

THE BMD WAY

DEVELOPER : Major Road Projects Victoria
MAIN CONSTRUCTION COMPANY : BMD Constructions
CONSTRUCTION VALUE : \$131.2 million

The 3.9km upgrade of Yan Yean Road will minimise traffic congestion and improve safety by reducing the risk of head-on collisions and off-road crashes. Upgrades include optimised traffic lights, installation of safety barriers, a new shared user path, dedicated bus lanes, as well as improvements to existing roundabouts.

The Yan Yean Road Upgrade is a massive roads project commissioned by Major Road Projects Victoria (MRPV) to supply infrastructure to support the rapid growth of Melbourne's north-east.

The upgrade improves road safety and cuts transport times for road users travelling through Plenty, to Melbourne's CBD. The project includes the construction and relocation of intersections, traffic signals and bus stops.

MRPV awarded BMD Constructions the contract for the upgrade of 3.9kms of Yan Yean Road in October 2017. Work started onsite in February 2018 with BMD Constructions carrying out bulk earthworks, excavation, battering and profiling and the building of retaining walls.

The work included the removal of dangerous road bends, widening sections of the road from one to two lanes and upgrading six intersections with optimised traffic lights and signalised pedestrian crossings. A centre safety barrier to help prevent head-on crashes was installed and service lanes, to provide safe access to residential properties, were constructed. There are new shared foot and cycle paths along the full length of the western side of Yan Yean Road and new footpaths along sections of the eastern side.

In January 2019 the job was fast tracked to complete three months of work in less than three weeks at the intersection of Yan Yean, Aqueduct and Diamond Creek Roads in Plenty. New road lanes and a new centre median strip were constructed and road levels modified to suit the new work. Almost 5,500 tonnes of crushed rock was placed, 4,000 tonnes of asphalt laid and more than 20,000 hours were worked by construction crews to complete the upgraded intersection which was finished three days early.

"Delivering the accelerated programme was an enormous achievement and keeping

the traffic moving throughout the whole project was a major job in itself. There were challenges concerning the environment and the community in Plenty, especially in regards to land acquisition," said Anthony Damiani, BMD Construction's General Manager Southern Region. "The area of Plenty is a small hamlet close to the city – a unique place with a passionate community. We spent time in consultation with the locals and their input was successfully incorporated into the project."

"A major component of the construction was the environmental impact of the removal of trees. The removal of each tree was a considered process and a place was found for it as bench seating, playground equipment or mulch. We gave 12 trees to the original landowners, the Wurundjeri people."

As part of the Yan Yean Road Upgrade, a small historic weatherboard church built in 1925 was relocated and is undergoing a refurbishment. It was moved 700m from the corner of River Avenue and Yan Yean Road to a more comfortable site next to the Plenty Hall.

The Yan Yean Road upgrade was completed on time in mid-2019 and now transports 24,000 vehicles every day. The large scale project is typical work for BMD Constructions, the company offers civil and industrial construction services for major infrastructure projects throughout Australia. It operates across a range of sectors including transport, water, rail and port, mining and resources as a sole principal contractor, managing contractor or in a joint venture.

For more information contact BMD Constructions, 24-30 Camberwell Road, Hawthorn East VIC 3123, phone 03 9811 3444, email victoria@bmd.com.au, website www.bmd.com.au

For more information contact Major Road Projects Victoria, phone 1800 105 105, website www.roadprojects.vic.gov.au



KEEPING IT CLEAN

Patriot Environmental Management isn't your typical environmental management provider.

As a part of the Patriot Group, founded in Brisbane, Patriot Environmental Management offers a variety of environmental and industrial services across the mining, oil and gas, industrial and construction sectors, across Australia with a reputation for excellence in liquid waste management.

Striving to be a 'first choice-best value' provider, Patriot Environmental Management provides liquid and semi liquid waste removal, non-destructive digging, CCTV pipe inspection, drain cleaning, sub-surface utility locating and site storage solutions. Patriot Environmental Management are proudly committed to their staff, customers and the environment with a zero-harm ethos.

Starting in December 2017, Patriot Environmental Management carried out subsurface utility investigation, non-destructive digging and drain cleaning with CCTV surveys at the Yan Yean site. They worked throughout the whole 3.6km of the Yan Yean Road upgrade between Diamond Creek Road and Kurruk Road in Plenty.

"On a daily basis hydro-excavation units would dispose of all hydro-excavated non-contaminated material into onsite holding pits. We were also engaged to remove all clean fill slurry and material from the pits and transport over 190,000L of clean material to approved waste facilities," explained Operations Manager, Ben Richards.

The enormous road building project required many workers and Patriot Environmental Management supplied up to 15 operators during any one shift. "Our challenge was to ensure we did not let BMD down, we understand that availability and reliability is critical to the project schedules and timelines," said Ben.

Working across the eastern seaboard of Australia with operations in Brisbane, Sydney and Melbourne, the company have provided a range of services to a number of infrastructure projects, including BMD's Thompsons Road Upgrade and the Melton Highway Level Crossing Removal project.

For more information contact Patriot Environmental Management, Unit 2, 3970 Pacific Highway, Loganholme QLD 4129, phone 1800 PATRIOT, email sales@patriotgroup.com.au, website www.patriotgroup.com.au



CIVIL INFRASTRUCTURE AT ITS BEST

Established in 2016, Civil Infrastructure Group specialises in construction services for the civil infrastructure industry in Victoria. The company provides professional services from engineering and design through to site supervision and delivery.

For Yan Yean, a team of 14 worked on the design and engineering. They supplied 600 piles, 700lm capping beams and parapets as well as 670 precast concrete elements to construct 13 retaining walls over 1.5km. The job also included forming and casting in situ transition barriers, in situ pedestrian ramps and installing rail and handrail systems.

"The precast elements were manufactured by our division Civil Elements at our facility in Rockbank and the light steel elements, handrails, brackets and guardrails were fabricated by our steelworks division, CIGFab, in our 2,000m² factory at Campbellfield," said Site Engineer, Conor Luxmoore. "Working in a live environment was a challenge, we had to keep the traffic moving and beware of the safety of the general public. We worked with the client and other subcontractors on the project scheduled events, like power outages and the creation of restricted areas, to minimise the impact on residents and road users."

"At Civil Infrastructure Group we have 18 site engineers, if we have problems onsite they are available to assess the challenges and come up with a solution," explained Conor. "Our company provides formwork, reinforcing and concrete pouring services and this enables our clients to combine extensive scope of works into one subcontract package. This translates to more efficient management and a simpler programme."

Civil Infrastructure Group focuses on engineering and construction services for road and rail, bridges, water and sewerage treatment plants, electrical substations and general in situ concrete construction.

In 2018, Civil Infrastructure Group completed the Thompsons Road Upgrade for BMD Constructions. The job involved the construction of two road bridges over existing rail lines as well as building abutment structures, piers, T-beams that included temporary jack diaphragms and the bridge deck.

For more information contact Civil Infrastructure Group, 2070 Hume Highway, Campbellfield VIC 3061, phone 0447 717 191, email admin@civilinfrastructuregroup.com.au, website www.civilinfrastructuregroup.com.au