In 2004 two new designs for the keeping of laying hens were proposed as stepping stones towards more sustainable livestock husbandry methods: the Roundel and the Plantation (in Dutch: Rondeel and Plantage). In the designs special attention was paid to solutions that unify the needs and requirements with respect to animal welfare and health, consumer and citizen emotions, and working conditions and pleasure of the farmer. Two attempts to realize essential parts of these design concepts in practice were successful: 1) a rearing and laying hen house for 6,000 organic hens on the Lankerenhof farm in Voorthuizen (approx. 6 hens/m², separation of functional areas for different behaviour, no beak trimming, natural day light, and outdoor access for rearing and hen house), and 2) a round Roundel hen house for 30,000 hens in Barneveld (approx. 6 hens/m², covered but letting in natural day light with a light foraging area, and a separate dust bathing area in the outer ring), both in the Netherlands. The Roundel house was granted 3 stars of the BeterLevenKenmerk of the Dutch Association for the protection of animals because, amongst other reasons, no beak trimming is currently tested and foreseen in the future. Monitoring of various aspects of sustainability during the first laying cycles was carried out. Results with respect to indoor climate, gaseous emissions, nitrogen and phosphorus load of the outdoor run (including use by the hens), hen behaviour and use of functional areas (for resting, laying eggs, eating and drinking, dust bathing, foraging, social behaviour), and economics of the Lankerenhof will be shown and discussed. Results of the Roundel will focus on the behaviour of the hens, the plumage, and production results. Most remarkable is the performance and limited feather pecking of hens despite the day light conditions under which the hens were reared and kept.