BLASTPLAN^3 TM

The Next Evolution in the BlastPlan Suite

BMI
www.blastmanagement.com.au

Introduction

The latest evolution in the trusted BlastPlan suite—**BLASTPLAN^3**—delivers a powerful, intuitive, and fully integrated CAD-based drill and blast design solution. Developed **by Blasting Engineers, for Blasting Engineers**, BlastPlan has supported surface operations globally since 2012.

Whether you're planning production shots, presplits, or complex bespoke blasts, **BLASTPLAN^3 brings every aspect of drill and blast design into one seamless, intuitive platform**.

With its **modern user interface** and **streamlined workflow**, most engineers can begin creating designs with **just 1 hour of training**, as demonstrated in BMI's surface blast engineering courses.

Built for Performance

BLASTPLAN^3 is a **single, comprehensive application** for:

- Pattern design
- Charge rule assignment
- Timing design and simulation
- Equipment-ready export

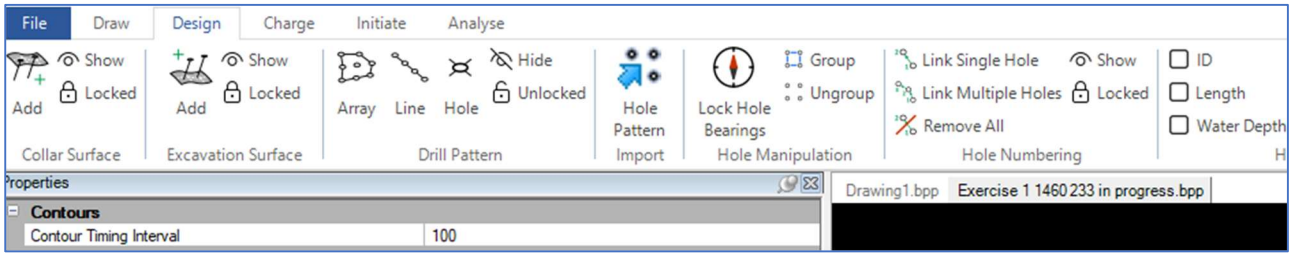
Complex, custom, and production blasts—**all handled with ease** in one tool.

BLASTPLAN^3 Core Features

This brief brochure highlights some of the key functionality of the tool, - for a comprehensive understanding however, we recommend viewing our videos online, and downloading a trial license for a fully functional version.

System Configuration

The BLASTPLAN^3 user interface features upgraded industry standard 'ribbon' style structure, logically laid out in line with the drill and blast design process. From here all the CAD functions are accessible for editing and manipulation. BlastPlan^3 is built upon the 'VectorDraw' CAD platform commonly used by best in class design applications such as Deswick and Datablast. BLASTPLAN^3 does NOT require any add on applications.



Logically Laid Out Ribbons following the Design Process

Import Data

Import data directly from survey in DXF (from most mine planning tools) or point cloud format (for detailed topographic data). Easily overlay TOPO surfaces and **blast limit boundaries** to ensure real-time spatial accuracy, especially where pit shells change frequently.

Imported Survey Data

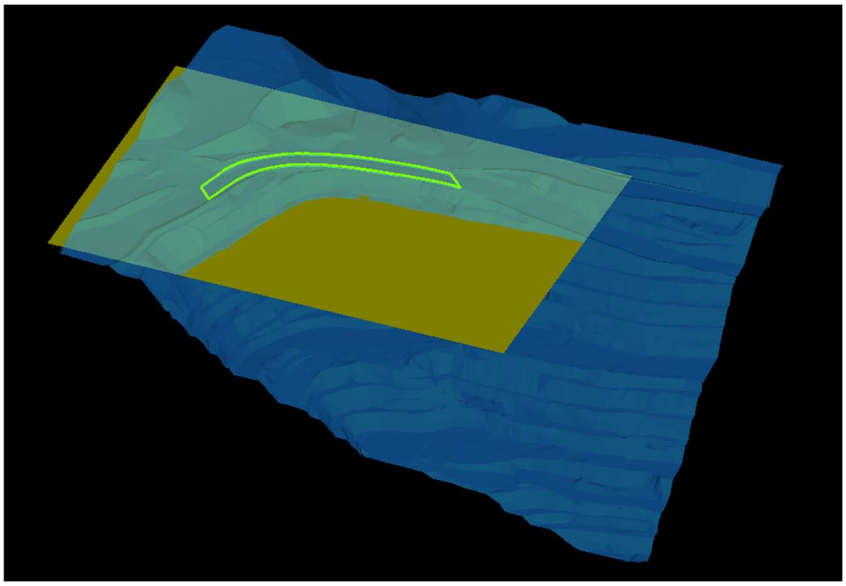
Topo (triangulated survey) And Blast Limits

