

Attachment 3 - Blasting Regulation Changes (v. 2024 05 31)

Building and Plumbing Bylaw No. 4247, 2005			
Sec.	Current	Proposed	Rationale
	DEFINITIONS		"DWV" is the District of West Vancouver Soil Removal, Deposit, Blasting and Rock Breaking Bylaw No. 5130, 2021 "ISEEW" is the Best Practices Guide for Close Proximity Blasting Operations 3rd Edition, International Society of Explosives Engineers Wester Canada Chapter
1	N/A	"Affected Owner(s)" means the owners or occupiers of parcels of land to be inspected before a Blasting Permit is issued pursuant to Section 24 (2)(h) (Pre-Blast Inspection and Post-Blast Inspection);	Differentiates between the Owner who is initiating the Blasting or Rock breaking and those properties within a certain radius who may be impacted (DWV)
	N/A	" Blast " or " Blasting " means the use of explosives, or chemicals, for the purpose of moving, displacing, or breaking rock or other material;	Reference to Bylaw regulations (DWV) 
	N/A	" Blaster " means the person, firm or corporation engaged by the Owner to conduct Blasting and includes an agent, contractor, or employee of the Blaster;	Reference to Bylaw regulations (DWV) 
	N/A	" Control Measures / Blasting Plan " is the Blasting plan developed for a site that specifies in what manner Blasting operations are to be undertaken;	This definition explains how the Blasting Plan is a technical document about the activity (ISEEW) 
	N/A	" Independent Blasting Consultant " is an Owner -retained qualified professional with specific knowledge and expertise in rock mechanics and close proximity Blast design to meet specific objectives as well as the control of vibration and air over pressure, who is independent of the Blaster ;	The definition is aligns with the industry definition (ISEEW and DWV)  
	N/A	" Pre-Blast Inspection " is a detailed record in written form, accompanied by photos/video, of the condition of private or public property, prior to the commencement of Blasting operations;	For increased clarity and improved communication in reference to Bylaw regulations. It differs from the industry term with the use of <i>inspection</i> rather than <i>survey</i> to avoid confusion with other required surveys. (ISEEW)  
	N/A	" Rock breaking " means the removal of boulders or bedrock from land by drilling, percussive breaking (other than rock hammering), or splitting, but excluding Blasting ;	Reference to Bylaw regulation scope (DWV)  

	N/A	“ Rock hammering ” means the use of a sharp-tipped hydraulic hammer that is fitted on a piece of mobile machinery to break concrete or rock surfaces;	Reference to Bylaw regulations. Also known as hoe ramming 
4(1)	(d) Blasting.	(d) subject to section 4(2)(d), the removal of rock by Blasting and other acceptable Rock breaking .	The broader definition allows the District to regulate all Rock breaking activities. 
4(2)	N/A	(d) Blasting or Rock breaking in any of the following circumstances: (i) Rock breaking that involves the removal of less than 10 cubic metres of rock; (ii) The rock to be removed consists entirely of boulders separate from bedrock; (iii) If the rock removal is specifically authorized by a statute or regulation other than the Community Charter or Local Government Act; or (iv) If the work is, in the Director's opinion, required on an urgent basis to lessen or eliminate an imminent threat to life, safety, property damage or public transportation routes and communication systems.	Exemptions avoid unnecessary steps in the right circumstances They are reasonable consideration (DWV) 
5(4)	No person shall carry out Blasting unless a building official has issued a permit for the work.	No person shall carry out Blasting or Rock breaking unless a building official has issued a permit for the work.	Typical bylaw clause to confirm permit requirement
24	BLASTING	BLASTING AND ROCK BREAKING The following regulations apply to Blasting and Rock breaking with the purpose of regulating the removal of rock from, and deposit of rock on, lands within the Municipality, to regulate and prohibit the use of explosive agents for Blasting , to require the holding of a permit for such purposes, and to fix a fee for such permit.	Provides an introduction to Section 24 of the Building Bylaw to make clear that Blasting and Rock breaking are regulated subject to this section 
PERMIT REQUIREMENTS			
24	(1) No person shall Blast, carry on Blasting operations, or use any explosive agent without first obtaining a permit and paying the fees set out in Schedule “A” of this Bylaw.	1) No person shall remove or cause to be removed rock unless the person has obtained a Blasting or Rock breaking permit for such removal under this bylaw, and every such removal shall conform in all respects to the regulations and requirements of this bylaw and the terms and conditions of the permit;	Permit required for Blasting or Rock breaking provides the District the opportunity to manage neighbourhood disturbances of these construction activities (DWV) 
		2) When an Owner proposes to remove rock through means of Blasting , the Owner shall first apply to the Director of Building and Planning for a Blasting Permit by providing each of the following:	List of information required to facilitate communication and transparency. 

