Design of Low Volume Roads

AFCAP Workshop on Rural Accessibility and Mobility
Feedback from Site Visit

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Pavement design process must be fully responsive to the road environment.
Issues for Discussion

● Alignment
  ➢ horizontal
  ➢ vertical

● Road Safety
  ➢ urban and peri-urban areas (x-section, etc)
  ➢ rural areas
  ➢ road width – curves, straights, 3m? 4m?
  ➢ passing bays

● Environmental issues
Issues for Discussion

● Social issues
  ➢ Access to adjacent property

● Traffic over design life
  ➢ Motorised, non-motorised (over design life)

● Pavement design
  ➢ Efficacy of design (multi-layered, traditional approach)

● Materials
  ➢ Lab testing (BS methods)
  ➢ Wearing course gravel
  ➢ Pavement layers
Issues for Discussion

- **Surfacing options**
  - Rationale for selection (gradient related)
  - Use of other options (e.g. cobblestones, armouring)

- **Materials**
  - lab testing (BS methods, adequacy, utilisation)
  - wearing course gravel assessment
  - pavement layer assessment

- **Drainage**
  - drainage rating
  - lined drains, unlined drains, scour checks
  - turnouts (direction, grade)
Issues for Discussion

- Construction
  - Interface between flexible and rigid
  - Use of other options (e.g. cobblestones)
Typical cobblestone surfacing on urban collector road in Bujumbura
Urban road surfacing: AC on urban arterials and cobblestone on urban collectors
Close up of cobblestone surfacing
Cobblestone speed reduction measure (road hump)
AC-cobblestone joint