Create/Identify Excavation Limits

Mark out the boundaries of the blast—floor, crest, walls—based on:

- Topographic surfaces
- Planning data
- RL (Reduced Level) definitions

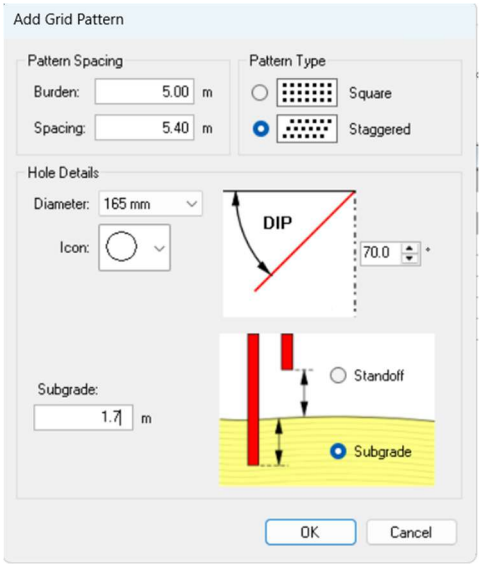
This ensures the pattern generation is fully constrained within approved design envelopes.



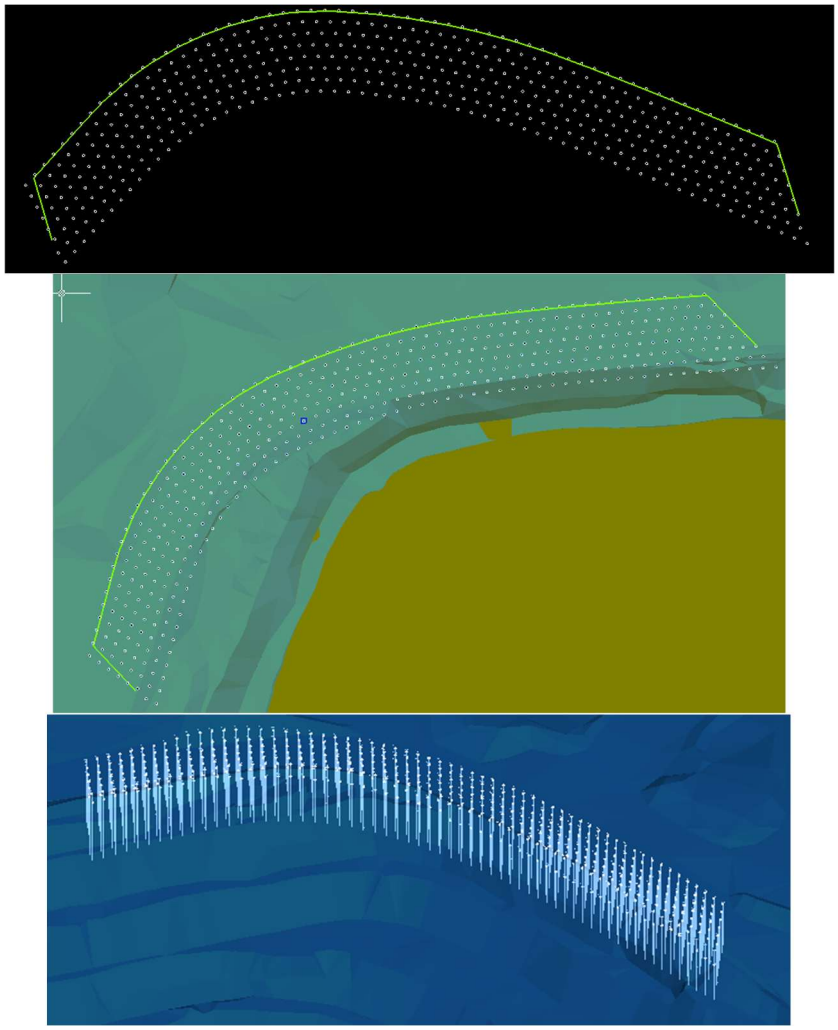
Define excavation limits according to RL

Define Hole Properties and Create Pattern

Create hole properties for the specific pattern - Burden and spacing, diameter, bearing, subdrill, staggered, square. Identify the blast limits and allow BlastPlan^3 to automatically generate the pattern within the excavation boundaries, and automatically adding subdrill where specified.
Zonal patterns may be created – Presplits for instance, where hole properties may differ from the production hole properties. Review and modify manually as required against the survey data of face.
Manually edit holes, shift, rotate or delate as needed.
Visual validation against TOPO to check coverage, layout integrity, and highwall conformity



