



Client
Moreton Bay Regional Council

Year
Early 2017

Value
\$5m

Location
Pine Hills Drive, Bunya, QLD,
Australia

James Drysdale Reserve – Baseball Fields, Amenities and Car Parking Design

CIVIL & ENVIRONMENTAL / GOVERNMENT / HYDRAULICS / STRUCTURAL

Pine Hills Drive, Bunya, QLD, Australia

The scope of services included: service locating, lighting, planning/ approvals, irrigation, architecture, structural, hydraulics, geotech, landscaping, water drainage, temporary car parking, playground design, access road design and building certification.

James Ware was the Project Manager / Design Lead on this project and led the team to add value as per the following for the client:

- ADG structures offered a light pole footing design that avoided any penetration of the capping layers at the both top and bottom of the land fill site, all the while keeping all footings beneath the surface to minimise the majority of the potential spatial impediment above ground.
- Because one of the light poles was in the future expansion area, this potentially meant part of the playing surface would be inadequately lit. ADG were able to come up with a lighting design that could light the entire playing surface to the required lux levels with the 5 pole interim solution.
- ADG identified that the cost estimate from the previous phase of the project design was severely “undercooked” which resulted in a significant value engineering exercise being undertaken and the tender/construction documentation being reconfigured from “interim” and “ultimate” layouts to also incorporate a “future” layout which ADG were able to incorporate into the documentation with no impact on design/construction programme which provided MBRC with considerably more flexibility around staging in accordance with Council budget/funding allocations. Innovatively, pushed the earthworks viewing mounds and the children’s playground into the “future” layout as a not mandatory but nice to have if the budget/funding can be found.
- Even though the amenities building was located in an area where the level of the landfill was higher than in other areas, ADG were still able to identify a structural solution that did not require piles and enabled the capping to be placed immediately without the removal of existing landfill material
- ADG identified the repercussions on program of the proposed encroachment of the design footprint over the remnant vegetation extents and were able to innovatively massage the design realigning the existing swale without incorporating pits and pipes to avoid moving the entire design footprint to the



We Think differently

www.adgce.com

1300 657 402

north and a significant redesign of the masterplan layout. The proposed water and sewer were also realigned to avoid impacts/approvals to the remnant vegetation

- We undertook pavement design from first principles rather than specified design resulting in significant savings for the client on the “temporary” access road and car park.
- We were able to resolve design constraints raised late i.e. existing trees to remain and higher landfill level than expected by reconfiguring recommended layouts and repositioning proposed infrastructure
- ADG worked off minimal partial survey initially which was extrapolated and used to reconfigure the design to remove the reference design “terracing” to provide a single continuous grade solution providing a cost, time and quality efficient and effective outcome
- ADG cleverly incorporated one way cross fall, edge restraint/flush kerb and wheel stops into the “temporary” access road and car park design to maintain pavement integrity and minimise drainage infrastructure to minimise “sunk” costs when the permanent solution is constructed
- Innovatively, ADG aligned the non-potable and potable water mains beneath the “temporary” access road and car park design to minimise cross section spatial requirements knowing that in the ultimate case they would not be beneath infrastructure that would need to be demolished to gain access and rather beneath a topsoil and turf finish - minimised the incorporation of pits and pipes in the drainage design opting to adopt earthworks solutions for the same reasons
- Where rubble pits would normally be adopted and in the majority of instances result in a continuous unsightly and untrafficable damp area, we were able to provide small and simple pipe connections and outlets in all instances to remove this issue altogether
- ADG understood how significant a consideration the services are on these types of projects and as a result from the outset, commenced a coordination and spatial rationalisation exercise to identify the optimum location for the services corridor, keeping MBRC informed throughout. In all cases, the outcome was that the services can be easily accessed for any repairs required throughout the life of the project. Upgrades from interim, to ultimate, to future can also be easily undertaken as a result of how comprehensively the service rationalisation and coordination was undertaken from the start.
- Even though the standards are unclear and the relevant water authority and manufacturers were unable to provide a clear direction, based on experience and familiarity with similar situations, ADG managed to come up with a detail for the potable water through contaminated land requirement that satisfied both MBRC and the relevant water authority