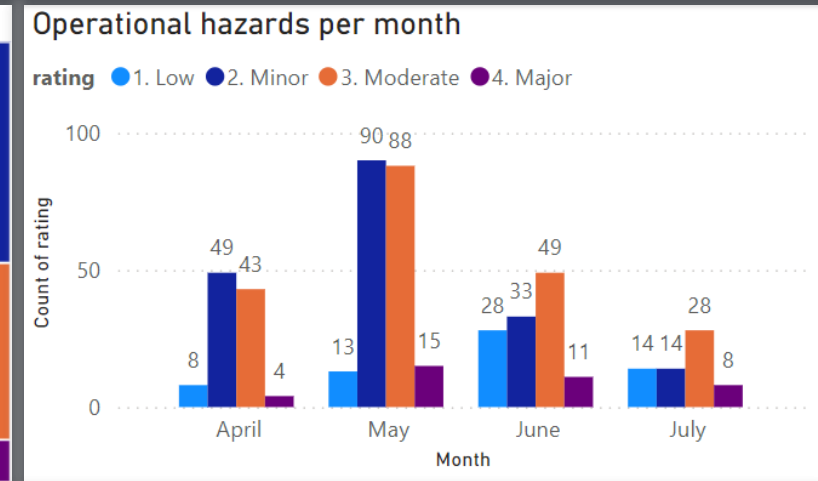
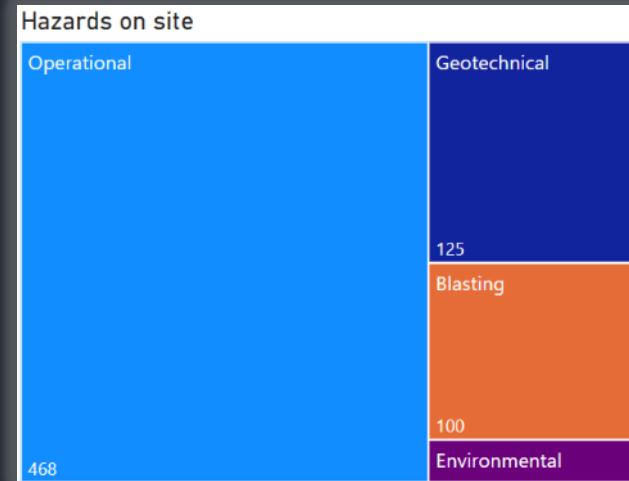
Site API URL: <https://hazview-api>

Hazard Map GeoJSON Endpoint: [Click to copy](#)

Hazard Map Symbology Download Link: [Click to download](#)

## Business Intelligence / Analytics

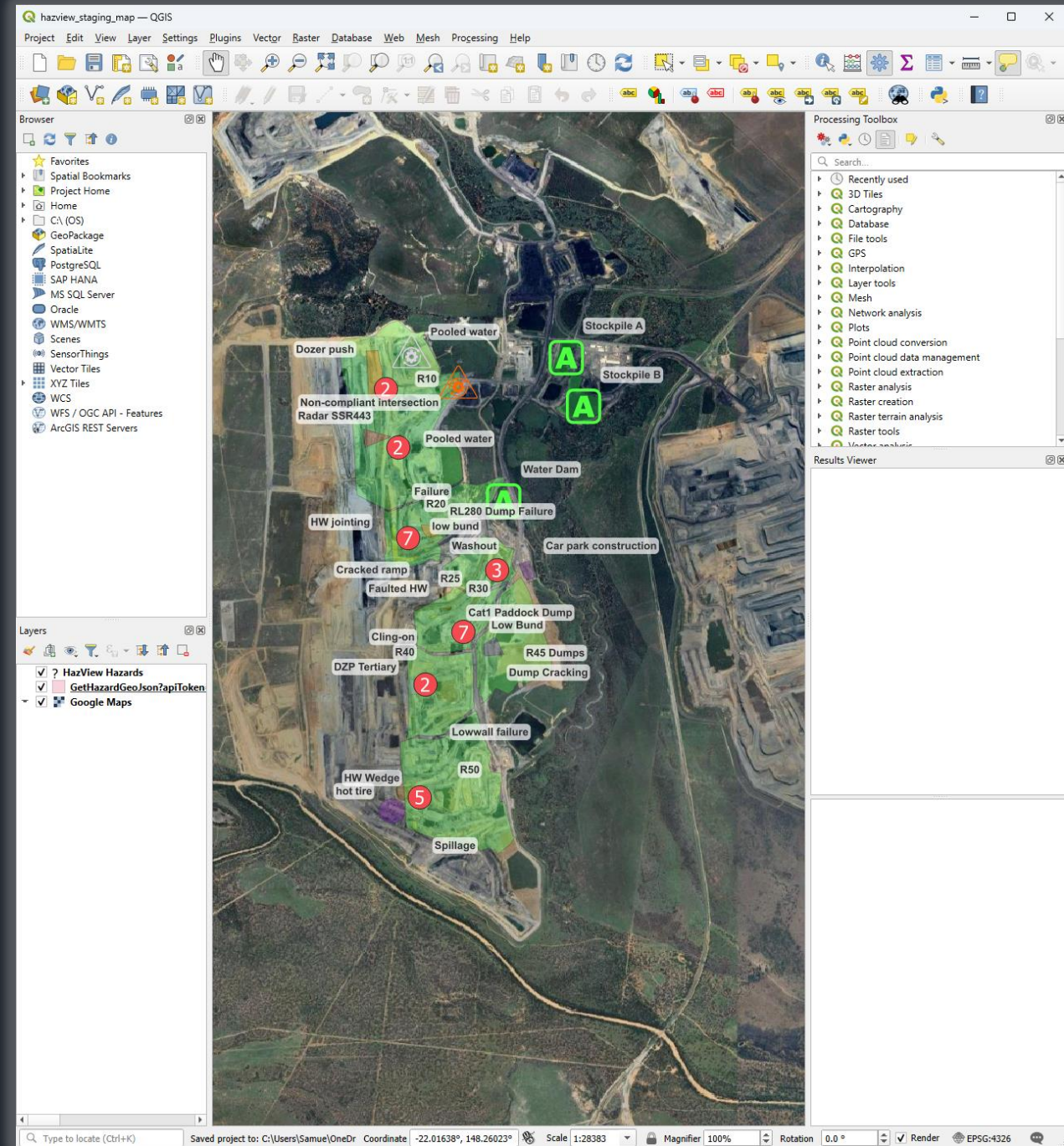
- Connect your database to **PowerBI**
- **Monitor and evaluate** site-specific risks
- **Transform data** into strategic decisions
- Visualise and **communicate trends**