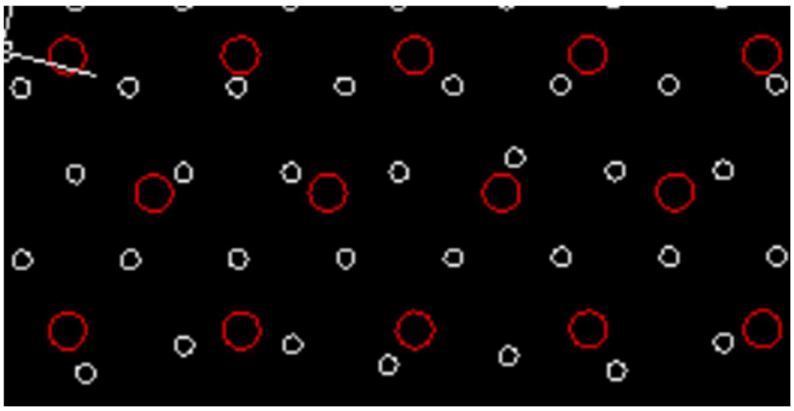
User Friendly Hole Property Definition



Pattern Array Assignment within Limits

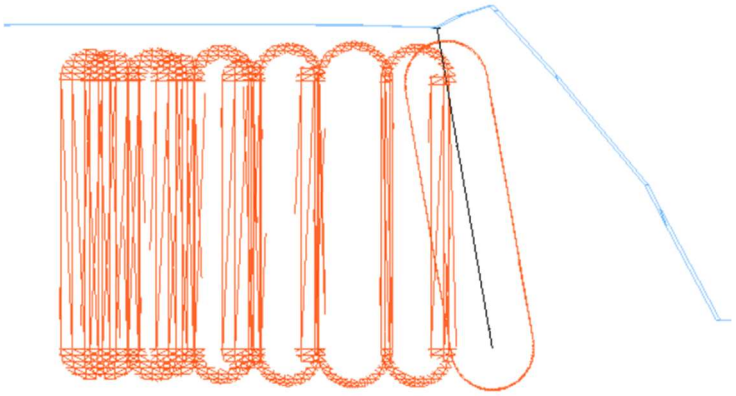
Socket Check and Burden Check

Superimpose hole sockets from previous blast to ensure holes do not intersect. Holes may be repositioned accordingly in accordance to regulations.



Superimposition of Sockets – Manipulate new Hole Collar Positions

Perform burden check against previously defined minimum burden (function of hole diameter) to ensure that risk of face burst or flyrock is minimised. BlastPlan3 will flag potential problem holes allowing repositioning ensuring compliance with safety standards.

