



# Launching the FMF Cape Breton



*One of the largest enclosed facilities on North America's west coast, the Fleet Maintenance Facility Cape Breton Shop Consolidation Project will fold 38 maintenance shops under one roof. This digital rendering depicts the facility at full operation.*

The Pacific Naval Fleet's indispensable "corner garage" is in the midst of a massive overhaul.

That corner garage, otherwise known as the Fleet Maintenance Facility (FMF) Cape Breton at CFB Esquimalt, is midway through the multi-phase Shop Consolidation Project.

The FMF's 38 maintenance shops are being transformed into one of the largest enclosed buildings on North America's west coast – second only to the Boeing aircraft plant in Washington State – and is currently one of DCC's largest projects.

"We've gotten a lot done, and we've got a lot more to do. We're about halfway there," said Brian Roach, DCC's Consultant Contract Manager at the FMF. "It's pretty exciting to see the changes here."

The FMF Cape Breton (named for the *HMCS Cape Breton*, which served for 43 years as a fleet repair and training vessel in the Atlantic and Pacific) is responsible for the repair and overhaul of ships and auxiliary vessels.

The maintenance shops will be folded into one modern facility, located within the Ship Repair Zone of the dockyard. Everything from engine shops to radar shops will be located and connected under one roof, about the size of seven football fields.

Consolidating existing buildings within a working Navy dockyard is a logistical challenge – one ideally tailored to DCC's expertise, said Roach, who brings private sector experience to this \$250-million project.

Because the Navy is constantly keeping its fleet in a state of ongoing readiness, a functioning dockyard means that upgrades to the facility have to be completed around ongoing maintenance and repair jobs.

"You might have someone say, 'We can't move because we're fixing a submarine right now,'" said Roach, who joined DCC in 2002.

"They really can't shut their operations down, so that means we work on a lot of coordination with DND and the users. We're always aware that their priority is to keep the fleet maintained properly, so it's been a careful balancing act of moving ahead with the project while ensuring the client always has access to the facilities they need."

From project management support to environmental assessments, DCC has had a role in every stage of the job, he added.

"It's very specialized work that you don't normally get on a project, even one of this size," explained Roach.

"We've handled everything from work with electro-plating processes to submarine batteries, which are worth over a million dollars each and are about the size of a refrigerator. Everything about this project has been big."

With such an enormous – and critical – Navy facility, DCC has also been working to ensure that stringent west coast earthquake building code requirements are met.

"This facility has been classified as an essential service building," said Roach. "In the event of an earthquake or a Tsunami, it is designed to remain standing."

The shop roof structure and each overhead structural beam is designed for crane support.

As well, the suspended concrete structural slab has been designed to accommodate additional heavy machinery in any configuration. The project has entered the fourth phase of construction, which is expected to run to 2009. The fifth and final stage is expected to close out the project by 2014.

# Priming the biodiesel pump at 4 Wing

When it was decided that 4 Wing Cold Lake should be the first base in Canada to offer biodiesel fuel for its fleet, Defence Construction Canada was tapped to make sure the plan flowed smoothly.

Turning ideas into reality is one of DCC's specialties. And on 4 Wing Cold Lake, the introduction of the biodiesel fuel pilot program shows how DCC's technical expertise and entrepreneurial approach helps DND meet its environmental objectives.

"The ultimate goal was to make Cold Lake the first base in Canada to use biodiesel," said Clint Horyn, Site Manager. "DCC's role was all about implementing the Wing Environmental Officer's idea. We had to determine how to make it work and, even more importantly, how to make this to work in Cold Lake's northern climate."

For two years, members from Wing Logistics and DCC's site office worked together to develop and implement the biodiesel trial, officially launched in September. Under this program, 4 Wing will fuel 64 of its 282 ground vehicles with a one per cent blend of canola-based biodiesel, becoming, as planned, the first Canadian Forces base in Canada to offer this environmentally friendly fuel.



*Drew Craig, 4 Wing Cold Lake's Base Environmental Officer (left) stands with Colonel Greg Matte, the Base Commanding Officer. They turned to DCC to ensure that their biodiesel fuel pilot program was properly developed.*

Biodiesel is produced from several renewable resources, including waste vegetable oils and animal fats.

