

Traffic Signal Products



A CRH COMPANY



Retention Socket Systems

The NAL Retention Socket system is a patented range of fittings developed to secure all types of illuminated and non-illuminated street furniture enabling a quick installation and removal with a key and a spanner. All Retention Sockets are manufactured with a cast steel or ductile iron top section and a range of base types to suit all applications. All furniture is secured into the socket by a stainless steel locking mechanism, located in a recessed side chamber in the top section of the socket. Available in sizes from 48mm to 410mm with a range of bases to suit all applications.



Duckfoot Bend

A one way duct bend offering bottom cable entry and 360 degree swivel with the ability to be shortened on site. This product is suitable for all directly cabled illuminated street furniture.



Non-illuminated

A flat base with no provision for cable entry but has the ability to be shortened on site. These are suitable for any type of non-illuminated street furniture.



Shallow Foundation

Manufactured with a strengthening plate and an overall planting depth of 200-300mm with an option of four bottom cable entry points. This product is suitable for both illuminated and non-illuminated street furniture installations with severe depth issues.



Precast Foundations

Retention Sockets are supplied in a precast foundation which has been designed to suit the furniture being installed and also the ground conditions on site. Manufactured with high strength concrete and certified lifting points. The system is simply lifted into position, leveled and backfilled removing the need for wet trade on site.



Adapter Plate for Keep Left Bollards

The Retention Socket and Adapter Plate has been designed to fit all types of reflective flexible bollards. This unique socket allows damaged bollards to be removed and replaced within minutes and also enables customers to change to alternative bollard types in the future without any civils excavations.



Retention Socket Post Installer

This patented lifting system is designed to lift, lower or raise various types of highway furniture installed in the NAL Retention Socket. It eliminates working at height and manual handling risks involved in the installation and maintenance of signage, traffic signal and street lighting columns.





Product Benefits

Installation Benefits

- ◆ Ability to be installed in shallow depth
- ◆ EN40 or BD9407 foundation design service
- ◆ Enables civils works to be completed without street furniture
- ◆ 360 degree bottom cable entry bend allows easier cabling works at ground level
- ◆ Enables furniture orientation change after installation

Additional Benefits (Precast Foundations)

- ◆ No requirement for wet trade on site
- ◆ Over 50% reduction in installation time
- ◆ Installation unaffected by weather conditions
- ◆ Enables immediate installation of furniture



Maintenance Benefits

- ◆ Withstands unlimited impacts of any force
- ◆ Eliminates civils works on replacement of knockdowns
- ◆ Minimises disruption and traffic management cost during replacement
- ◆ Maintenance works can be carried out in a controlled environment
- ◆ Simplifies the erection and removal of seasonal street furniture



Future Benefits

- ◆ Allows public areas to be cleared for events
- ◆ New and upgraded technology can be installed quickly and cost effectively in existing Retention Sockets
- ◆ Increases the life expectancy of street furniture in Retention Sockets
- ◆ Simplifies the works involved with wide loads
- ◆ Retention Sockets have a life expectancy of 100 years. This allows for four street furniture life cycles



Free Foundation Design Service

NAL provide a free foundation design service for Retention Socket installations.

Foundations for either EN40 and BD9407 can be calculated for any non-standard installation.

Project Information		Pile Information		Foundation Information		Summary	
<div>Loading: Horizontal Load = 1.98 kN Moment to Ground = 12.21 kNm</div>							
<div>Foundation 1 Foundation Width = 1.00 m Foundation Breadth = 1.00 m Foundation Depth = 1.00 m Socket Depth = 0.10 m Reinforcement = 2 Layers of A305</div>				<div>Foundation 2 Foundation Width = 1.00 m Foundation Breadth = 1.00 m Foundation Depth = 1.00 m Socket Depth = 0.10 m Reinforcement = 2 Layers of A305</div>			
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Temporary Highway Products



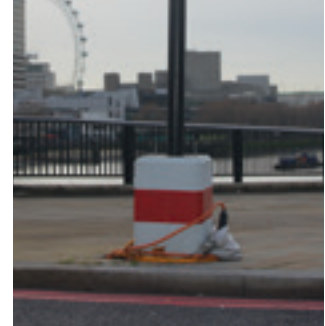
Temporary Foundation

The Temporary Foundation system are a range of highly stable, and portable bases which secure all types and sizes of illuminated and non-illuminated street furniture during temporary construction works. All posts are locked in position with the Retention Socket system which is precast within the foundation. This eliminates the risk of unauthorised removal or rotation of the furniture.



