

**A10 – BUCELAS / CARREGADO (A1) / IC 3 (A13) MOTORWAY**



The A10 – Bucelas / Carregado (A1) / IC 3 (A13) motorway has a total length of 39.9 km. Its prime purpose is to have a motorway out of the Lisbon Metropolitan area that works as alternative to the A1 Motorway between Alverca and Vila Franca de Xira and connecting the two banks of the Tagus river.

This new Tagus crossing improves accesses between both banks of the river, linking the area of Vila Franca de Xira to the area of Samora Correia / Benavente, thus working as relief road to the existing EN 10, and in the future, providing a better access of the areas located north of the Tagus to the future Lisbon Airport, to be located in Alcochete.

The motorway has 6 links to the national road network, beginning at the intersection with the A9 - CREL, near Mato da Cruz (Bucelas) and extending mainly to northeast up to the current intersection of Arruda dos Vinhos, which connects to the EN 248-3, following from here to the connection to the A1 Motorway, south of the present Carregado intersection, crossing the North Railway, the Tagus River and respective planes ("Lezíria"), connecting to the EN118 at the Benavente intersection.

Afterwards, the motorway stretches to southeast ending at a "high-speed" intersection which connects to the A13 –Almeirim / Marateca motorway, and thus allows traffic stemming from the A10 to continue towards the Alentejo / Algarve (via A2) and Spain (via A6), as well as North (via Almeirim – Ponte Salgueiro Maia).

The Environmental Impact Assessments of these sub-stretches were carried out from 2002 to June 2003, having deserved the required approval and the issuing of the Environmental Impact Statement by the Secretary of State for the Environment. The corresponding Reserve Strip was published on the Official Gazette nr. 245, dated 03.10.22.

The following phases of the projects associated to the A10 were then developed in strict compliance with approved Reserve Strips. Based on the Traffic Survey carried out for this motorway, the motorway design project considered a 2x3 lane transversal profile, similar to that deployed on the A9 – CREL for the sub-stretches between Bucelas and Carregado, and a 2x2 lane transversal profile from this point to the intersection of the A10 with the A13.

Taking into account the orography and the geological and geotechnical characteristics of the areas crossed through by the A10, the plan and longitudinal profile of this motorway considered distinct criteria. The parameters used on the design plan are compatible throughout the entire length of the motorway with a project speed of 120 km/h, whereas for the longitudinal profile, two distinct areas were considered:

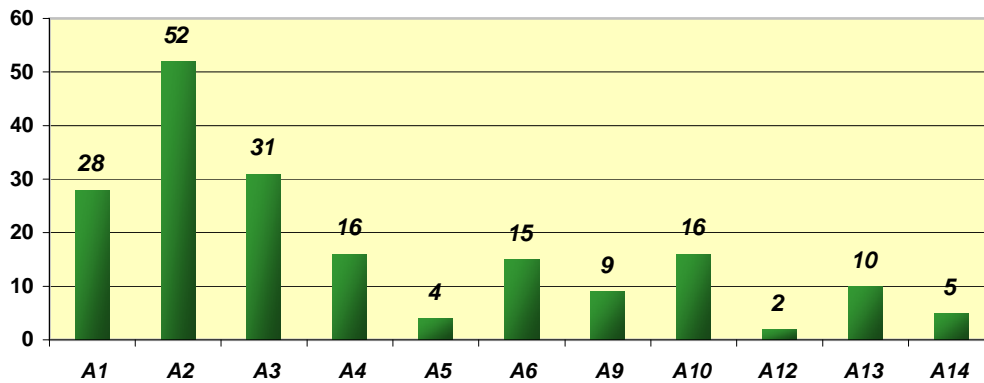
- For the sub-stretches between Bucelas and Carregado (A1), we used gradients compatible with a project speed of 100 km/h, particularly in the initial area of the layout (connection to the A9), where a 5.7% longitudinal grade was foreseen, given the area's difficult orography;
- For the sub-stretches between the A1 and the intersection with the A10/A13, taking into account the characteristics of the land where the A10 will be implanted, namely the crossing of the river and "lezíria", we adopted parameters compatible with a project speed of 120 km/h, forcing inclusively the use of minimum gradients of 0.5 %.

The following engineering works included in this motorway are worth pointing out:

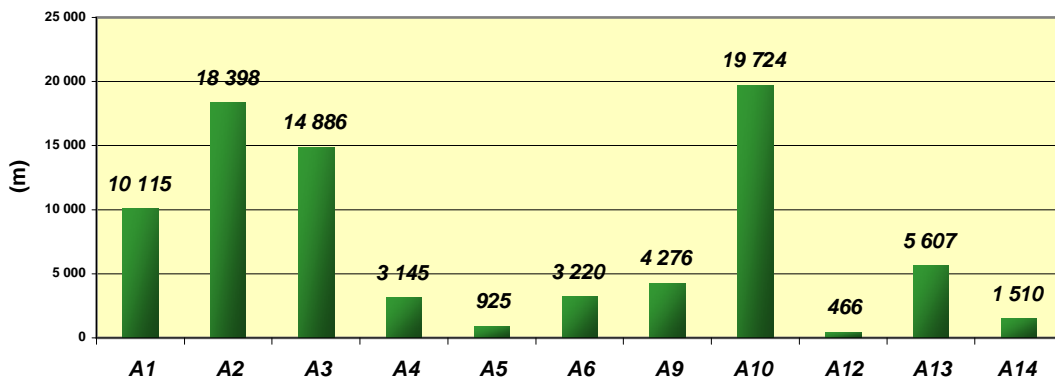
- Mato Forte Tunnel – Buried reinforced concrete structure, made up of two separate galleries, with a total length of 260 m;
- A1/A10 intersection junction – intersection between the two motorways, made up mainly of engineering works, strongly limited by a number of infrastructures existing in the area, amongst which those falling under the responsibility of REN, EDP, Transgás, EPAL, REFER and NAER, as well as its difficult geological and geotechnical environment;
- Lezíria Bridge– New Tagus River crossing, with a total length of 12 000 m, crossing one of the most sensitive areas in agriculture terms in Portugal.

Please find below some relevant data concerning the A10 as against the remaining motorways included in Brisa Concession.

### Number of viaducts



### Total length of viaducts



### Number of engineering works per km of motorway

