

# From Raleigh to runways: a brief history of Trinidad Lake Asphalt

NEW APPLICATIONS CONTINUE TO BE FOUND FOR TRINIDAD'S OLDEST PETROLEUM PRODUCT

The benefits of superior, reliable, all-weather land transportation links are incalculable. Roads and networks of roads, either singular or in association with rail-hubs, constitute a bedrock on which modern civilised life sustains itself and advances. For well over 100 years Trinidad Lake Asphalt (TLA), a solidified hydrocarbon, naturally occurring and mined from the Pitch Lake at La Brea in the Island of Trinidad, has been the premier natural asphalt employed worldwide for road construction and bridge-deck works. TLA is also used as a high-quality sealant. It is of interest to note that the transatlantic cable carrying telecommunications traffic between Britain and North America was from its first emplacement coated and sealed with TLA.

Sir Walter Raleigh on his first visit to La Brea, Trinidad in 1595 referred to TLA as “most excellent good.” Almost 200 years later a commission of technical experts appointed by the United States Congress in 1876 concurred with Raleigh and designated TLA the asphalt of choice for paving Washington DC. After the ending of the Civil War between the Northern and Southern States, the now United States of America (USA) sustained an explosion of social and producing energy that eventually advanced that country to world economic and financial leadership. That seemingly unbounded energy was fuelled by the post-Civil War industrialisation, particularly in the areas east of the Rocky Mountains and excluding the Southern States; the discovery of large-scale petroleum reserves; an expanding Western land frontier opening up seemingly limitless agricultural and food producing farm and land holdings; and until 1924 an open frontier to immigration mainly from Europe. As populated cities and towns grew on the Eastern Seaboard and also in mid-Western States, the lead of Washington DC was followed in the use of TLA for paving such new cities and towns as well as arterial land transportation routes in the USA.

Within Britain, the Industrial Revolution made reliable all-weather road transportation a compelling necessity. These road transportation links allied to rail transportation networks were urgently required and emplaced, as essential social infrastructure for the take-up and carriage of machine, mining and farm production; as well as for the teeming populations migrating from the British countryside areas and drawn to the new important industrial towns and cities. This developmental logic patterning replicated itself in Continental Europe, notably but not exclusively in Germany and France. This demand for long-lasting quality roads and land transportation links continued to increase exponentially with the coming of the automotive age.

By the beginning of the 20th century and even well beyond, TLA was the asphalt of choice, employed more or less globally in road-paving developments. The

success of TLA commercially as premier asphalt was owing to TLA's unparalleled surface energy; so identified and recorded after careful laboratory experimentation by Clifford Richardson, the first and most reputed American Asphalt Chemist. From 1903 through 1948, the General Asphalt Company, an American corporation headquartered in the State of New Jersey, in partnership with the British Previt  Group, had cornered much of the global paving business on all five continents, excluding the Soviet Union and Central Asia. TLA was the product jewel in General Asphalt's business crown. Today the TLA business is wholly owned by the Government of Trinidad and Tobago; and managed by a State Corporation, Lake Asphalt of Trinidad and Tobago (1978) Ltd.

Three TLA product lines have underpinned the commercial base principally. These have been crude asphalt (asphalt in the natural state), known as Trinidad Natural Asphalt (TNA); dried asphalt (TLA and asphalt cement) and TLA blended or fluxed with heavy oils or petroleum bitumen. A fourth product, mastic asphalt made from asphalt cement combined with a designated additive mineral, has been used for roofings, floorings, tanking and damp-proof courses. Asphalt cement itself, although used early on in Australia in road making, has been a specialty product for airport runways, tarmacs and apron construction. Paints and varnishes from a TLA base have also found commercial application. TLA in powdered form, and more recently pelletised asphalt, have enhanced the utility range and ease of handling of TLA for various end-use applications. New York's John F. Kennedy and La Guardia airports have utilised TLA's asphalt cement. The Honshu-Shikoku bridge has incorporated TLA in its construction materials. The Beijing Olympic Village was paved with TLA. Pennsylvania Avenue, the Victoria Embankment and the German autobahns have all employed TLA as overlay paving material, with excellent service results. □

*A bird's eye view of the Pitch Lake at La Brea, southern Trinidad*

