

Tips & Tools For Landscape Professionals

Issue 10

Landscaping the Pacific Northwest Water In The Landscape Proper Water Management

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"British Columbia might be the greenest place on the planet", says Rob Hughes, Allan Block sales rep. for CCI Industries. "And it could also be one of the wettest. We had 45 consecutive rain days here recently, and more is on the way".



With that kind of weather, water management is always a key to good landscaping. "As I explain in the classes I teach, the best time to do an estimate is when it rains, because then the contractor will see the existing drainage patterns at the site. Understanding where the surface water goes and how the contractor can eliminate potential problems is half the battle when building Allan Block Walls in British Columbia", said Hughes.

The contractors for this project followed the Plan, Design, Build process. At their first meeting with the clients they visualized what the homeowners, the Koes, described as

their perfect landscape. "We wanted to develop the entire backyard into a fully landscaped space",

said Mrs Koe.

Using their notes from the site visit and their many years of experience, the contractors prepared a detailed site plan. Water management details were incorporated into the plans.

The challenge at the site was water management. The Koes wanted a large paved area immediately off the back of the

house. Run-off from the roof would drop onto the new paved patio. All this water had to go somewhere and could not be diverted off their property. The yard is surrounded by other properties, and draining the run-off into their yards would create problems too.

The answer was a gravel path that doubled as a drain field. The paved surfaces were gently sloped towards the walkways. Stepping stones were set into the gravel bed for walking. And lowprofile AB Junior walls frame the walkways to help hold the water in the drain field, and to transition the

"Contractors working in the Pacific Northwest are always thinking about water. "

slopes of the yard. This allows water runoff to flow to the lowest point in the landscape, where a catch basin was

installed with connecting drains to route the water away.

The overall effect is a graceful, terraced backyard with built-in water management. Good planning and a thoughtful design have the homeowners delighted. "We haven't had any water or drainage problems since the project was completed, and we love the overall design", said Mrs. Koe.



The design of this project really flows and because of some good planning, run-off from the heavy rains of the Pacific Northwest does too.

Construction Tips for Proper Water Management

Use the right Wall Rock

• To promote in-wall drainage, you should always use crushed stone or gravel that is fairly free of fine grained material (less

than 10%). The Wall Rock, placed in and around the block on every course, will allow incidental water to filter down and work its way out from behind the wall.



Wall Rock makes compaction easy around the blocks and locks them tight together. It also acts like a filter, keeping the fine-grained soil from bleeding through the face of the wall.

When do I need in-wall drains?

Follow these rules of thumb:

- All walls taller than 4 ft (1.2 m)
- Sites with poorly drained clay soils
- Alongside paved areas
- With slopes above the wall
- On multi-tiered and terraced walls
- All commercial and municipal projects

Vent your Toe Drain to Daylight

• The preferred method places the toe drain as low as possible in the trench. From there, you will need to find a lower grade to vent the drain line to.

Vent to a lower grade



Water Management

Good landscaping doesn't create water problems - IT SOLVES THEM.



Plan

- **Site Grading** Prior to constructing the wall, evaluate the entire site to ensure proper grading. Direct water away from the walls to help manage surface drainage.
- **Concentrated Water Sources** Identify concentrated water sources and take them into account during the design of the wall. Examples include:
 - Slopes above the wall
 - Driveways that slope towards the wall
 - Roof downspouts
 - Lawn, landscape irrigation systems and outdoor faucets
- **Ground Water** Identify the ground water elevation, which is defined as water that occurs within the soil. Ground water movement must be prevented from coming in contact with the wall structure. If ground water is encountered, contact your local engineering professional to ensure that water has been accounted for in the design.
- If the base elevation of the wall is already at the lowest point, you can move the toe drain up above the grade at the base of the wall. The material below the toe drain will need to be a low-permeable granular material to direct any water towards the vent. Attach tee fittings at

Vent thru the block face



30 to 50 ft (9 to 15 m) intervals and direct the drains out through the wall face.



- where does the water go?

Design

Wall Rock.

Toe Drain

Water can be managed in two ways; surface run-off and in-wall drainage.

<u>Surface Run-Off</u> is handled by site grading and incorporating berms and drainage ditches (swales) to handle the water before it gets close to the wall.