It also produces fewer unburned hydrocarbons, carbon monoxide, polycyclic aromatic hydrocarbons, and other greenhouse gases.

And there's a strong supply of canola on the prairies, allowing locally produced resources to be used.

"We worked as a key part of the DND team," explained Horyn.

"We helped write up the scope of work, assisted with the design process, procured the contractors to complete the work, managed the con-

tract and commissioned the facilities. So we took the idea, helped develop it, implement it, and turned it into something that could have a profoundly positive impact on the Canadian Forces."

That's because the test vehicles will be monitored for performance and fuel economy. If the trial is a success, 4 Wing plans to increase the biodiesel concentration up to 20 per cent. The CF may also extend the program to include other non-deployable vehicles. DCC will prepare a report on the program, which will be

distributed nationally. If the results are successful, similar programs could appear on bases across the country.

"Because of the Department's sustainable development strategy and desire to reduce greenhouse gas emissions, this report will be timely," explained Horyn.

"Biodiesel is environmentally-friendly, it's a renewable resource, and we also know that the Department is always looking for ways of making better use of agricultural resources that are on the prairies, including canola oil. We're very proud to be a part of this project."

## Design-build work at Shilo's 2 PPCLI wins national award



*DCC's innovative approach to the 2 PPCLI design-build contract helped ensure the unit's new CFB Shilo headquarter facility was completed on time.*

CFB Shilo's 2 Princess Patricia's Canadian Light Infantry (2 PPCLI) headquarters was awarded Second Place in the Canadian Design-Build Institute's National Design-Build Award of Excellence.

This design-build project involved three new buildings: two for vehicles and one used as a combined main building and training facility. DCC's primary role in the project was contract management. Thanks to DCC's innovative approach, the 2 PPCLI's move from Winnipeg to Shilo was met.

"To me, the award compliments the efforts of everyone involved," said Frederick Hart, site manager. "This really turned out to be an exceptional product, and it's been well accepted by the owners and the user groups."

The joint venture design-build team included Aecon (formerly Westeinde Construction Ltd.) and Caspian Construction Inc. Griffiths Rankin Cook Architects were in charge of the design team. The award winners were announced during the CDBI's 2005 conference in Ottawa. The CDBI awards recognize excellence in Canada's design-build industry, and to acknowledge design-build teams whose projects contribute to the growth and stature of the design-build profession.

According to the CDBI, "Award recipients demonstrate the highest standards and principles in the design-build industry and the business community in pursuit of excellence."

# Building stronger relationships at ASU London

In business, one of the best ways to learn more about your client's needs is to walk a mile in their shoes. Or, in the case of the Canadian Forces, their boots.

So it's a safe bet that Patricia Baker has logged more than a few miles since she became the acting Construction Engineering Officer (CEO) at London's Area Support Unit Wolseley Barracks.

Patricia, usually consumed with her job as DCC's site manager at the London barracks, has a solid reputation for getting the job done right for DND. It's one of the reasons she was asked to take on her new role by the ASU Commanding Officer.

"It's been an honour to serve in this position," said Patricia, who assumed her duties last May.

"I wasn't expecting this, because it's not something we usually see. Military personnel would normally fill the position, but there just aren't enough construction and engineering people, in that rank, to fill that position."

Making the transition to CEO was challenging, but Patricia's already substantial experience working alongside base personnel armed her with sufficient knowledge to hit the ground running.

Reporting directly to the ASU CO – as well as having military personnel report to her – has given Patricia even greater insight into the day-to-day operations of the Canadian Forces.

"Everyone here has always had a really good relationship with each other, which is one of the reasons I was chosen for this position," she said. "They know DCC. We work side by side. Sometimes we share offices. So that relationship has always been very positive."

Given her civilian background, Patricia knew the spotlight would be on both her and DCC to not only maintain their ongoing work, but to ensure that new projects and issues were dealt with immediately and effectively. She and



*DCC's Patricia Baker, seen here during a DCC site visit with (from left to right) Chief Warrant Officer Kevin Carleton, 2 Area Support Group Sergeant Major, Petawawa; Col. Ian Poulter, 2 Area Support Group Commander, Toronto; and Maj. Keith MacNeil, Commanding Officer, Area Support Unit, London. Baker was asked to step in and work as the Construction Engineering Officer. Thanks to the hard work and dedication of both DND and DCC employees, the temporary transition has gone smoothly.*

the DCC site office staff have worked hard to demonstrate their competence during this period.

