1. **Title:**

Road Gradient and Tyre/road Noise

2. **Objectives:**

   a. To understand tyre/road noise generation mechanisms
   b. To understand the impacts of road gradient on tyre/road noise
   c. To evaluate the relationship of road gradient and the tyre/road noise with the data in Hong Kong
   d. To compare the Hong Kong results with results obtained elsewhere

3. **Methodology:**

   a. To conduct a literature review on tyre/road noise generation mechanism;
   b. To review the results of studies on tyre/road noise and road gradient relationship;
   c. To collate the data obtained from local studies; and
   d. To assess the relationship between road gradient and tyre/road noise using the Hong Kong data and compare the results obtained elsewhere.

4. **References:**

   d. Hanson D.I., James, R.S. and NeSmith C, Tire/pavement noise study, National Centre for Asphalt Technology”, Auburn University, Auburn AL, US, August 2004.
   e. [http://www.cse.polyu.edu.hk/~activi/CPXWeb/Overview.htm](http://www.cse.polyu.edu.hk/~activi/CPXWeb/Overview.htm)
1. **Title:**
   Road Curves and Tyre/road Noise

2. **Objectives:**
   a. To understand tyre/road noise generation mechanisms
   b. To understand the impacts of road curves on tyre/road noise
   c. To evaluate the relationship of road curves and the tyre/road noise with the data in Hong Kong
   d. To compare the Hong Kong results with that obtained elsewhere

3. **Methodology:**
   a. To conduct a literature review on tyre/road noise generation mechanism;
   b. To review the results of studies on tyre/road noise and road curves relationship;
   c. To collate the data obtained from local studies; and
   d. To assess the relationship between road curves and tyre/road noise using the Hong Kong data and compare the results obtained elsewhere.

4. **References:**
   d. Hanson D.I., James, R.S. and NeSmith C, Tire/pavement noise study, National Centre for Asphalt Technology”, Auburn University, Auburn AL, US, August 2004.
   e. [http://www.cse.polyu.edu.hk/~activi/CPXWeb/Overview.htm](http://www.cse.polyu.edu.hk/~activi/CPXWeb/Overview.htm)
1. **Title:**

Vehicle Tyres and Tyre/road Noise

2. **Objectives:**

a. To understand tyre/road noise generation mechanisms
b. To understand the impacts of vehicle tyres on tyre/road noise
c. To evaluate the relationship of vehicle tyres and the tyre/road noise with the data in Hong Kong
d. To compare the Hong Kong results with results obtained elsewhere

3. **Methodology:**

a. To conduct a literature review on tyre/road noise generation mechanism;
b. To review the results of studies on tyre/road noise and condition and types of vehicle tyres relationship;
c. To collate the data obtained from local studies; and
d. To assess the relationship between vehicle tyres and tyre/road noise using the Hong Kong data and compare the results obtained elsewhere.

4. **References:**

d. Hanson D.I., James, R.S. and NeSmith C, Tire/pavement noise study, National Centre for Asphalt Technology”, Auburn University, Auburn AL, US, August 2004.
g. http://www.cse.polyu.edu.hk/~activi/CPXWeb/Overview.htm
1. **Title:**

Road Surface Texture and Tyre/road Noise

2. **Objectives:**

   e. To understand tyre/road noise generation mechanisms
   f. To understand the impacts of road surface texture on tyre/road noise
   g. To evaluate the relationship of road surface texture and the tyre/road noise with the data in Hong Kong
   h. To compare the Hong Kong results with results obtained elsewhere

3. **Methodology:**

   e. To conduct a literature review on tyre/road noise generation mechanism;
   f. To review the results of studies on tyre/road noise and road surface texture relationship;
   g. To collate the data obtained from local studies; and
   h. To assess the relationship between road surface texture and tyre/road noise using the Hong Kong data and compare the results obtained elsewhere.

4. **References:**

   l. Hanson D.I., James, R.S. and NeSmith C, Tire/pavement noise study, National Centre for Asphalt Technology”, Auburn University, Auburn AL, US, August 2004.
   m. [http://www.cse.polyu.edu.hk/~activi/CPXWeb/Overview.htm](http://www.cse.polyu.edu.hk/~activi/CPXWeb/Overview.htm)
1. **Title:**

   Apportioning of Motor vehicle on-road pollutant emissions

2. **Objectives:**

   a) To understand the apportioning of motor vehicle on-road pollutant emissions;

   b) To review the results obtained from local studies on motor vehicle on-road pollutant emissions; and

   c) To estimate the amount of exhaust emissions emitted from various types of vehicles in the local vehicle fleet

3. **Methodology:**

   (a) To conduct a literature review on the apportioning of motor vehicle on-road pollutant emissions;

   (b) To collate and analyze local available data on motor vehicle on-road pollutant emissions;

   (c) To estimate and compare the apportioning of motor vehicle on-road pollutant emissions in Hong Kong and elsewhere.

4. **References:**


1. Title:

Design of Railway Stations and Ridership

2. Objectives:

(a) To study the inter-relationship of railway station designs and railway ridership;
(b) To identify station design parameters affecting people’s choice of travelling on rail;
(c) To analyse this relationship using available data in Hong Kong and compare the results
   with that obtained elsewhere

3. Methodology:

(a) To conduct a literature review on railway station design and railway ridership, taking at
    least three overseas cities as references;
(b) To collect and collate railway station design and ridership data in Hong Kong.
(c) To analyze inter-relationship of railway station design and ridership in Hong Kong.
(d) To contrast the overseas and local experiences in railway station designs.

4. References:

Wilson J. et al edited (2007), People and rail systems: human factors at the heart of the
railway, Ashgate.
Nakagawa D. and Hatoko M, “Reevaluation of Japanese high-speed rail construction:
Recent situation of the north corridor Shinkansen and its way to completion”,
Transport Policy, Volume 14, Issue 2, March 2007, Pages 150-164
Vuuren D., “Optimal pricing in railway passenger transport: theory and practice in The
Netherlands” Transport Policy, Volume 9, Issue 2, April 2002, Pages 95-106
Coto-Millán P, Baños-Pino, J. and Inglada V., “Marshallian demands of intercity passenger
Part E: Logistics and Transportation Review, Volume 33, Issue 2, June 1997, Pages
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