Ref. : DSD T 1/50/1/72

DSD Technical Circular No. 2/95

Design Population for Estimation of Sewage Flow

1. Data Sources

Population projection figure is a key parameter to estimate sewage flow quantities for the design of sewerage facilities. Designers should draw population figures from up-to-date versions of the following documents, wherever applicable:-

(i) Territorial Development Strategy;

(ii) Sub-regional Development Strategy (e.g. North West New Territories Development Strategy, South East New Territories Development Strategy, "Metroplan", etc)

(iii) Development Statements Studies (e.g. North West New Territories (Yuen Long District) Development Statement Study);

(iv) New Town Development Programmes; and

(v) Working Group on Population Distribution (WGPD).

Designers should select the most appropriate figures in design, depending on the size, location and design horizon of the project in hand. In case of difficulties in reconciling difference from various sources, Planning Department should be consulted.

2. Critical Review of Design Population

Population projections may change over time. Periodic check should be made against up-to-date projection during the project life to ensure that the finalized design has taken into account the latest information as far as possible. Critical examination of design population figures is essential at the following stages :

(i) Preliminary project feasibility stage before inclusion in RAE;

(ii) Design stage before Design Memorandum is confirmed; and

(iii) PWSC paper stage before project upgraded to Cat A.

3. Flow Monitoring

Flow measurement devices should be installed at strategic locations of the sewerage system for the purpose of flow monitoring.

When sewage works facilities are commissioned, the actual sewage flow should be monitored for the purposes of :

(i) comparing actual flows with design flows with a view to refining operation requirements; and

(ii) assessing need of extension works.

4. Phased Provision of Facilities

When there is a significant difference in existing population and the ultimate design population, and a significant change in land use during the design life of the facilities, consideration should be taken to carry out the project in stages taking into consideration the following : -

(i) rate of population increase, including minimum and maximum development scenarios;

(ii) design life of civil/E&M works;

(iii) cost implications; and

(iv) lead time for design and construction.

5. Attached for reference are guidelines on the application of WGPD projection figures for different time ranges in facilities planning.

(Y.Y. NG)
Director of Drainage Services

September 1995

Guidelines on the Use of Population Distribution Projections for the Future Planning and Implementation of Work

Type of Planning	Uses	Projections to be used
Long-Term Planning (7 - 10 years)	• Planning urban development areas (e.g. a new town) • Reserving land for major facilities & services (e.g. hospitals, sewerage systems, trunk roads, major recreational facilities)	Ultimate Design Population
	• Determining the phasing & implementation of major works for facilities & services to meet user demand (e.g. new bus routes)	WGPD + safety margin (say 10 %)
Median-Term Planning (3 - 7 years)	• Determining the specific location, size and capacity of facilities & services to meet demand • Determining the timing of their provision	WGPD + safety margin (say 5 %)
Short-Term Planning (up to 3 years)	• Planning the actual provision of facilities & services	WGPD
Operational Planning	• Assessing / Reviewing the adequacy of provision of existing facilities & services	WGPD
	• Planning facilities & services specific to an area smaller than a TPU / PA	Department may derive its own estimate but using WGPD parameters, where appropriate, as control totals