Litho Plate Making

1. Litho plates are thin aluminium or sometimes plastic plates with a thin hydrophilic (water loving coating). An image is cut through this coating to expose the underlying hydrophobic (water hating) surface, almost in the same plane as the coating. The different surface properties are used to determine to which part of the plate ink adheres which is then transferred from the plate in the printing process.
2. Production of plates uses a computer to plate (CTP) process which may be thought of as being like a large laser printer.
3. The image is transferred from the computer to the processor so that the image is cut though the coating using a laser.
4. The plate passes through the processor to the section where it is developed using specialist developer suited to the plate coating. Normally, only one plate type and developer combination is used.
5. As the plate leaves the developing section, it passes through rollers which squeeze most of the developer and removed coating from the plate. This is drained to containers for removal by a licenced hazardous waste treatment company.
6. The plate passes through a rinse section where water passes over the plate. This removes any remaining traces of developer and coating which are drained to the foul water drain (sewer). Samples taken from a number of companies have shown that this has a pH of around 8 to 8.8 and has suspended inert solids of about 2.5 mg/m^3.
7. The rinse water is only applied whilst the plate is passing through the rinse section and therefore the discharge is intermittent.
8. The amount of water per rinse is constant for a given plate size and is typically around 16L per plate.
9. The number of plates produced in any given period is known as this is a key function of the company's operations.
10. The product of 8 and 9 means that the discharge rate over the period is known.