		a) The permit fee as set out in the <i>Planning and Development Fees and Charges Bylaw No. 4845, 2023</i> as amended from time to time.;	Permit fees in accordance with fees bylaw. Noting potential for permit extension fee.  
24	(2) No person shall Blast, carry on Blasting operations, or use any explosive agent or obtain a Blasting permit unless he holds a valid Blasting Certificate issued by the Workers Compensation Board of British Columbia.	b) A copy of a valid Blasting certificate issued to the Blaster by WorkSafe BC for all persons completing the Blast ;	Confirmation of technical blasting qualifications on file. (DVW)  
24	(3) An applicant for a Blasting permit shall provide proof of comprehensive general liability insurance coverage for Blasting operations with a minimum coverage of Two Million Dollars (\$2,000,000.00) inclusive per occurrence.	c) A certificate of insurance to insure damage to persons or property that may be injured by the Blasting or Rock breaking . This insurance shall be public liability and property damage insurance in a form satisfactory to the Municipal Solicitor, with Five Million Dollars (\$5,000,000) coverage inclusive for loss or damage in respect of injury or death of any person or person and/or damage to property from any one accident or occurrence. There shall be no third-party deductible for bodily injury or property damage loss and no space warranty clause. The District and the company employing the holder of the Blasting certificate shall be named insureds. Notification will be given by the insurer to the Director of Building and Planning by registered mail not less than 30 days prior to material change, cancellation or termination of the insurance.	Required regulation in building bylaw but increases value to \$5million   
24	(4) An applicant for a Blasting permit shall execute a contractual Letter of Undertaking releasing, indemnifying and saving harmless the Municipality from and against any and all losses, claims, demands, suits, actions, recoveries and judgements of every kind brought or recovered against the Municipality arising out of or in any way connected with the work done under the Blasting permit.	d) A contractual Letter of Undertaking from the Owner releasing, indemnifying, and saving harmless the Municipality from and against any and all losses, claims, demands, suits, actions, recoveries, and judgements of every kind brought or recovered against the Municipality arising out of or in any way connected with the work done under the permit, in a form satisfactory to the Director;	Requirement transfers from current building bylaw (DVW)  

