A surface is of infinite type if its fundamental group is infinitely generated. The mapping class group of an infinite-type surface is uncountable and therefore does not have a natural notion of a word metric. Does such a group have any infinite-diameter left-invariant (pseudo-)metrics? For a large class of surfaces we construct such a pseudo-metric by studying an infinite-diameter subgraph of the curve graph on which the mapping class group acts. (Received July 18, 2017)