Product Benefits

- ♦ Highly stable bases designed to EN40
- ♦ Furniture secured in place with Retention Socket
- ♦ Certified lifting points ensures safe movement
- ♦ Simple installation and removal of post
- ♦ Easily stored and re-usable



Temporary Cable Shroud

The Temporary Cable Shroud creates a void around the Temporary Foundation enabling the storage and protection of excess electric cables or associated equipment such as batteries. The system drastically reduces the requirement for traffic management around Temporary Foundations allowing improved public access during construction works.



Product Benefits

- ♦ Protects the public from exposed cables
- ♦ Improves public access to push buttons
- ♦ Eliminates the need for traffic management around Temporary Foundations
- ♦ Reduces risk of personal injury claims
- ♦ Removes area traditionally used to discard litter
- ♦ Enables works programs to continue during public events



Temporary Controller Base

The Temporary Controller Base has been designed to enable all types of traffic signal and highway electrical cabinets to be surface mounted during temporary construction works. The systems plinth and gland tray ensure the cabinets are sealed and vented while offering a stable footprint.



Product Benefits

- ♦ Louvered ventilation and cable gland tray ensures no moisture build up
- ♦ Lifting eyes for ease of transportation and installation
- ♦ Stainless steel construction gives 25 year+ life expectancy
- ♦ Available for all types of highway cabinets
- ♦ Reuseable





Guardian Access Ramp

The Guardian Access Ramp has been developed to overcome the common issues found with traditional ramps used for temporary access. Traditional tarmac ramps are both time consuming and disruptive to install and remove. Alternative ramps often use a raised edge design or have no sides at all, creating a hazard.

The Guardian Access Ramp has been designed with side access on either end, dramatically reducing the risk of slipping. The ramps modular design enables the overall width to be increased with additional sections to suit the site requirements, while the height is fully adjustable to fit different kerbs.



Product Benefits

- ♦ Main ramp complete with side ramps
- ♦ No raised edges
- ♦ Adjustable height
- ♦ PTV (skid resistance) rating of 64.1
- ♦ Modular design
- ♦ Easily stored
- ♦ Re-usable



Guardian Road Barrier

The NAL Guardian Barrier system is an innovative temporary traffic management barrier developed to provide a reusable, lightweight, flexible barrier.

The system is telescopic and designed to be fitted to standard traffic cones enabling a single barrier the flexibility of closing an area from 2 to 6 metres. Constructed from high strength lightweight fibreglass, the Guardian Barrier enables a single operative the ability to deploy the system in under 2 minutes.



Product Benefits

- ♦ Flexible telescopic system (2 to 6 metres)
- ♦ High strength and stability
- ♦ Lightweight - one person lift
- ♦ Simple attachment to standard traffic cones
- ♦ Fast and easy installation by one person
- ♦ Highly reflective and visible at night and in poor weather conditions
- ♦ Completely reusable
- ♦ Small storage footprint



EasyWynd®

Attributable to its unique and patented hinge design, the system incorporates a 2 metre extension pole, to which a variety of applications can be mounted to and then installed, above any pole or highway structure. The extension pole is secured to a hinged arm, operated via an extended crank handle, which allows the thread to be reached.

The hinge mechanism is mounted through standard fixing points using a U-bolt and can also be retrofitted easily utilising this method. Dependent upon the requirements of the installer and the type of application being mounted, the EasyWynd® system can accommodate both round and square poles and both extension tubes are available.



Product Benefits

- ♦ Eradicates the requirement for access equipment, after installation
- ♦ Removes all 'working at height' health and safety implications
- ♦ All maintenance conducted from ground level
- ♦ Cost effective due to unnecessary 'working at height' access equipment
- ♦ In the absence of road closure: minimal disruption is caused to motorists and pedestrians





Product: EasyWynd
Project: M5 Junction 7 Radar Installation
Client: Worcestershire County Council

Highways England have selected to trial the NAL EasyWynd to assist in the maintenance of radar repeaters secured on 115mm diameter poles, situated on junction 7 of the M5 in Worcester. Collaboration with an experienced traffic signal team leader, of a construction and highways services group, has enabled NAL to develop EasyWynd. Designed and manufactured in direct response to risks associated with working from height, highlighted and faced by traffic signal engineers, EasyWynd eradicates these risks to personnel when maintaining various equipment including, wimag repeaters, CCTV, detection appliances and base stations, when bolted on to highway structures.

Thanks to its unique hinged design, the system incorporates a 2 metre extension pole, of which a variety of equipment can be mounted to. The extension pole is secured to a hinged arm, which can be lowered to, and raised from ground level, with the use of a crank handle. Accommodating both round and square poles, the EasyWynd system can also be retrofitted with ease and speed utilising a standard U-bolt.