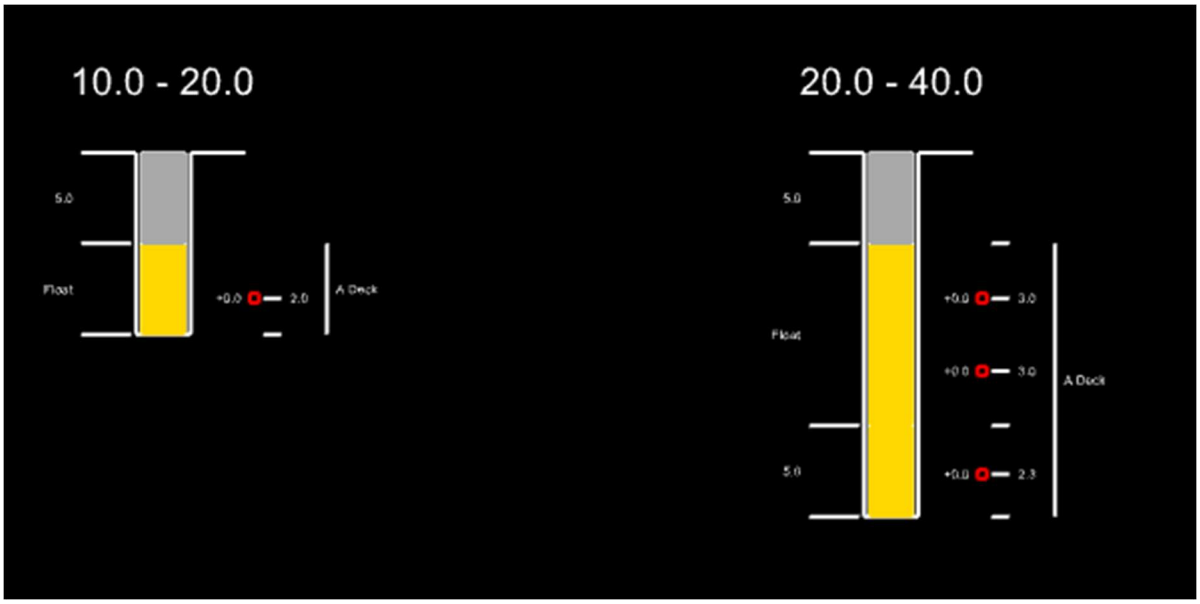


Burden Check – Minimise Face Burst and Flyrock

Create and Assign Charge

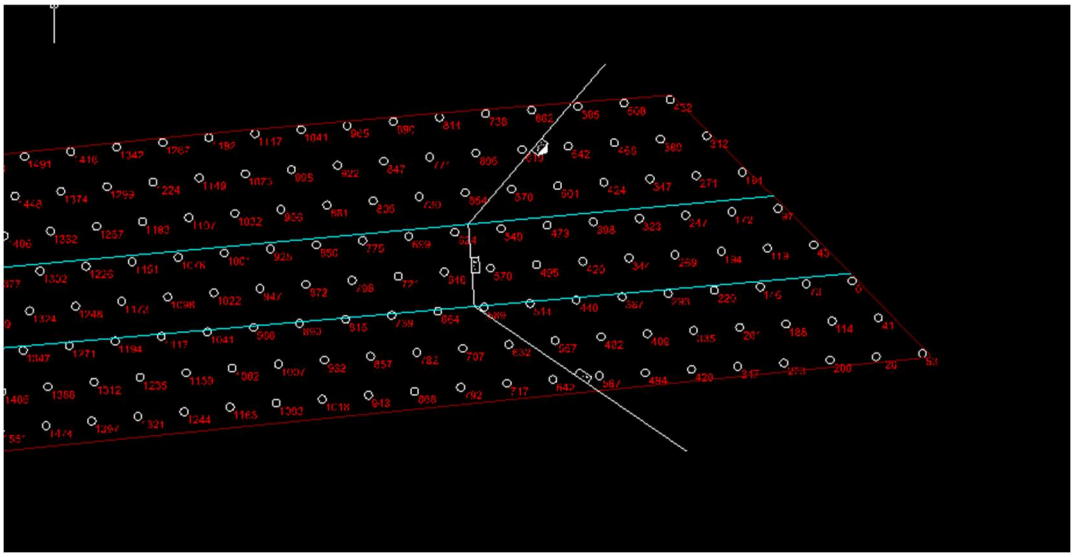
Create charge rules via a user-friendly interface defining explosives type and properties, stemming, deck configurations, primer positioning and quantity. Assign these rules to Individual holes, Hole groups, or zones within the blast - Stab holes or Presplits for instance.

Confirm powder factor for reconciliation against concept design.



Create Multiple Charge Rules for Various Hole Types

Assign Timing



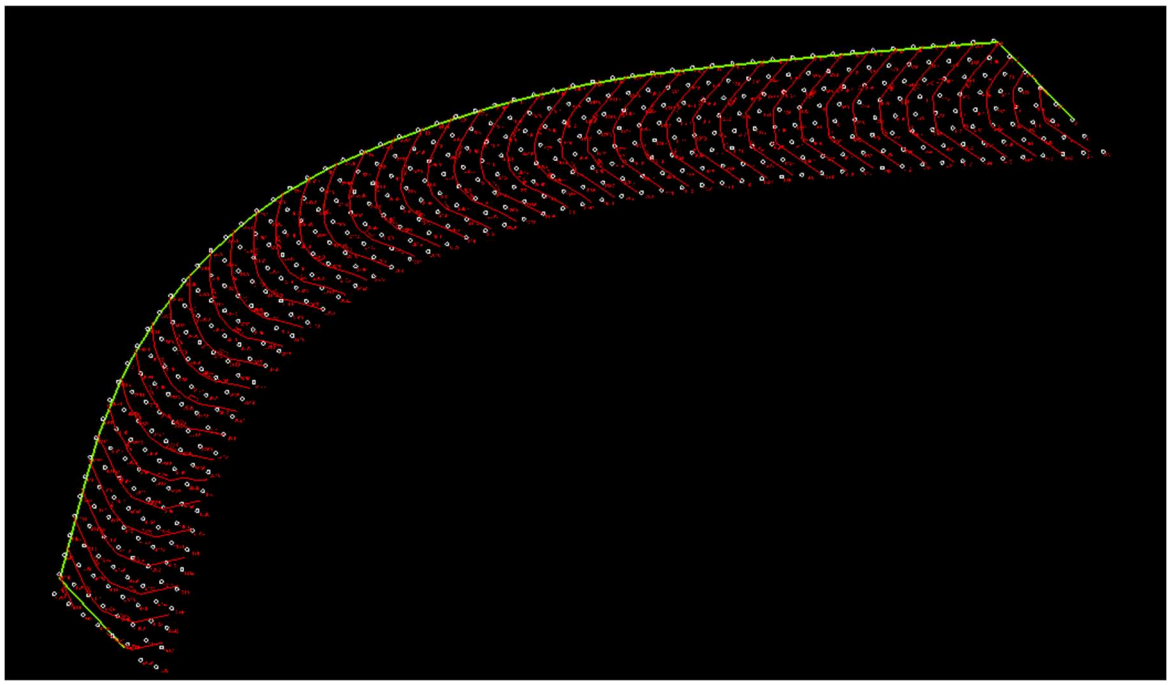
Create Timing Objects (e.g. Contours) for Electronic Timing

