HydroWorks Model Transfer (Sewerage) – Information Required

i) HydroWorks Input files

a) Project files

Suffix	Contents
.prj	Project description for identification of the project. A printout is required to indicate the associated files of each project.

b) Asset files

Suffix	Contents
.DSD	Details of the sewerage system (asset data). A textmax printout is required for each .DSD file and a layout plan is also required for each model.
.SHP	Details of non-standard pipe shapes.
.LUD	Land use index & other related indices. Information includes that related to the .WWG profiles and to the sub-catchment.

c) Event files

Suffix	Contents
.LEV	Input level hydrograph data. A graphical printout is required.
.QIN	Input discharge hydrograph data at nodes. A graphical printout is required.
.DWF	Diurnally-varying dry weather flow (dimensionless hydrograph data).
.WWG	Wastewater flow (and wastewater pollutant) profiles.
.PRM	Details of runoff parameters. Subcatchment information related to a node. A textmax printout is required.
.RED	Rainfall intensity profile across the whole catchment. A graphical printout is required.

d) Simulation files

Suffix	Contents
.CTL	Control data for a simulation. This file contains a single record, which sets the timesteps that the simulation uses.
.EVT	Event data for simulation. The event file contains a list of records that describe pending events that the simulation will run.
.GGS	Details of pipes to be gauged to gather detailed results during a simulation.
.JOB	Job file for a simulation process. The file contains input and output filenames for the simulation pre processor and the simulation. A printout is required.
.SIM	Parameters used for numerical calculations carried out by hydraulic network model.
.SPS	Hydraulic state file of the network model at an instance in time.
.SPH	State of runoff and washoff at end of simulation.
.SPB	Binary code details of the drainage system.

ii) HydroWorks Output files

Suffix	Contents
.PRN	Summary result from Simulation. A printout is required for the result of each run.
.HYD	Details of depth hydrographs for gauged pipes. A graphical printout is required for each gauged pipe.
.HYQ	Details of discharge hydrographs for gauged pipes. A graphical printout is required for each gauged pipe.
.HYV	Details of velocity hydrographs for gauged pipes. A graphical printout is required for each gauged pipe.
.log	Details of input files, warnings, and errors from simulation & simulation preprocessor.
.PR1	Summary output from simulation pre-processor
.SPR	Details of summary hydrographs from the simulation
.TXT	Summary of hydraulic simulation results and return period analysis results. A textone printout is required for each file.
.SPB	Network definition of validated data.
.SPH	State of runoff and washoff at end of a simulation.
.SPR	Hydraulic simulation results.

Note :

There may be multiple sets of HydroWorks input and output files to describe different basins within the Study Area and also to test different hydraulic and physical conditions within a catchment under different scenarios or planning years. A clear description shall be given to indicate the conditions.

iii) Model building information & Drawings

- A description of the methods used to calculate storm runoff, including the values used for the runoff parameters
- A description of the methods of modelling dry weather flow inputs
- A description of the production of the design rainfall profiles
- Descriptions of any model simplifications made during the model building process
- Mark-up sewerage record plans showing catchment areas and sub-catchment areas of the final sewerage network models numbered using the HydroWorks pipe numbering nomenclature (in the form of both soft copy and hard copy)
- Database showing detailed breakdown (e.g. population, area, unit flow, peaking factor) of the input data used in the input files (in the form of both soft copy and hard copy)
- Descriptions of data sources and the process of gathering and checking the data
- Tailor-made computer programmes with printed source code for establishment of the models

iv) Flow survey and model verification information

- Original recorded flow survey depth, flow and rainfall files
- Plots comparing observed and predicted flows and depths produced during the model verification process
- A description of any model amendments made during the verification process