		e) A context map of the area within 300 metres of where the rock removal will occur. The context must visually indicate the location of all designated and registered heritage buildings;	Provides neighbourhood context of the Blast site including any potential affected properties, highlighting those with heritage value.   
		f) (removed)	
24(5)	No person shall Blast, carry on Blasting or operate or use an explosive agent in dangerous proximity to any person, building or property, or the works of any underground utility liable to suffer injury from Blasting unless and until precautions have been taken to prevent injury to any person, building, property or utility.	g) A Control Measures / Blasting Plan , prepared by the Blaster in accordance with requirements set forth by WorkSafe BC.	This is the technical plan that specifies the methods to be used to ensure safety of people and property. The clause provides increased clarity and direction to achieve the current Blasting regulation that references “precautions” (current Sec 24(5)) Staff are not qualified to judge the competence of the plan so will rely on WorkSafe BC’s oversight and requirement that the plan is subject to review and endorsement by an Independent Blasting Consultant (DWV and ISEEW)  
		h) A copy of the Pre-Blast Inspection Report ;	This information provides the District with insight regarding the extent of the Pre-Blast Inspection conducted for insurance purposes by the blaster.  
		i) A letter to the District from a qualified Independent Blasting Consultant confirming they have reviewed and approved the Control Measures / Blasting Plan and acknowledging that the District is relying on their approval in issuing the permit.	An additional step for the Independent Blasting Consultant to communicate directly with the District respecting compliance with WorkSafeBC.     
		j) An arborist report that describes the plan to protect trees, including that Blasting and Rock breaking : i) near tree roots will only be performed using explosives of low phytotoxicity and techniques that minimize tree damage, like expanding foam and hydraulic rock breakers; ii) will only use small low-concussion charges, and multiple small charges designed to pre-shear the rock face, to reduce fracturing, ground vibration, and minimize the impact on the surrounding environment; iii) materials, including blast rock and other construction materials and debris, are stored away from critical tree root zone.	The District arborist often adds these conditions to Blasting permit so they are included in the bylaw for consistency, communication, and transparency. The examples are recommendations from local professional tree service providers. 
		k) (removed)	

		l) Information of any proposed road and sidewalk closures, detours, or other temporary accessibility changes;	This information is information required by Public Works that can be communicated as part of the rock removal permit notification process.   
		3) When an Owner proposes to remove rock through means of Rock breaking , the Owner shall first apply to the Director of Building and Planning for a Rock breaking Permit by fulfilling each of the requirements outlined in 24(2), except for 24(2)(b) Blasting Certificate, 24(2)(g) and 24(2)(i) respecting Control Measures / Blasting Plan , and 24(2)(h) report on the results of a Pre-Blast Inspection .	List of information required to facilitate communication and transparency. Rock breaking does not require the technical detail of Blasting . (DVW) 
		4) For Blasting or Rock breaking on land owned by the municipality or another government, the persons seeking permission to Blast or Rock break shall sign all forms, complete all requirements, and bear all responsibilities, liabilities, and costs under the Bylaw and otherwise, as if they were the Owner.	Provides clarification about how the bylaw applies to public lands (DVW)   
24	(10) Where a Blasting permit is for an excavation required for the construction of a building, no Blasting permit shall be issued unless the applicant has first obtained a building permit for the proposed building	5) Where a Blasting or Rock breaking permit is for an excavation required for the construction of a building or structure, no Blasting or Rock breaking permit shall be issued unless the applicant has first obtained a building permit for the proposed building or structure.	Ensures the site plans are completed and filed with a building permit to justify the need for blasting or rock breaking.   
		6) The rock removal areas will be clearly marked on the site prior to issuance of a permit, readable from the outside the property line, and posted at least one week prior to the planned rock removal. Information will include the planned date and duration of rock removal, the intended depth of rock removal, and the volume of rock to be removed. The method of marking should not be removed by inclement weather;	This provision supplements the OHS blasting regulation 21.88(2) that requires the project notice be posted at the blast site. Site marking provides additional information to neighbours. And confirms owner's intention for department staff inspection and response to enquiries (DVW)    
		7) (removed)	
LIMITATIONS			

