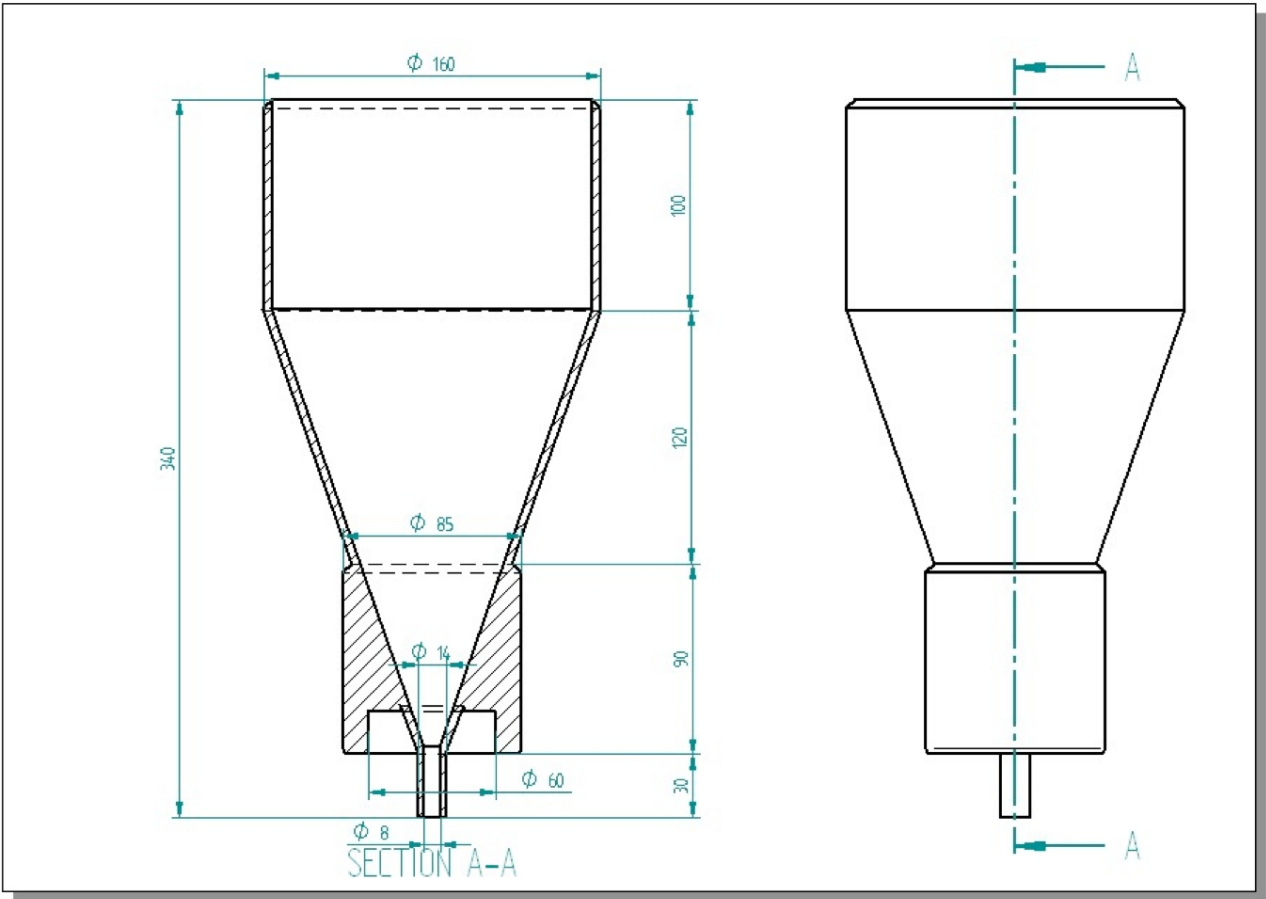


Atmospheric deposition consists of precipitation plus dry-deposition, and is a transfer of substance from the atmosphere to an ecosystem. Precipitation includes water, plus dissolved and suspended materials, in the form of rain, snow, frost and fog where it impacts onto vegetation and land surfaces. Deposited substances vary with location and over time: in Ireland they are dominated by dissolved seasalts (sodium, chloride, magnesium, sulphate, calcium, potassium), products of biological processes (ammonium), and of combustion (nitrogen oxides, sulphate derived from sulphur oxides). Atmospheric deposition is a significant nutrient source for many ecosystems. The rough tree canopy in forests has a large surface area, that captures fog, dust and gases, in addition to rain and snow. Nutrients in the rain are potassium, magnesium and calcium, which originate as seasalt, and nitrogen, which has more local sources, as ammonia from agriculture and nitrogen oxides from combustion sources.

The [chemical composition of precipitation has been monitored at eighteen sites in Ireland over variable periods since 1991](#). Under ForSite, monitoring of deposition has been restarted at three ICP-Forests Level II sites previously monitored since 1991, including a new Level II site at Dooary, Co. Laois.

The ForSite project is collating existing data on deposition, and is monitoring deposition at sites around Ireland.

Maps	kg/(ha year)	Deposition	N	P	HnPO4(3-n)- -->	K	Ca	Mg
	S							



Funnel used to collect bulk precipitation and throughfall at Dooary.

Atmospheric-deposition monitoring with water sampling is ongoing at Dooary, and ion-exchange-resin sampling at Brackloon and Ballinastoe.