Radar repeaters can require regular maintenance in terms of alignment or battery related issues. In their trial of EasyWynd, Highways England were able to remove their usual requirement of a MEWP to conduct maintenance, which in turn ensured no road closures were necessary, causing minimal disruption to commuters, not to mention the beneficial impact this afforded in terms of expenditure and time. Previous health and safety concerns faced by personnel were effectively minimised as engineers were able to carry out necessary works safely and in less time at ground level, as opposed to historically working at height.



Product: Temporary Cable Shroud
Project: St Augustine's Parade
Client: Bristol City Council

During major roadworks in St Augustine's Parade in Bristol city centre, temporary traffic lights were installed in NAL Temporary Foundations. The NAL Cable Shroud was fitted around the foundations to offer a protective surround for cables and batteries powering illuminated street furniture.

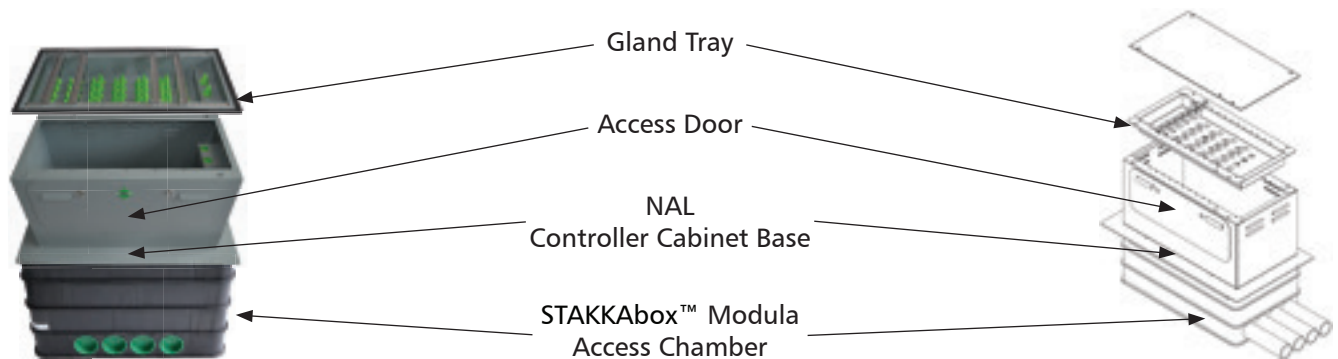
This innovative system provides safer access for the general public during highway works in this busy, urban area. Reflective banding ensures the units are highly visible to motorists during the evening.





Cabinet Bases

The NAL Controller Cabinet Base is a patented product designed to simplify the installation, maintenance and upgrading of all roadside control cabinets. The system consists of three main components, an underground structural access chamber, a cabinet base plinth and a cable gland tray. The product seals all incoming cables and also provides ventilation to all cabinets. The cabinet base also provides future access to the incoming cables by authorised personnel. The cabinet base system is manufactured from stainless steel and can be manufactured to suit any cabinet type or size with gland trays to suit any cable size or configuration.



Controller Cabinet Base

The Controller Cabinet Base is manufactured to suit all standard UK and European traffic signal cabinets. Available in both grey and black to match the cabinets, each gland tray provides up to 70 stepped grommets suitable to seal 2 to 20 core SWA cables. Pre-drilled castellated bars provide stability for all incoming cables.



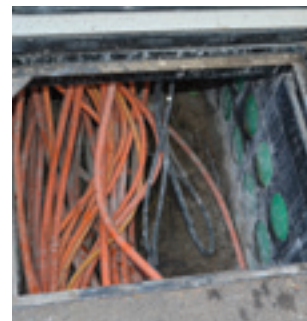
Cabinet Base Side Access

All Cabinet Base systems with base plinths are available with separate side equipment compartments. This enables access to equipment without the need to enter the cabinet. Compartments are fitted with incoming and outgoing cable glands ensuring they are kept free from moisture. Access doors are provided with a variety of locking options.



Low Level Cabinet Base

The Low Level Cabinet Base has been designed to simplify the installation, upgrading and replacement of all types of electrical control cabinets, where the overall height of the controller is crucial. The system offers a low level base plinth and gland tray with access to underground cables through a lightweight composite cover and frame situated directly in front or behind the cabinet.



Multi Cabinet Base

The Multi Cabinet Base has been designed to simplify the installation, upgrading and replacement of all multi cabinet sites. The STAKKAbox™ Ultima Connect provides the flexibility and structural strength to build a single access chamber to suit any type and size of multiple cabinet site. The single access chamber reduces the cabinets footprint while simplifying the civils installation and cabling.



Case Study

Project: Traffic Signals Cabinet Upgrade
Product: Low Level Cabinet Base
Client: Transport for London (TfL)

TfL recognised the benefits of this system for a controller cabinet located behind a low wall on The Mall, outside Buckingham Palace and was able to preserve the area aesthetic as well as TfL's controller cabinet specification.

