



Rock Excavation & Controlled Splitting Checklist (Compliance)

Rock excavation and controlled splitting checklist for compliant field execution. Interactive, commentable, with monitoring evidence and export as PDF/Excel.

Project:

Date:

Filled by:

Permits and Notifications

1	Verify blasting/excavation permit dates, conditions, and drawing references against the site plan; store the signed permit PDF in the project folder; acceptance: permit active for planned work window, conditions acknowledged by supervisor signature.
2	Confirm authority approvals and utility-owner permissions per approved project specifications and authority requirements; method: check letters/emails and reference numbers; acceptance: approvals saved, constraints noted on the daily briefing sheet.
3	Issue stakeholder notifications to neighbors and agencies per approved project specifications and authority requirements; method: delivery receipts, email read confirmations; acceptance: log with dates/times, distribution list, and responsible person signature.
4	Implement the traffic management plan; method: install signage, barriers, and detours as shown; acceptance: time-stamped photos and supervisor sign-off before any blast or split activity.

Pre-Blast Condition Surveys

5	Complete pre-blast condition surveys of structures within the influence zone; method: geotagged photos/video, crack mapping; acceptance: signed occupant/owner acknowledgment and filed survey report.
6	Establish baseline instrumentation where required (crack gauges, settlement points); method: initial readings recorded; acceptance: baseline documented (e.g., 0.0 mm change) with date and technician signature.
7	Locate and mark underground services; method: GPR and electromagnetic locating, paint/flags; acceptance: utility map with GPS coordinates and photos, superintendent approval before excavation/splitting.
8	Identify sensitive receptors and set project vibration and air-overpressure limits; method: risk register; acceptance: limits documented in mm/s and dB(L) per approved project specifications and authority requirements.

Vibration and Monitoring Controls	
9	Verify seismographs have current calibration certificates (within manufacturer cycle); method: check serials and cert dates; acceptance: copies filed and devices labeled with calibration due date.
10	Position seismographs at nearest foundations to receptors; method: firm coupling (spikes, sandbag), GPS tagging; acceptance: placement photos and coordinates recorded on the monitoring plan.
11	Program trigger thresholds and sample rates per approved project specifications and authority requirements; method: device setup screenshots; acceptance: pre-blast self-test pass with date/time stamp.
12	Conduct a controlled validation event to confirm PPV response; method: record waveform; acceptance: PPV (mm/s) and frequency below project limits, plot attached and reviewer sign-off.

Blast Mats and Flyrock Control	
13	Inspect blast mats/mesh for broken cables, damaged connectors, and dimensions; method: visual check and ID tag record; acceptance: only intact mats used, defects quarantined, photos archived.
14	Place mats to fully cover blast area with required overlap; method: chains/anchors per lift plan; acceptance: pre-blast photos showing full coverage and overlap per specifications.
15	Verify handling equipment capacity for mat lifts; method: check crane/loader charts, sling tag ratings; acceptance: lifting checklist completed with equipment ID and operator signature.
16	Establish exclusion zone and sentry posts; method: barriers, signage, radio checks; acceptance: access log closed, sentry names recorded, 'all-clear' protocol tested and logged.

Execution Controls and Safety	
17	Conduct pre-task briefing covering misfire, evacuation, and communication; method: toolbox talk; acceptance: attendance sheet signed with roles and responsibilities assigned.
18	Reconcile explosives and initiation equipment on site; method: receipt and return log; acceptance: counts match log entries, supervisor and blaster signatures recorded.
19	Test primary and backup communication channels; method: radio call-and-response; acceptance: test times recorded and devices listed by ID.
20	Complete evacuation sweep before initiation; method: zone-by-zone check and horn signals; acceptance: sentry confirmations and time-stamped 'all-clear' recorded.

Post-Blast Verification and Documentation	
21	Perform post-blast area inspection; method: check for flyrock, gas, mat movement; acceptance: gas monitor readings recorded and below project thresholds, re-entry authorized by competent person.
22	Retrieve and review monitoring data; method: download seismograph files; acceptance: PPV (mm/s), frequency, and air overpressure within limits, plots attached, reviewer signature.
23	Inspect adjacent structures for damage and address complaints; method: photo walkdown and log; acceptance: findings documented, corrective actions assigned if required.
24	Stabilize exposed faces; method: scaling, temporary protection as needed; acceptance: area declared safe, sign-off by competent person with photos.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
<p>Rock excavation and controlled splitting checklist helps site managers and blasting supervisors execute compliant, low-risk rock removal. It concentrates on pre-blast surveys, controlled blasting or splitting practices, vibration monitoring, and blast mat deployment to contain flyrock—without covering production design. By defining responsibilities, documentation, and acceptance evidence, this checklist reduces the chance of permit breaches, nuisance complaints, and structural damage. You'll verify authority approvals, complete pre-blast condition surveys, establish vibration limits, position calibrated seismographs, and install blast mats per approved project specifications and authority requirements. Practical acceptance cues include geotagged photos, PPV readings in mm/s, air overpressure traces, and signed acknowledgments. Typical risk drivers—unverified utilities, poor coupling of monitors, inadequate mat overlap, or weak exclusion control—are addressed with clear steps and evidence capture. Use this interactive tool to tick off tasks, leave comments, attach data, and export a signed record to PDF/Excel, secured with a QR code for easy field verification.</p>	<p>1. Preparation: assemble permits, approvals, pre-blast survey templates, calibrated seismographs, blast mats, anemometer, multi-gas monitor, radios, and PPE. Define receptors, vibration limits (mm/s), and responsibilities per approved project specifications and authority requirements. 2. Open the interactive checklist, enter project metadata (location, permit numbers, limits), upload the monitoring plan, and add receptor and exclusion-zone maps. Preload mat IDs and equipment certifications. 3. During field activities, tick each item, attach geotagged photos, calibration certificates, and setup screenshots. Use comments to capture decisions, constraints, and approvals from supervisors or authorities. 4. Import seismograph files after events, review PPV and air overpressure, mark pass/fail against limits, and flag any exceedances for corrective action and stakeholder notification. 5. Export the completed record as PDF/Excel and share via QR code for quick verification. Include photos, plots, signatures, and time stamps for traceability. 6. Sign-Off: obtain digital signatures from the supervisor, blasting lead, and client/owner's representative. Archive the report in the project folder with version control.</p>