Create timing patterns with electronic timing. Apply timing objects such as chevrons and relief factors to generate timing pattern and wire up.

Non electric patterns may be generated by creating tie up plans based upon the OEM product delay specifications

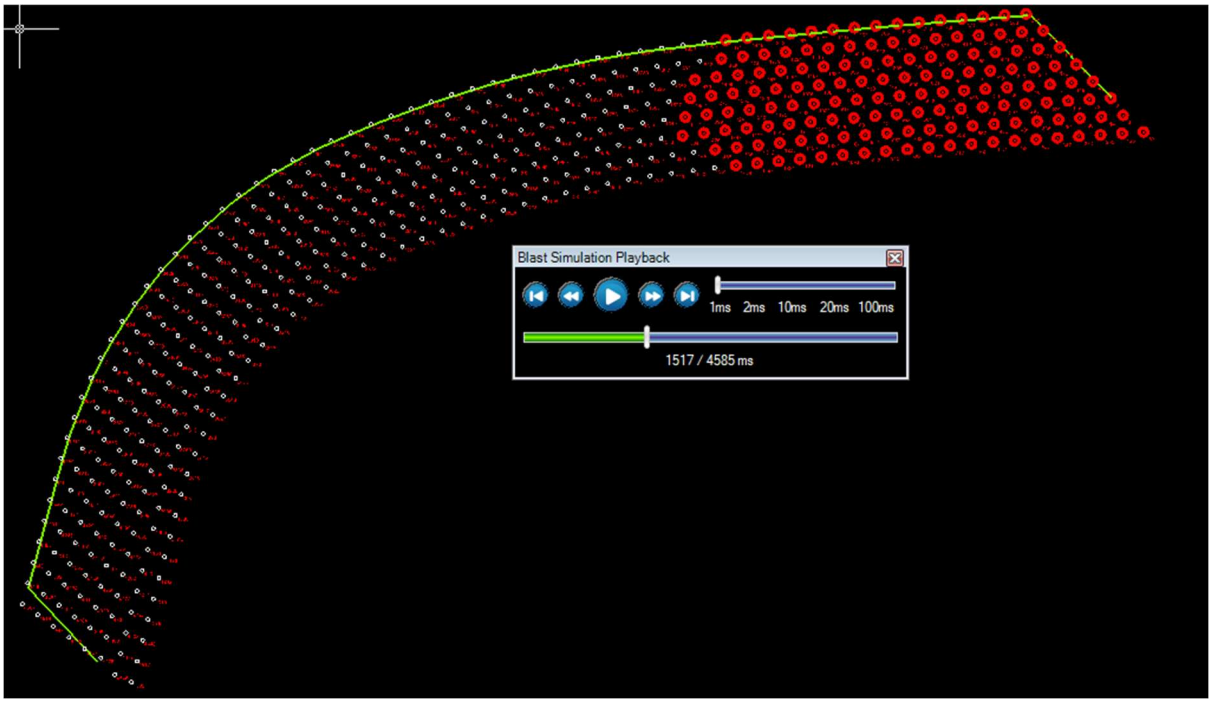
Analyse

View contours to evaluate relief and direction of movement.