## GIS System Integration

- Live **GeoJSON** endpoint
- Download your HazView **symbology**
- Connect HazView to **QGIS** and other GIS applications
- Integrate with ArcGIS online<sup>†</sup>

† Requires additional setup to refresh



# Who Can Access HazView?

Is the data available to everyone? Are there permissions to control who can edit the hazard data?

## HazView Users

- **Everyone** can have a copy of HazView on their device
- **Setup custom roles** (e.g. OCE, Geotechnical Engineer, Supervisor)
- Role-based **read/write privileges**
- Administration control for **adding and deactivating** accounts (contractors, ex-employees)



# What Does a HazView Trial Look Like?

How long does long is a trial and what's involved?

## HazView Demonstration

Online meeting to demonstrate HazView:

- Functionality.
- Integration.
- Trial structure.
- Live demonstration.



### **Business solution: Sites current systems and HazView integration.**

- Production manager.
- Technical services manager.
- OCE supervisor.
- Geotechnical supervisor.

### **Technical Overview: Required structure, roles and functionality.**

- OCEs
- Geotechnical engineers.
- Mine planners.
- Survey supervisor.

### **Procurement: Vendor approval, legal and IT.**

- IT representative.
- Procurement officer/representative.

## **Trial Agreement:**

- Both parties agree to undertake a 6-week free trial of the HazView software.

## **Internal Champion Nomination:**

- Internal champion will be point of contact for data handover, site visit organisation and helping to facilitate meetings.



## **HazView set-up (Week 0): Getting everything ready.**

- HazView will request data from internal champion.
- Aerial imagery.
- Typical OCE report.
- Hazard reports.
- .dxf of general areas and hazard locations.
- Site specific lat/long to easting/northing transforms.
- Site specific TARPs and risk rating systems.
- Trial agreement between HazView and Site will be signed.
- Determination and agreement of trial success KPIs.

# HazView.

## Kickoff On-Site (Week 1-2): Testing the software

- HazView team come to site and launch the trial.
- Finalise site setup.
- Training for all users.
- Site users test the software:
  - Build familiarity.
  - Trial the software in the field.
  - Maintain up-to-date hazard information.
  - Generate shift-based reports.
- Weekly meetings to discuss progress, collect feedback and ensure successful onboarding.



## Full Transition (Week 3-6): Using the software

- Site uses HazView as main source of truth.
- All teams keep their information updated (OCE, geotechnical e.g.).
- Reports are generated and published based on HazView data.
- All users have access.
- Vendor confirmation.
  - HazView to be set up as a vendor.
  - Processing of any required security, legal and procurement requests.
- Weekly meetings to discuss progress, collect feedback and ensure successful trial.

HazView.

# HazView.

## Safety Just Got A Major Upgrade

