

**MINUTES OF THE APT STEERING COMMITTEE MEETING
27th NOVEMBER 2003
GAUTRANS LABORATORY**

PRESENT:				
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	Action
<p>1 WELCOME AND APOLOGIES</p> <p>Ms Sadzik welcomed all the members of the Steering Committee.</p> <p>Due to time constraints the following items were omitted from the agenda as they had been presented in earlier meetings attended by the committee:</p> <p>Item 4.1: HVS and associated testing Item 7: Feedback from HVS benefits workshop Item 8: Feedback from HVSIA meeting</p>	

2 MINUTES OF PREVIOUS MEETING

The minutes of the previous meeting were accepted as a true reflection of the meeting with the following amendments:

Page 2, last paragraph: ...before speaking to KZN about a proposal for investigating thin sands. Should be amended to ... before speaking to KZN about a proposal for investigating **their** sands.

Page 3, last bullet: A decision whether to construct an ETB section on the N2 was deferred ... Should read; A decision whether to construct an ETB section on the **N7** was deferred ...

Page 4, first bullet: The lab testing programme proposed to replace the HVS testing should be undertaken in phases. Should read: The lab testing programme proposed to **supplement** the HVS testing should be undertaken in phases.

Spelling error: Netterburg should be spelt **Netterberg**.

3 MATTERS ARISING

Point 3: Distribution of Information/Reports:

The first level analysis draft report on the N7 was posted on the HVS web site for downloading and comment by committee members with a password for security. The final document will be available to all interested parties on the web site. Mr Theyse had only received comments from two members and requested further comment in order to finalise the document

All

Messrs Theyse and Sadzik were requested to re-look at the format of the first level report for the next report on the crushed stone sections on the N7.

ES/HT

Point 4: Status Report on Progress Related Priorities and Action Plan Third paragraph:

Mr Theyse presented a draft spreadsheet of the test numbers and corresponding reports, together with the relevant dates. The 3 sets of tables (not linked at present) contain a summary, description, objectives and results as well as design parameters. A hyperlink on the website could ultimately be developed to link relevant reports. A bibliography should be kept in the conventional format.

It was recommended that the Steering Committee look at the output and give their comments as soon as possible. A working group of Messrs Taute, Sampson, Sadzik and Theyse was formed to provide input for the structure of a final spreadsheet/database. Mr Theyse should coordinate the

HT/ES/AT/LS

task group.

Last paragraph:

There has been no feedback related to the proposal for a full-scale HVS investigation of the stabilization of sands in Mozambique.

Point 5: LVR, Cape Town: Testing Programme and Outcomes

Second bullet:

Messrs Theyse and Lorio to liaise regarding Texas Triaxial testing. Dr Netterberg also has information related to the standard test.

HT/RL

It was unknown if any equipment was still available at UP. Prof Horak will investigate from the Geotechnical side regarding the availability of equipment and their capability in the area of triaxial testing.

EH

Last paragraph:

Mr Theyse is still busy preparing a report on the overall picture related to research on LVRs. A discussion document should be available by the end of February 2004.

HT

Point 7: N7 ETB Sections: Design and Constructability Problems

A proposal has been submitted by CSIR as a STEP project to look at the effects of field-curing related to laboratory curing on test results.

Point 8: Revised plan for HVS testing

First bullet:

The Compaction Study has started and is on schedule. This item to be discussed at the next meeting.

Update on Concrete Sections

Testing programme and outcomes include:

- Study into load transfer as a result of aggregate interlock and dowels;
- Concrete shrinkage in the lab and prediction of shrinkage;
- Erodibility of the subbase.

New testing apparatus and method is being investigated to simulate water erosion. A meeting has been called for further guidance on this aspect.

Aspects of work done by M de Beer and experience in Australia and France should be investigated. J Grobler has also done work in the area.

The wet/dry brushing test does not simulate the typical failure mechanism of water erodibility of the subbase under a concrete pavement. This test is better suited to evaluating the durability of lightly cemented base and subbase materials (ie C3 and C4 materials). The new simulation test of water erosion is more suitable for these types of pavements.

MMLS testing is being done to evaluate the erosion of sands. Additional add-on testing with the MMLS could be done.

4 STATUS REPORT ON APT TESTING

4.1 HVS and Associated Testing

Ms Sadzik gave a presentation with regard to the status of APT testing at the Road Pavements Forum on 25/26 November 2003. As the Steering Committee was present at the RPF, and in the interest of time, the presentation was not presented again. For record purposes, the presentation is attached in Appendix A.

4.2 MMLS

The presentation of Prof Hugo is attached in Appendix B, along with a 3-page bibliography.

4.3 ART

Prof Horak gave a presentation on the Accelerated Road Tester (Appendix C).

5 ISSUES RELATED TO ETB LAB TESTING

Mr Theyse presented issues related to the laboratory testing programme for emulsion treated materials and highlighted the differences between the quarry material sampled recently for use in the test programme, and the material milled from the N7 and used for the foam bitumen laboratory study. The presentation is attached in Appendix D.