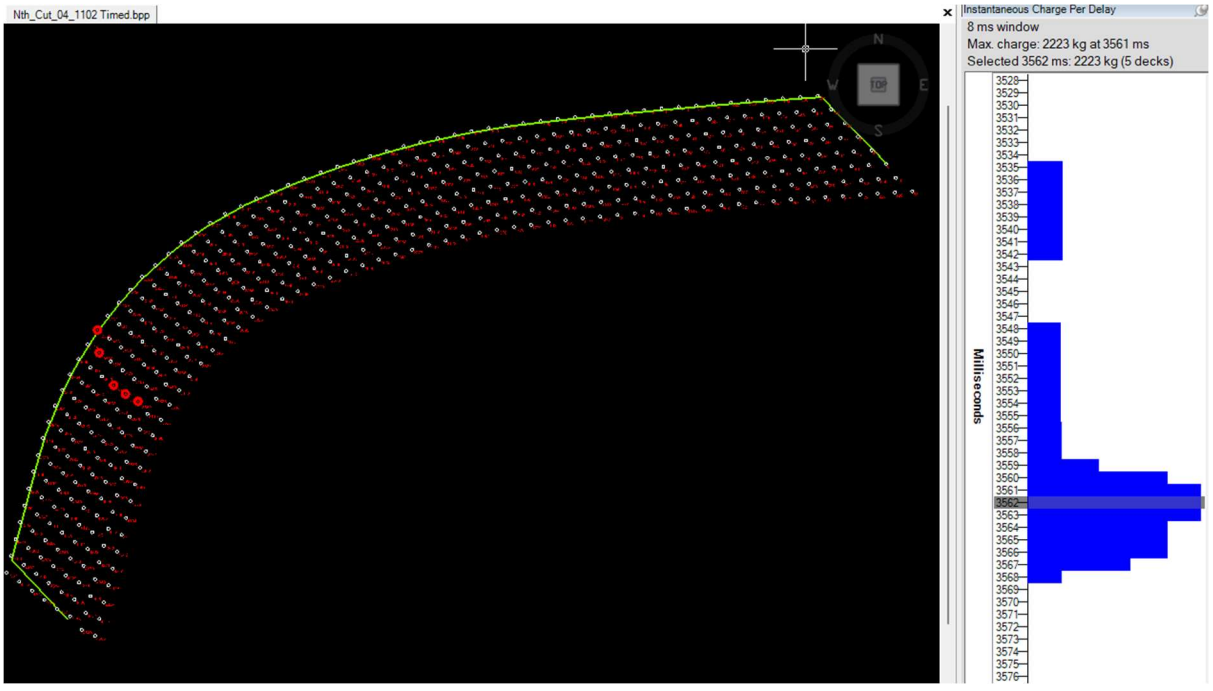


Review Contours

Simulate initiation pattern and calculate charge mass per delay within a specified window.