		8) On land zoned Residential Use (RS or RD) in the zoning bylaw, Blasting and Rock breaking are prohibited except: a) For the construction of one or more of a primary dwelling, garage, coach house, access driveways, or parking area as shown on plans for which a building permit has been issued and is in good standing, and for such purposes the allowable rock volume to be broken, blasted and removed, shall not exceed: i) a total volume of 400m³ on lots less than 885m², and ii) a total volume of 600m³ on lots over and equal to 885m²; For certainty, the totals above are the cumulative amount of rock that is permitted to be broken, blasted and removed for the construction of any and all primary dwellings, garages, coach houses, access driveways and parking areas on a lot. If the District has records of a volume of rock that was previously removed on a lot for any of these purposes, then this volume will be deducted from the allowable volume specified under this section. If the District has no records of a volume of rock that was previously removed on a lot, then no adjustments are made to the allowable volume specified under this section.	Provides limits to rock removal in accordance with OCP Policies guiding natural landscapes and outcrops with minimal blasting Provides an opportunity for the district to manage rock removal and related topographic change over time. (DVW) 
		b) For the installation of utilities and utility connections; and	Facilitates required utility connections (DVW) 
		c) Blasting or Rock breaking certified by a geotechnical engineer as being necessary for the safe use of the site.	Provides for safety-related intervention (DVW) 
		9) Despite the provisions of Section 24 (8)(a) for RS and RD zones, the Owner of the land may apply to the Director for a Blasting or Rock breaking permit to remove a volume of rock specified in the permit in order to:	Provides minor opportunities for rock removal when a broader policy objective may be achieved. (DVW) 
		a) Facilitate the construction of a swimming pool if the Director is satisfied that the Blasting or Rock breaking will reduce the visual and auditory impact of the pool and associated mechanical equipment on surrounding properties;	Supports urban design objectives (DVW) 

		b) Enable any accessory building or structure to be located on the site in a manner which in the opinion of the Director will: (1) Accommodate the design and spatial relationship of the buildings so the floor levels conform to the natural contours of the site; (2) Eliminate or reduce the use of exposed foundation walls and structural support elements, or; (3) Minimize the visible mass of all structures as viewed from adjacent roads and properties;	Supports urban design objectives (DVW)   
		c) Enable minor terrain alteration, in the opinion of the Director, to accommodate landscaping work or property amenity; but excluding in all cases, the removal of rock which substantially alters the natural grade of the site.	Enables landscaping projects (DVW)   
		10) For certainty, an Owner may not remove an aggregate volume of rock removed pursuant to one or both of Sections 24(8)(a) and 24(9) exceeding the allowable rock volume in Section 24(8)(a);	Further regulations of volume of rock removed to limit impact on natural landscape. (DVW)  
		11) (removed)	
		12) The aggregate volume limitations in 24(8)(a) do not apply to rock removal required for the construction of roads or the installation of utilities and services in accordance with approved subdivision drawings;	Exempts required infrastructure projects from aggregate volumes for new subdivision development. (DVW)  
		HOURS and CONDITIONS	
24	(6)The holder of a Blasting permit may only Blast, carry on Blasting operations, use an explosive agent, or operate drills, compressors or other equipment used to prepare land for Blasting from Monday to Friday, exclusive of statutory holidays, between the hours of 8:00 a.m. and 4:00 p.m.	13) An Owner shall ensure that Rock breaking or Blasting only occurs within the times permitted under <i>Anti-Noise Bylaw, No. 3210, 1977</i>, as amended from time to time.	Limiting the hours of nuisance while maintaining a reasonable window of time to safety complete the work. This represents status quo for Oak Bay respecting time of day – see Noise bylaw proposal. Note that this allows blasting for 30 minutes beyond the end of the normal workday of Public Works. (DVW)  

		14) (removed)	
		15) No person shall engage in Rock hammering except for minor Rock breaking under 10m ³	Addresses the excessive annoyance of hoe ramming. See also accompanying provision in Noise Bylaw. DVW 
		16) Onsite rock crushing or grinding is prohibited, except for in the case of a new subdivision of land.	 
24(9)	No person shall Blast, carry on Blasting operations, use an explosive agent, or operate drills, compressors or other equipment used to prepare land for Blasting unless and until steps have been taken to suppress dust which may occur as a result of the said activity.	17) No person shall remove or deposit rock in a manner that causes a dust or dirt nuisance to any neighbouring property or right of way.	Provides clear instruction to contractors to manage operations to avoid impacting neighbours (DVW) 
PERMIT EXPIRY			
13(4)	Every permit is issued upon the condition that the permit shall expire and the rights of the owner under the permit shall terminate if: (c) the work authorized by the permit is not completed, or any inspections and occupancy permits related to the permit and required pursuant to this Bylaw are not obtained: (ii) within twelve (12) months from the date of issuance of a permit that is not in respect of the construction of a complex building and that is not a renewal permit	18) Authority for Blasting under a Blasting permit expires a) 20 working days for lots less than 885 m2 b) 30 working days for lots equal to or greater than 885 m2 19) A Rock Breaking permit expires 30 working days after issuance of the permit for Rock Breaking ;	Blasting expirations are intended to balance enough time to complete the required blasting but limited to avoid ongoing blasting. Rock breaking permit expiration is reasonable to limit the nuisance of noise in the vicinity. (DWV)  