From the discussions it was agreed that:

- The two materials were significantly different and direct comparison between emulsion and foam bitumen results may not be possible. Factors other than material type could also influence the comparison;
- A limited comparison programme should be undertaken to look at the effects on UCS results of emulsions stabilized “milled” material and emulsion and foam stabilized “quarry” material. This is underway and should continue;
- The project proposal and its objectives should be revised to undertake a testing programme to evaluate different material types and different densities to provide improved inputs into the structural design models and provide additional information for the new classification proposed for emulsion treated materials. The revised proposal will be resubmitted to members for comment;
- The sandy material, foam-stabilized as part of the MR439 (Mseleni to Phelendaba) contract by SANRAL in KZN, should be included in the

HT

HT

All

programme. Mr Theyse to liaise with Mr Rossmann to obtain a bulk sample of the material;

HT/DR

- The quarry material would provide results on an emulsion stabilised G2 material in the EB 1 category;
- Ideally more milled material should be obtained from the road as it is information on the stabilized, milled material that will be relevant for future projects. Mr Lorio to investigate the possibility of obtaining more of the N7 “milled” material from the road.

RL

6 HMA RESEARCH PROPOSAL

Mr Verhaeghe gave a summary of the project proposal submitted to Gautrans (pp/2003/04), dated 22 September 2003 related to further work on the validation and refinement of the draft SA design procedures for HMA. Copy attached in Appendix E.

The following was agreed:

- The current TRH 8 is inappropriate for HMA design and needs urgent replacement;
- Validation of the current draft design was a priority and should be added to the list of priority areas for APT testing;
- A suitable permeability test with limits is essential;
- Attention should be given to including design information from the UTLA guideline document being sponsored by Sabita and soon to be available;
- An interim practical guideline to design of HMA based on the current draft document should be developed now and the Sabita initiative in this regard was supported. This could be updated and revised when additional information becomes available on completion of the proposed project.

BV

7 FEEDBACK FROM HVS BENEFITS WORKSHOP

Mr Sampson gave a presentation with regard to the HVS benefits project at the HVSIA meeting of 16/17 October 2003. As the Steering Committee was present, and in the interest of time, the presentation was not presented again. However, for record purposes, the presentation is attached in Appendix F.

8 FEEDBACK FROM HVS INTERNATIONAL ALLIANCE MEETING

Ms Sadzik gave a presentation with regard to the outcomes of the HVSIA meeting at the Road Pavements Forum on 25/26 November 2003. As the Steering Committee was present at the Forum, and in the interest of time, the presentation was not presented again. However, for record purposes, the presentation is attached in Appendix G.

9 STRATEGIC PLANNING DOCUMENT FOR HVS

It was explained that a strategic planning document for APT was required by Gautrans to tie in the current APT programme to Departmental priorities.

Appendix H shows the departmental goals along with member's inputs into the long term vision, mission, goals and strategic approach for the APT strategic plan. The requirements for information to be provided from the identified focus areas are also given.

Mr Sampson will be responsible for compiling the overall strategic plan. Ms Sadzik will provide copies of the Austroad and Caltrans strategic plans to Mr Sampson.

LS/ES

9.1 Revisit Research Needs/Priorities

The priority testing list developed at a previous meeting was revisited to assess progress and determine a future testing schedule. Following discussion, it was agreed that:

- APT research would be carried out in five focus areas and individuals were identified to produce a strategic plan of research for the focus areas by end of February as follows:
 - Cold Recycling (EBTM & Foam) – H Theyse
 - Asphalt Performance – B Verhaeghe
 - Upgrading of Gravel roads – L Sampson
 - VPI (dynamic loads and contact stresses) – W Steyn
 - Concrete pavements – B Perrie
- The strategic plans should in line with the expectations for the focus areas shown in Appendix H.
- The strategic plans in the focus areas will be consolidated in the overall plans and actions for APT testing being prepared by Mr Sampson.

HT
BV
LS
WS
BP

LS

11 GENERAL/ANY OTHER BUSINESS

None.

12 NEXT MEETING

Date of the next meeting to be advised.

Appendix A

**STATUS REPORT ON APT TESTING:
HVS AND ASSOCIATED TESTING**

Ms Elzbieta Sadzik

Appendix B

STATUS REPORT ON APT TESTING: MMLS

Prof Fred Hugo & Prof Kim Jenkins

Appendix C

**STATUS REPORT ON APT TESTING:
ART**

Prof Emile Horak

Appendix D

ISSUES RELATED TO ETB LAB TESTING

Mr Hechter Theyse

Appendix E

HMA RESEARCH PROPOSAL

Mr Benoit Verhaeghe

Appendix F

FEEDBACK FROM HVS BENEFITS WORKSHOP

Mr Les Sampson

Appendix G

**FEEDBACK FROM HVS INTERNATIONAL
ALLIANCE MEETING**

Mr Les Sampson

Appendix H

STRATEGIC PLANNING DOCUMENT FOR HVS

Ms Elzbieta Sadzik & Mr Les Sampson