

Multipole™

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Multifunction Light Poles - Lets Clean up the Streetscape

Development of the new generation of aluminium multifunction light poles has provided designers and public works engineers with an opportunity to deliver to the community an effective solution to the growing number of single purpose poles that are sprouting in the urban environment.

With the need for pole mounted lighting, traffic control, CCTV, banners, signage, public warning, communication, environmental monitoring, pedestrian management and many other applications in public areas it was inevitable that a streetscape would become cluttered with a myriad of different poles delivering these services. Not only has this become visually unsatisfactory in many places but also it has created a maze of obstructions in pedestrian areas using up valuable civic space.



The solution is in the installation of multifunction poles such as Multipole™ or Multipole Solar™

Developed over the last seven years, Fyntrim Pty Ltd has developed its Multipole™ and Multipole Solar™ products that deliver an aesthetically pleasing all aluminium multifunction pole that can provide a flexible secure home for many of the services required in the streetscape. In addition the poles can be the basis for the provision of public amenities such as bike racks, bus shelters, water bubblers and seats.

Early versions of the multifunction pole relied on a steel core with decorative cladding for accessory attachment that had the potential for suffering corrosion from the inside out especially in marine environments. The modern generation

of the pole is a 100% aluminium extruded pole that is approximately one third the mass of comparable steel products allowing for significantly lower transport and installation costs. For example a 5.2m pole on its own weighs approximately 63 kgs enabling installation without the use of heavy equipment.

The all aluminium pole is inherently energy absorbing frangible, thereby eliminating the need for slip base arrangements for highway applications. In addition the inclusion of a pole ventilation system will minimize the internal humidity within the pole thus reducing control gear failures through moisture build up.

From a structural perspective, all aluminium poles can be economically constructed to a height of 18 metres and are suitable for areas requiring a cyclone rating. Strength achieved through the use of marine grade aluminium and careful design, provides a yield strength that matches mild steel for a similar cost. Their corrosion resistance enables use in marine and flood prone environments for up to eighty years. There is much anecdotal evidence of steel poles failing in such locations after only two years.

To clean up the streetscape, graffiti resistance and security of poles and their accessibility are major requirements in public places. A clear or coloured anodised finish to a pole will simplify the removal of graffiti and give a long lasting finish. Cleaning can be achieved simply by the use of a steam cleaner or solvent use.



Security of access hatches can be delivered through the use of a fastener such as the patented Rivlok™ system which comprises a domed smooth head reusable security screw. These have the appearance of rivets but require a special tool and power drill for removal.

The whole concept of the multifunction pole is to offer flexibility in respect of the services it supports. Therefore Multipole™ has developed a patented deformable clamping system that can be used, and reused, for a series of accessories. The clamps attach at any height to external tracking and support CCTV, banner arms, street signs etc.

It is clear that consideration needs to be given to sustainability issues when considering any product specification.

Aluminium poles have a smaller carbon footprint to steel when their overall life is considered. They are capable of being fully recycled (and indeed, most extruded aluminium has a substantial recycled content) and less energy is required to transport and install them. Further the power to make the

aluminium poles is approximately 8 kilowatts per tonne which is the same as steel but aluminium will deliver more than triple the number of products per tonne of raw material.

It is in response to sustainability issues that Multipole Solar™ solar poles have been developed. These are multifunction poles that incorporate a solar collector along with a battery and control gear within the pole. The poles are water proof rated to IP 23 and the control gear fully waterproofed with a silicon skin.

The Multipole Solar™ solar pole has been adopted by a number of councils around Australia and overseas especially where power supply is a problem, land might be flood prone and corrosion is an issue. With regard to cost, progress in the technology has meant that the installed cost of a solar system on an aluminium multipole is very similar to the installed cost of a traditional external power supplied system when the cost of power supply, trenching etc is taken into account. The benefits however are that the solar

poles can be located almost anywhere, have zero carbon footprint and zero energy costs.

As to the future, living in the communications revolution, electronic media in the public domain is becoming more and more prevalent and multifunction poles will need to support these systems potentially delivering revenue to the pole owners through advertising as well as displaying public messages. The modern multifunction pole must be able to support the weight of such displays.

In addition, due to the relatively short lifespan of steel poles, especially in marine environments, retrofitting of poles with the aluminium product will be widespread.

For more information on Multipole™ and Multipole Solar™ or Rivlok™ Security Fastenings contact Fyntrim Pty Ltd on 02 9997 1278 or visit www.lightpole.com or www.goldspar.com.au