		20) The Director may, at the request of the Owner, extend the authority for rock removal under a Blasting or Rock breaking permit provided that a) The Owner provides evidence of the need for an extension of time due to: i) Unforeseen environmental conditions such as extreme weather or a natural disaster ii) Labour shortage due to loss of staff or illness iii) Inability to proceed due to supply chain matters causing an equipment delay or unavailability; b) Only one permit extension is granted; c) The extension of time is no more than the time authorized with the original permit; d) The Owner pays an Extension Fee as established in the <i>Planning, Building and Development Fees and Charges, No. 4845, 2023</i>; e) The Owner notifies all Affected Owners of the permit extension and updates the project information posted on the site; f) The Director is satisfied that any policy of insurance provided under Section 24(2)(c) will remain in effect;	This provision allows for permit extensions, subject to an additional fee to cover administrative costs, to better manage the impacts of larger blasting or rock breaking projects or those impacted by unforeseen circumstances like weather. (DVW)    
		21) The Director may cancel or suspend the authority for rock removal under a Blasting or Rock breaking Permit if there are reasonable grounds to believe that the Owner or Blaster has done anything in violation of this Bylaw or the permit, or in violation of any agreement made pursuant to Section 24(2)(d) or (g). No person who has had their authority for rock removal under a permit cancelled or suspended shall engage in or carry-on rock removal in the District unless special written permission to do so is given by the Director;	This regulation provides the Director discretion to respond to a problematic project. The agreements reference the Owner's Letter of Understanding and the Blaster's Control Measures / Blasting Plan (DVW)  
		22) The District will not issue more than one Blasting permit for the same property within any 12-month period, exclusive of the dates of an active Blasting or Rock breaking permit.	Provides motivation for the Owner to communicate longer term development plans up front and limit multiple blasting projects over time at one location. 
		NOTIFICATION	

24	(7) No person shall Blast, carry on a Blasting, or use an explosive agent within a radius of 100 metres of any building without first notifying in writing the owners or occupants of such building, with such notice to include the anticipated duration of the Blasting program.	23) The holder of a Blasting or Rock breaking Permit shall not commence or allow Blasting, Rock breaking until such time as the holder of the Blasting Permit has given written notice to the Director and all property owners within 150-meter radius of the blast location. The notice shall include the: a) Description of the work to be done, including the volume of rock being removed; b) Dates on which the Blasting or Rock breaking will occur; c) Times when Blasting or Rock breaking will occur; d) Methods intended to safeguard persons and property, including plan of vibration and air over pressure monitoring; e) Signals and other warning methods to be used to inform those nearby of an impending Blast; f) Name, telephone number, cellular telephone number and email address of the Blaster or Owner who will provide additional information, and; g) Name, address, and telephone number of the Blaster's insurer.	This is required notification and the listed details provide improved communication and transparency for the Owner, Blaster , property owners, and District. (DWV) It supports provincial notification requirements and provides the District an opportunity to require additional communication in certain circumstances Occupational Health and Safety Regulation Part 21 defines the proximity zone for blasting as 300m from the blast site for a school, hospital or medical clinic, and 150m from the blast site for any other potentially occupied structure. Additional operational practice, with cost covered by the blasting fee. The District will: – Continue general notification to all property owners and residents within an increased 150 meters by the municipality with cost covered by the blasting fees - include blasting applications on the Development Tracker with information about who to contact for specific resident concerns.    
		24) The holder of a Blasting or Rock breaking permit shall provide at least 48 hours' notice shall be given of the commencement of any Blasting or Rock breaking , and at least one week's (7 days) notice shall be given of any project expected to continue for more than two (2) days.	In addition, the District will continue to provide notice to properties within 150 meter of the blast site at least one-week in advance of blasting.  
24(8)	No person shall Blast, carry on Blasting operations, or use an explosive agent within a radius of 300 metres of any school building during school hours without first notifying in writing the School District, Principal or person in charge thereof, with such notice to include the anticipated duration of the Blasting program.	25) The holder of a Blasting or Rock breaking permit shall not commence or allow Blasting or Rock breaking within 300 metres of a School or Health Facility until notice as required in Sections 24(23), and 24(24) has also been given to the senior administrator of the School or Health Facility and has been provided to the Director . Further notice must be given to the senior administrator, or his or her designate, at least two (2) hours prior to each actual blast, stating the approximate time of the blast.	Provides specific notification requirements for schools and health facilities, so Blasts can be planned to avoid more sensitive school or health centre times and that the planned Blasting is well known to nearby institutions.  

