



## Moderating an online AfCAP LVR-DCP Software User Forum:

### *Frequently Asked Questions (FAQ)*

The screenshot shows a forum thread titled "How do you activate Site Collection Features?". The original post by Bruno Gabrielli asks for help finding the option. A verified answer by Zak AIAI provides the path: "Site Actions > Site Settings > Site collection features (Located under Site Collection Administration)". Below this, a post by Hanif Khalid suggests an article titled "Activating and Deactivating Features with PowerShell". A final reply by Bruno Gabrielli says "That worked - thanks.".

Overlaid on the screenshot are two moderation menus:

- Reply Menu:** Reply, Reply With Quote, Private Reply
- Moderation Menu:** Verify Answer, Mark as Not Answer, Suggest as Answer, Mark as Not Answer

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Cover Image: From: <https://store.bamboosolutions.com/p-211-discussion-board-plus.aspx>

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**Abstract**

AfCAP has developed pavement design software for low volume roads (LVR), named AfCAP LVR-DCP Software, together with the associated Software Help File (SHF), and has made it available on a “free to use” basis on the ReCAP website. The users of this important LVR design software are supported through an inter-active User Forum that will also be used for further development and refinement of the software. This document reports on the initiation of discussion and also frequently asked questions (FAQ) aimed at further stimulating user discussion on the associated Users LVR-DCP Forum web page.

**Key words**

AfCAP LVR-DCP Software, DCP, User Forum, Frequently Ask Questions (FAQ),pavement design

**Acronyms, Units and Currencies**

AfCAP	Africa Community Access Partnership
AsCAP	Asia Community Access Partnership
BE	Built Environment (CSIR)
CSIR	Council for Scientific and Industrial Research
DCP	Dynamic Cone Penetrometer
DFID	Department for International Development
EP	External Project
FAQ	Frequently Asked Questions
GBP	British Pound Sterling
GWAVA	Unified archiving and critical messaging security solution for business infrastructures
GWDMS	GroupWise Document Management System
CSIR ICT	CSIR Information and Communications Technology
LVR	Low Volume Roads
ReCAP	Research for Community Access Partnership
SHF	Software Help File
TIE	Transport Infrastructure Engineering
UK	United Kingdom
UKAid	United Kingdom Aid (Department for International Development, UK)
v	Version
WinDCP	Existing Windows Based DCP software at CSIR.

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### **Executive summary**

ReCAP, the Research for Community Access Partnership, aims to empower road design technicians and engineers in Africa and Asia by dissemination of freely available Low Volume Roads (LVR) Dynamic Cone Penetrometer (DCP) design software. The DCP software is available on the following link: <http://www.research4cap.org/SitePages/LVRDCPSoftware.aspx>. Access by registration for the AfCAP Low Volume Roads (LVR) DCP Software Forum, is available on the following web page: <http://research4cap.org/LVR/SitePages/Home.aspx>.

This document reports on the FAQ that have been formulated and topics aimed for discussion and to be posted on the LVR-DCP Forum webpage.

## 1 Background

One of the milestones under the Terms of Reference (ReCAP ToR, 2016) includes that a list of Frequently Asked Questions (FAQ), addressing the key aspects of the application of the AfCAP LVR-DCP Software, on the dedicated AfCAP LVR-DCP Software webpage to be available on the ReCAP website. New users of the developed software are encouraged to use the FAQ and its answers for quick and easy reference as well as answer commonly asked questions. Ideally, this should shorten the learning cycle of the software as well as associated hardware technologies.

## 2 Progress

It was noted that during December 2016 there was very low activity on the Forum. However, since late December and January 2017 activity increased. As of January 25, 2017 a total of 35 members are registered for the LVR-DCP Software, and 17 for the LVR Forum since inception. These include countries in Africa, as well as other countries such as USA, Columbia, Netherlands, Qatar, Bangladesh, Norway, Nepal, UK and Myanmar.

## 3 Challenges

As this is a new endeavour for both ReCAP and CSIR Built Environment Transport Infrastructure Engineering Group, experience to operate within this space will be very valuable for both the practice of using the web platform AfCAP DCP Software and forum activities. In summary, the following issues on the web based DCP Forum currently includes:

- “Welcome Message” that was posted in October 25, 2016;
- On November 29, 2016, an “Initiation of discussion” posted. See Section 3.1 below;
- List of seven (7) FAQ posted on Dec 1, 2016. See Section 4 below.

### 3.1 Initiation of discussion

Below is a copy of the content from the posted discussion by the author. It includes items in tabular format, as follows:

“Discussion on of the MAIN differences between the existing **CSIR WinDCP5.1 software** (available on: <http://asphalt.csir.co.za/DCP/>) and the new **AfCAP LVR-DCP v1.03** software package.

