Monumental funerary landscapes are paramount representations of the relationship between environment and superstructural human behavior. Their formation sometimes requires millennia and they cover wide territories, often adding up to complex palimpsests of monuments belonging to different time periods. In this regard, the funerary landscape of the semi-arid foothill region of Kassala (Eastern Sudan) represents a solid example. Therein, a comprehensive geoarchaeological investigation conducted by means of field survey and remote sensing allowed the creation of a regional geomorphological base-map and a dataset of funerary monuments. The latter comprises several thousand raised stone-built tombs spanning from the early first millennium AD clusters of tumuli (belonging to the pan-African traditions) to regionally exclusive variants of medieval Islamic funerary architecture (*qubbas*). Funerary monuments are found as eye-catching scatters of hundreds of elements along the foothills of the many rocky outcrops dotting the pediplain of the western periphery of the Eritrean Highlands. In this study, the two categories of monuments were not considered as separate *burialscapes*, but rather examined as a unique, diachronic funerary landscape in its relationship with the geological and geomorphological settings and constraints. Point Pattern Analysis (PPA) was employed to determine the main environmental drivers of their locations on a regional scale, as well as to assess the existence of superstructural factors acting on their aggregation at the local scale. Our results strongly suggest the presence of a geological/environmental/societal synthesis underlying the choice of monuments’ location: at the regional scale, the pattern follows a precise set of rules residing in the concomitant presence of stable, gently rolling slopes and available metamorphic rock slabs; at the local scale, the clustering is heavily conditioned by superstructural dynamics that most likely reside in kinship and collective social memory of local Beja people. We suggest that the creation of the funerary landscape of Eastern Sudan is the result of a repeated and well coded social behavior of the Beja people, semi-nomadic cattle breeders known to have inhabited the region since “time immemorial”. Despite their mobile lifestyle and cultural contact with other North African and Arabic cultures, the monumental palimpsest portrays how the funerary habits of this millennia-old society persisted almost undisturbed, valuing location and kinship over external influences.