

# Case Study

## From pit to prestigious sports centre



### Background

Hot dip galvanizing (HDG) applied to the entire structure of a driving range and practice facility at a brand new golf centre in Sydney's northwest, transformed what was a disused and derelict industrial brick pit and waste site into a modern and enduring sporting venue.

The \$5 million Thornleigh Golf Centre facility features 56 hitting bays over two levels with automated ball return complementing a mini-golf facility, clubhouse and 15,000m<sup>2</sup> driving range.

As the golf centre is located on a clay-capped filled site, an adjustable design was required for the two-tiered driving facility to overcome differential site settlement associated with engineering constraints onsite, demanding a lightweight protective coating.

The structure therefore incorporates a system to adjust deck levels and a lightweight HDG steel superstructure was chosen. HDG was applied to the entire two tiers of the structure comprising 80 tonnes of structural steel portal frame supporting a steel clad roof and two levels of pre-cast concrete flooring.

The HDG structural steelwork includes universal beams and columns, parallel flange channels as well as rectangular and circular hollow sections.

### Challenges and Solutions

The most significant challenge was the need for an architectural finish from what is basically an industrial process to ensure an end surface finish which is completely uniform and unblemished with no wire or touch up marks.

The second biggest challenge was to provide the high quality galvanizing within a very tight schedule required by the builders for items to arrive onsite ready for erection without delay, which was met through tight teamwork between the galvanizer, steel contractor, owner, engineer and architect.



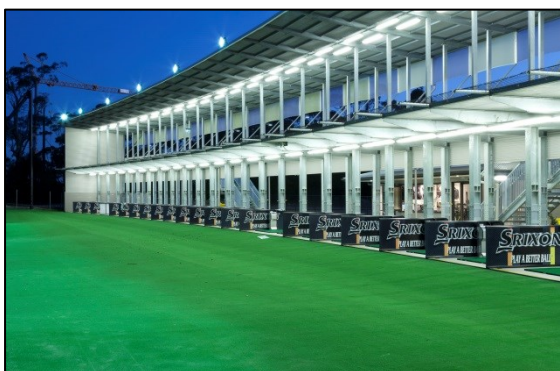
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The vast majority of outdoor sporting facilities use paint as the preferred type of protective coating. Thornleigh Golf Centre made a conscious decision to use HDG steel due to its durable, cost-effective and aesthetic properties. The vast quantity of galvanized steel for the golf centre is clearly visible.

Already promoting sustainability and environmental awareness through land renewal, the use of galvanizing on this



project was the most appropriate finish as HDG does not leach, nor require maintenance or further product applied during its lifetime.



### Summary

This project scored a real hole in one for golfing enthusiasts and even resident rabbits which still thrive on the grounds.

The HDG solution was not only a lot cheaper than stainless steel or other alternatives it provided superior weathering capabilities in the exposed outdoor setting with no touch ups required at erection and minimal maintenance costs going forward.

### Eight Reasons to Choose Hot Dip Galvanizing

1. No hold ups due to weather – steel can be galvanized in any weather conditions
2. Speed – modular design compatibility to speed up construction
3. Tough coating system – reduces transport damage & minimises on-site repairs
4. Inbuilt durability – minimises in-service damage from vandalism & accidental knocks
5. Withstands UV – the surface is immune to damage from the extreme Australian sun
6. Superior corrosion protection – provides initial and lifetime cost savings
7. Aesthetics – natural good looks
8. Sustainable – Zinc and steel are 100% recyclable

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### Awards

In addition to being a finalist in the 2013 Galvanizers Association of Australia Sorel Awards, the project also attracted a High Commendation in the Small Building projects category of the 2012 Australian Steel Design Awards organised by the Australian Steel Institute.



### Project Team

**Developer/Owner:** Steve Aisbett for Thornleigh Golf Centre

**Architecture:** OPRA Architects

**Structural Design:** Kneebone and Beretta Consulting Engineers

**Project Managers:** Darren Comin, Paul Comin and Ron Comin (Combelle Steel Fabricators)

**Main Contractor:** DBHE Building Services

**Hot Dip Galvanizer:** Galserv® Galvanising Services (by NEPEAN Building & Infrastructure).



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