Simulate Timing

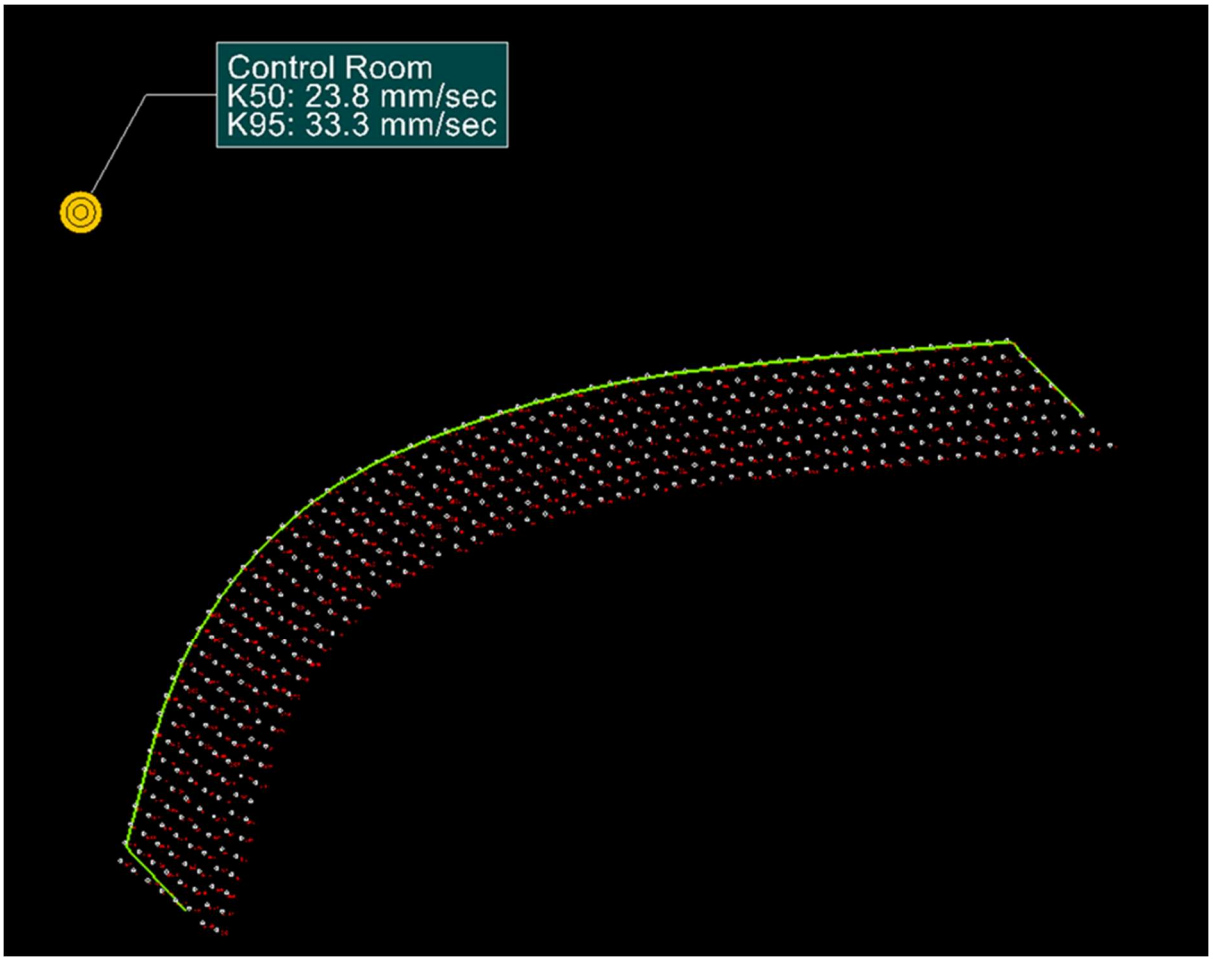


Calculate Maximum Instantaneous Charge (MIC (kg))

Adjust pattern to minimise charge mass per delay. BlastPlan^3 will automatically adjust patterns when maximum instantaneous charges are to be limited – for instance single hole firing in the case of vibration control.

Vibration Prediction

Predict vibration levels expected at specific points, based upon Maximum Instantaneous charge and site specific constants