In-Wall Drainage is meant for incidental water only and includes the following:

Drainage Swale



- <u>Wall Rock</u> Use wall rock in the block cores and behind the wall to ensure in-wall drainage. The wall rock should extend 12 in. (300 mm) behind the wall.
- <u>Toe Drains</u> Toe drains are used to prevent water from being trapped behind the wall and building up hydrostatic pressure. For this reason they must be positioned at the lowest point possible to allow the water to flow to daylight.

FACT: 90% Of Wall Failures Are Caused By Improper Water Management

Irrigation Systems - When irrigation systems are used they should be designed and installed to perform irrigation in a controlled and reasonable manner.

- The system should incorporate planning and equipment to prevent over irrigation that could saturate the soils behind the retaining wall.
- Allan Block recommends that all sprinkler heads and piping be installed 10 ft (3 m) behind the wall to prevent problems associated with broken lines or faulty sprinkler heads.
- Even with relatively flat grade above the wall, berms and swales should be utilized in the event of over irrigation. This will prevent surface water from ponding above the wall.
- An outdoor faucet can also cause problems if it leaks or is accidentally left on, creating a water build-up behind or above the wall.

Build

- Always build on solid ground. Check the base trench before you place your wall rock and install your first course of block. Any soft or saturated soils must be removed and replaced with additional wall rock.
- During wall installation temporary grading must be in place to ensure water will not be draining towards the construction area. Constructing and maintaining temporary ditches and berms daily will prevent the on-site soils from becoming saturated.
- Use a sheet of poly or tarps to cover stockpiled backfill to prevent saturation.





For additional information on building with Allan Block products, visit **allanblock.com**

Water In The Landscape

Water has become a signature feature in today's landscaping. Ponds, waterfalls, and running streams are among the most popular items on many homeowners wish list.

Allan Block provides a great building block for creating and integrating water features.

- Waterfalls cascade through AB walls to create dramatic effects.
- Natural stone and AB work together to simulate a babbling brook.
- Courtyard makes a perfect form for above or below ground ponds.







Build a pond with the Courtyard Collection™

Enhance your flower garden with a beautiful pond using the Courtyard Collection. With this flexible system you can build a pond without any special tools or materials and without splitting blocks.







Lay out the location where the pond will be. Mark the position of the liner that is being used. We recommend a 6 ft diameter plastic liner (1.8 m).

Excavate the area outside the liner 3 in. deep (75 mm) and 8 in. (200 mm) wide. Fill in the trench with wall rock, level and compact.

Install the first 2 courses of York block at the same time to ensure proper alignment. Check the blocks for level and proper circumference of the circle. Stack additional courses to the desired height.

Place the liner inside the ring of blocks. Position the Wall Caps and glue them down with concrete adhesive. This will lock the blocks together and prevent unwanted disassembly.

Add decorative rock and accessories. For more detailed instructions see How-to sheet #280.







Great Ideas and Resources for Landscape Professionals

Allan Block Landscape Wall DVD

This DVD contains all the information a landscape contractor or a DIY homeowner will need to build a professional looking Allan Block project.

- Instructional videos and animations on basic construction, curves, stairs, step ups and much more.
- Photo gallery featuring many different types of applications offering hundreds of ideas.
- General product information on each of the Allan Block Collections including the Courtyard Collection.

Allan Block Courtyard Collection DVD

Now you can create beautiful courtyard walls and posts with the Courtyard Collection from Allan Block. Use this versatile, easy-to-install system to enhance the beauty of any landscape project.

Learn How To:

- Build walls, posts/pillars, curves and corners
- Build a pond, patio enclosure or Bar-B-Q surround and more

Also includes a photo library with great design ideas, projects you can do in a weekend and much much more!

AB Contractor Certification Rewards - "Its in the Bag"

The 2006 AB Rewards Program recognizes AB Certified Contractors for their commitment to building top-quality Allan Block walls. It's easy and the rewards get bigger at each level.

By achieving the Bronze level in the AB Rewards program **you can receive this durable contactor bag for FREE**.

Ask your local AB Rep. for more details on how to get this great gift for building with Allan Block.

To receive this Landscape Lifestyles newsletter by e-mail, sign up at allanblock.com.

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