		26) The Owner shall notify or cause to be notified the Director and each Affected Owner , in writing, when the rock removal to be carried out under the permit that has been completed.	Notice of blasting completion triggers a 60-day period for affected to communicate concerns to the Blaster's (or contractor's, in the case of Rock breaking) insurance company.
		SAFETY AND MONITORING	
		27) The Blaster shall ensure that a security person (equipped with and trained in the use of warning and signalling devices approved by WorkSafeBC BC) is posted at every location where vehicles or pedestrians might be affected by a Blast . Prior to any Blast , the Blaster shall ensure that the security person signals vehicles and pedestrians to prevent them from entering an area which may be affected by the Blast . The Blaster shall ensure that no Blasting occurs until all persons and vehicles vacate the area affected by the Blast .	OHS requires blaster to secure access to the site but there is no mention of nearby vehicular and pedestrian intersections and access in the vicinity. Manages traffic and proximity access during a blast. (DVW)    
		28) (removed)	
		29) (removed)	
		30) (removed)	
		31) The holder of a Blasting permit must ensure that all Provincial and Federal Blasting standards are met.	Stating what is understood for clarity 

	Anti-Noise Bylaw, No. 3210, 1977		
Sec	Current	Proposed	Rationale
4		Prohibited Conduct: (6) Blasting or Rock breaking outside the hours of 8am-4pm Monday to Friday Blasting or Rock breaking on Saturday, Sunday, or holidays Blasting or Rock breaking from December 24 - January 2, inclusive	Limited times and seasons for blasting and rock breaking balances the need for construction activity with the comfort of living in the community
4		Notwithstanding (6) above, rock hammering is prohibited outside the window of 12 pm – 4 pm of the allowed days for Blasting and Rock breaking.	Rock hammering is the most impactful type of rock breaking in terms of noise. For this reason, extended day long noise exposure to residents could be limited to afternoons only.

	Planning, Building and Development Fees and Charges, No. 4845, 2023		
Sec	Current	Proposed	Rationale
	Initial fee based on construction value:		Set fees do not rely on construction value estimates.

	≤ \$100K	\$100 + 1.3% project value	Schedule 2, Table 1		The cost of notifications (an estimated \$250 dollars typically) has been included in the proposed base fees.
	> \$100K	\$1,500	Blasting permit fee	\$1,250	
	≤.\$500K	+ 1.3% project value >\$100K	Rock breaking permit fee	\$750	
	> \$500K	\$5,000 + 1.3% project value >\$500K	(removed)	(removed)	
	Extension fee based on original permit fee:		Blasting or Rock breaking fee for extension of time	\$250	Extension fees motivate completion of rock removal within a reasonable time frame. Note that this will require seamless turn-around of extensions at the District.
	≤ \$500	10% of original fee	Blasting or Rock breaking fee for rock removal over the maximum permitted	\$100/m3	
	> \$500	\$50			