"This has been our opportunity to show that DCC has the expertise to

***"Everyone here has always had a really good relationship with each other... They know DCC. We work side by side. That relationship has always been very positive."***

***Patricia Baker, Acting Construction Engineering Officer***

fill this role, and still be objective to what services we've purchased from DCC and what we're able to get from them," said Patricia.

"This is an opportunity to shine, and we have to do that as a collective group. I'm here to do this job, not as a

figure head."

As an official DND representative, Patricia sets high expectations on DCC's performance. She can be tougher, joked one colleague, than military personnel. But Patricia shrugs that off with a chuckle.

"I'm the client, and we have to show that this was the right choice for DND. It's about showing them that we as a group can do this. Everybody on the DCC side has stepped up to this challenge. People on the DND side have been great too. I stepped into a situation where many of the base staff have never been managed by a civilian, and now they're being managed by a civilian – and by one that's not from DND." The shared priorities between DND and DCC, forged by years of trust and co-operation, have helped ensure this relationship stays on a solid foundation.

"We all recognize that we're here to do a task, and we all want to get to the same end," said Patricia. "That's how it should be, and that's what we want to show. And it's been working very well."

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## Accountability matters at DCC

At DCC, hearing directly from the client—DND—is of utmost importance.

There's no better way to ensure DND and the Canadian Forces receive the best service possible than by providing accessible, accountable service.

That's why DCC's Infrastructure Support Services (ISS) hosted an open house for DND personnel on Tuesday, February 7 at the ISS office, only a block away from National Defence Headquarters in Ottawa. Below left, David McCuaig, Manager of DCC's

National Operations Group (right), and Michael Griffin, an ISS Program Manager, talk with Lt.-Col Marc Desjardins, Director Construction Projects and Engineering Policy (DCPEP).

Below right, Hans Gartner, ISS Manager, shares a word with Maj. Peter Williams, ADM (HR-Mil) Engr.

ISS is a section of the National Operations Group (NOG) of DCC with a mandate to provide services to support DND clients with all aspects of Realty Asset Management.



## Training arena prepares soldiers for terrorist attacks

### *Design-build project provides Canadian Forces with a year-round training facility*

Using the latest science and technology to prepare for terrorist attacks is a priority for the Department of National Defence.

And ensuring that the Canadian Forces' front-line defenders have a realistic training facility that will help them face any manner of threat has been a priority for Defence Construction Canada.

The completion of CFB Suffield's Indoor Training Arena (ITA), part of the Counter Terrorist Training Centre, helps the military prepare its response to chemical, biological, radioactive, and nuclear terror threats.

The \$3.8 million DCC design-build project was awarded in January 2005, and was completed in just 10 months.

"What's unique about this training facility is that it gives soldiers a year-round venue for training using simulated chemical and biological agents," said Tony Ambrosio, DCC's Site Manager at CFB Suffield.

"The facility contains a subway scenario, a large vehicle detection and decontamination scenario, and a multi-purpose area. The multi-purpose area has a structural ceiling grid on which a system of moveable wall panels can control the size and shape of different scenarios. The planned scenario training tries to recreate actual real life conditions."

The ITA's scenario areas can be observed by a complex

system of visual monitoring equipment. A catwalk above the multi-purpose area provides access and monitoring capability to all the planned scenarios, said Ambrosio.

Other areas include of the building include a storage area for scenario props, a workshop area used to design and build scenario props, and an equipment preparation storage area.

The DCC Suffield site office assigned Bob Hashizume to provide project management support to Thuy N Le, the DCPEP Project Manager.

The support started at the selection of the Performance Specification Consultant, Smith Carter, and continued through the selection of the design/build contractor, Bird Design-Build Ltd.

Bird's prime consultant was Barr Ryder Architects, supported by Earth Tech Engineering, PadCar Mechanical Contractors and Starks Electrical Contracting.



*CFB Suffield's Indoor Training Arena features moveable wall panels to control the size and shape of various scenarios.*