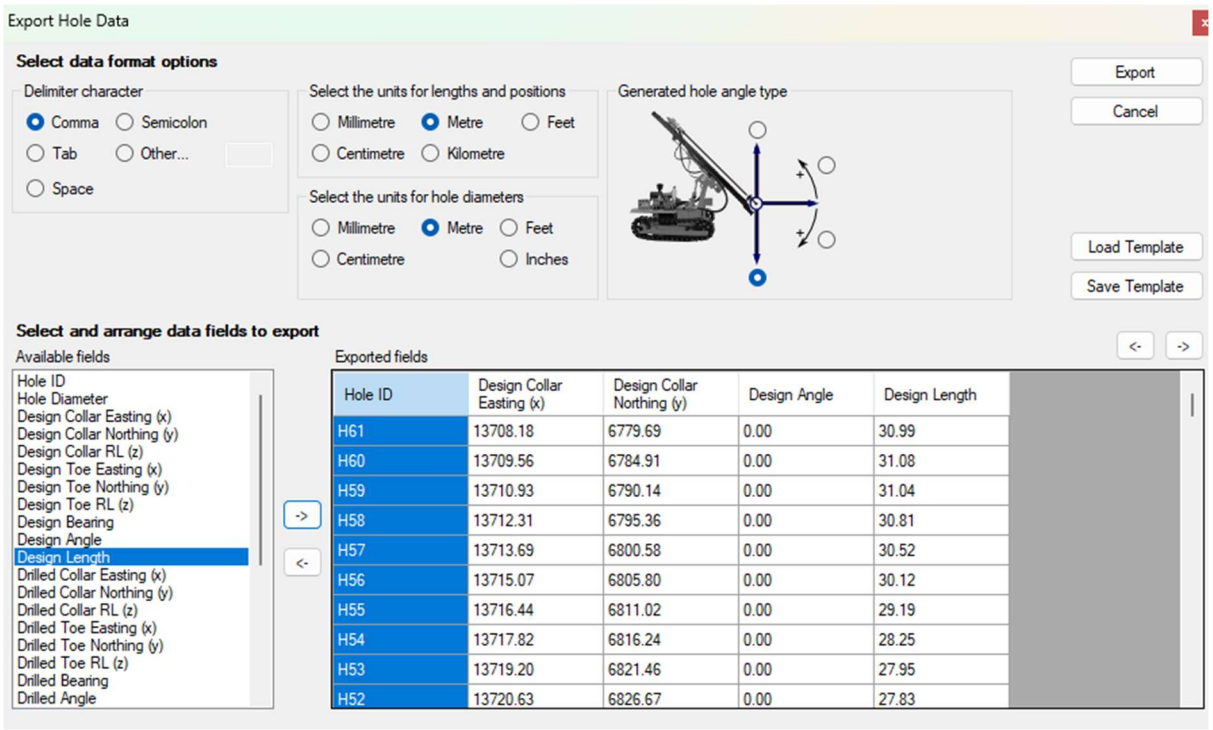
Predict and Modify for Vibration

Export Data

Once the blast pattern has been finalised and approved, data may be exported via appropriate file format to:-

- Drill Rigs – Drill plan files compatible with fleet systems
- MMUs – Charge rules and hole specific loading data
- Electronic Detonator Loggers – Timing and tie-up plans
- Advanced prediction analytics programs – fragmentation, movement, floor control etc
- Print-ready charge sheets, timing tables and drill logs auto generated

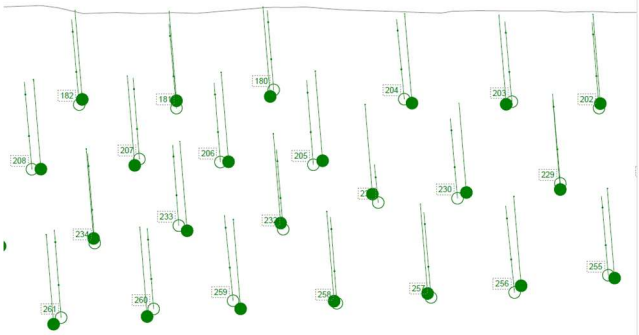
Charge Loading Details				
Hole Id	**Charge Depth**			
A1	21.9			
Deck Number	**Product**	**Length**	**Mass**	**Top of Charge**
1	Pump 1.15 1.2	17.9	373.7	4.0
2	Aggregate	4.0		0.0
Hole Id	**Charge Depth**			
A10	23.4			
Deck Number	**Product**	**Length**	**Mass**	**Top of Charge**
1	Pump 1.15 1.2	19.4	404.1	4.0
2	Aggregate	4.0		0.0
Hole Id	**Charge Depth**			
A11	23.3			
Deck Number	**Product**	**Length**	**Mass**	**Top of Charge**
1	Pump 1.15 1.2	19.3	403.0	4.0
2	Aggregate	4.0		0.0
Hole Id	**Charge Depth**			
A12	23.2			
Deck Number	**Product**	**Length**	**Mass**	**Top of Charge**
1	Pump 1.15 1.2	19.2	401.1	4.0
2	Aggregate	4.0		0.0



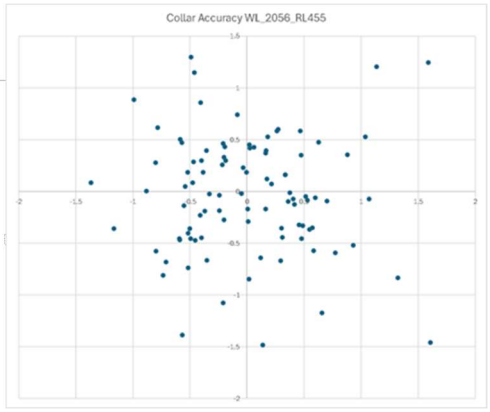
Export Charge Sheets, Timing Data and Drill Data

QA/QC Reporting

Based on the accepted tolerances defined by the Blast Engineering team, the system can be populated with 'As Built' data—such as hole depth, collar position, and charge masses—and used to generate QA/QC reports in various graphical formats. These outputs can then support management in making process interventions where necessary.



Drill Accuracy Report



Collar Accuracy Report

EXPERIENCE BLASTPLAN^3

Trusted by industry – Proven in operations since 2012

Engineered by experts – Created by professional blasting engineers

Streamlined workflow – Fast, intuitive design tools

Integrated environment – CAD, design, and simulation in one app

No plugins required – Everything you need is included

Whether you're managing production blasts, presplit operations, or advanced simulations, BlastPlan3 provides the **precision, control, and confidence** modern operations demand.

Watch our tutorials and see BLASTPLAN^3 in action
Download a trial license for the full-featured version

CONTACT US

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BMI provides drill and blast training and consulting services to the surface and underground mining, quarry and construction industries. We operate as an association of independent blasting engineers and shotfiring specialists