The main differences include the following:

Parameter	CSIR WinDCP5.1	AfCAP LVR-DCP v1.03
CBR	Included (Empirical method)	Owing to large variations across road materials the usual conversion of “DN to CBR” is <i>not</i> included in this package. It is up to user to define such a relationship between “DN and CBR” that could be used, if required, in normal spreadsheet calculations.
Structural Capacity (MISA): Granular Layers - Stabilized Layers	Structural capacity predicted using empirical functions, and is different for the two layer types, since the structural behaviour and damage evolution is different. Granular layers typically fail in shear, whilst stabilized layers fail under normal fatigue cracking and/or crushing failure from the top.	Not estimated at all. This package was developed primarily to be based on the “DN” value, i.e. rate of DCP penetration in mm/blow. DN from the DCP field data is used to quantify the “shear resistance” throughout the pavement structure up to 800 mm deep. Usually, different DN values will show the different layers in the pavement structure. In addition, the DN-value is also proposed to be used in the laboratory (Lab DN) for assessing the shear strength of potential granular materials from quarries, etc., to be evaluated for use in the road structure.
Layer type (i.e. Granular/Stabilized)	Differentiate between the two layer material types	Does not differentiate, as no structural capacity is calculated.
Laboratory DN-values (Lab DN)	Not used.	Used, and can be evaluated as such. See above.
LVR DCP Design Evaluation of the total road length under DCP investigation.	Not included. Up to user to do own evaluation from measured DN to pavement design.	Included, whereby a road section can be evaluated and the new required DCP DN-based pavement design computed as output. Based on the field DCP DN-values, the in-situ pavement can be divided into Uniform Sections, and compared with the associated user selected Traffic Load Class (TLC) for the new design requirement.

It will be interesting to get appropriate responses on the LVR DCP Forum from DCP users as to the value, or not, of having the CBR included in the new AfCAP LVR-DCP. Also, the value of having an option for Lab DN values for materials selection.

## 4 Frequently asked Questions (FAQ)

The following Frequently Asked Questions are prepared for posting on the LVR-DCP forum in order to facilitate further user learning and discussions:

### **Question 1. Why a new DCP software package?**

AFCAP's approach to the design of Low Volume Roads (LVRs) and also pavement rehabilitation design was mainly influenced by the increased use of the Dynamic Cone Penetrometer (DCP) instrument. For this, however, there was a need for consistency in the DCP data analysis and associated design procedures. Therefore, AFCAP decided, based on user feedback, that there was urgent need for an updated, or new LVR-DCP data analysis software package, in addition to other existing solutions.

### **Question 2. Why free LVR-DCP software?**

A free software package (with registered users) facilitates the acceleration and increased understanding of DCP data analysis, which also facilitates the creation and anticipation of a large LVR-DCP users group, obviously with accelerated Inter-User learning.

### **Question 3. What are the benefits of using the LVR-DCP software?**

The benefits of the LVR-DCP software include a fast and efficient evaluation methodology for the road structure design; more intuitive and user-friendly compared to the earlier version (WinDCP5.1). It also provides for consistency with DCP DN results, when performed within the existing DCP design and evaluation protocol.

### **Question 4. Why a Laboratory DCP protocol?**

A laboratory protocol is needed for the economical use of potential road material in LVR pavements. In this way, materials are evaluated in the laboratory, and materials selection is based on empirical experience, using the Lab DN value as a proxy for material selection, classification & use in the actual road pavement structure.

### **Question 5. What are the challenges associated with a laboratory use of DCP to obtain the Lab DN value?**

The challenges associated with the laboratory evaluation method using the DCP include issues such as mould size and associated confinement during DCP penetration. Currently the existing "CBR" mould is proposed to be used "upside down" for Lab DN values. Also, what is important is the accuracy of measurement when the DCP penetration is not undertaken with the rod in a vertical position (as it also should be on real pavements). For this it is preferable to have a type of vertical standing frame to host the DCP instrument during penetration into the mould. More research, however, is needed to further improve the DCP laboratory protocol for road material selection based on the laboratory DN-value.

**Question 6. How do I print reports to Adobe PDF and/or to image files?**

The format (\*.pdf, \*.jpeg, \*.bmp, etc) of the printed reports is under control of the User, provided that the correct printer drivers are installed. If the user wants to print image files for use in normal MS Word, or Excel, or PowerPoint (pptx), the correct printer drivers should be installed separately, as it is *not included* in the current software. One option is to obtain the following free driver software: “PDFill PDF&Image Writer” that could be installed and used for this purpose. See link: <https://www.pdfill.com/freewriter.html>

**Question 7. How do I select a “Reliability Level” in the LVR DCP Software?**

The User should note that the Reliability Level (e.g. 5P/95P, 10P/90P, 20P/80P, 50P/50P, etc.) defines the Percentile (P) value for the analysis. This is a User defined parameter. Note that the reliability levels you select will determine which percentile values will be used in the appropriate calculations, and therefore be shown on the associated plots and tables. For the associated tables, see “Summary Report” and/or “Detailed Report” from the software.

-- End --

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