The system is installed on a STAKKAbox modular access chamber which facilitates all underground ducting and cable connections to the cabinet. Cables are fed up through a sealed gland tray designed to suit varying diameters of cables. The lightweight NAL Composite cover allows simple access to the underground cables.



Product Benefits

Civils Installation Benefits

- ◆ Increases incoming duct capacity by up to 400%
- ◆ Simple horizontal duct connection from all directions
- ◆ Eliminates the requirement to bend incoming ducts vertically
- ◆ No requirement for specialist lifting equipment
- ◆ Lightweight, adaptable, structural access chamber enables simple installation in congested sites
- ◆ Removes the requirement for additional access chamber in front of cabinet
- ◆ Reduces installation time by up to 50%
- ◆ Separates civils and cabling works
- ◆ Enables traffic management removal and public access on completion of civils works



Cabling Installation Benefits

- ◆ Eliminates the requirement for base seal, pea gravel, clay balls etc.
- ◆ Removes requirement for duct bungs
- ◆ Provides IP66/67 seal to incoming cables
- ◆ Removes cable snagging points
- ◆ Simplifies cable installation
- ◆ Reduces risk of cable theft during installation
- ◆ Installation time reduced by up to 50%
- ◆ Improved working height for installation and maintenance engineers
- ◆ Eliminates risk of underground gas build up
- ◆ Removes risk of condensation to cabinets



Future Benefits

- ◆ Gland trays provide over 25% spare capacity
- ◆ Simple addition or removal of future cables in a fraction of the time and cost over traditional installations
- ◆ Allows simple upgrade to plug and play system
- ◆ Eliminates risk of flooding to cabinets
- ◆ Removes risks of rodent infestation



Chamber and Duct Systems



STAKKAbox™ Modula

The STAKKAbox™ Modula system is a range of preformed twin wall access chambers capable of withstanding vertical loads in excess of 40 tonnes without the requirement for any structural support. The system consists of 155mm deep stacking sections which form complete chambers of any depth. Chamber sizes range from 300² mm to 1200² mm clear opening and can be provided with or without pre-drilled duct entry points of any size.



Product Benefits

- ◆ 40 tonne vertical loading
- ◆ Simple and quick installation
- ◆ No requirement for concrete surround
- ◆ Life expectancy in excess of 40 years
- ◆ Easily adapted to overcome services



MULTIduct™

MULTIduct™ is a range of preformed duct banks designed for the installation of ducts in shallow depths such as road crossings, bridges and tunnels. The system is manufactured from nitrogen foamed high density polyethylene resulting in a high crush resistance and loading strength. This enables the system to be installed in areas where traditional duct is not suitable. A wide range of fittings allow smooth connection from traditional duct into MULTIduct™.



Product Benefits

- ◆ Tested to 100mm carriageway installation depth
- ◆ 50% more duct capacity
- ◆ Lightweight sections
- ◆ Rapid install, more cost effective than traditional ducting
- ◆ Available in a range of colours
- ◆ Fully recyclable



Steel Ducting

The Steel Ducting is a structural support system designed to house traditional twin wall duct. Tested to D400 it can withstand carriageway loading at depths as shallow as 100mm making it ideal for use in areas which have minimal cover.

Product Benefits

- ◆ High crush strength - tested to D400
- ◆ 100mm carriageway installation depth
- ◆ Eliminates risks of future cable strikes
- ◆ No requirement for earthing
- ◆ Smooth internal wall eliminates cable snagging
- ◆ Complete system with full range of components





Ductile Iron Loop Box

The Ductile Iron Loop Box has been specifically designed to give roadside access to carriageway loop cables. It is manufactured from Ductile Iron to BSEN 1563:2011 and has been designed to be installed in the carriageway to connect inductive tails into a sealed duct, which is jointed to a footway access chamber.



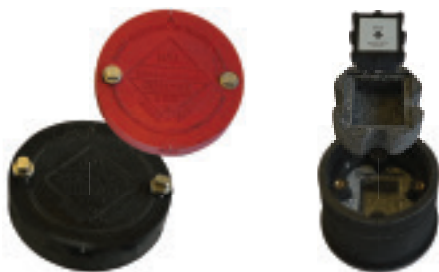
Product Benefits

- No need to slot cut through kerb
- D400 one piece non-rockable cover
- Octagonal shape allows easy core drilling
- Multi directional access (4 way)
- Prevents debris entering duct system



Composite Detector Chamber

The NAL Detector Chamber has been designed to house a variety of wireless vehicle detection systems. Being wholly manufactured from composite material it enables the wireless equipment to transmit signals without interference. The chamber is protected by a sealed cover which ensures the detectors are kept free of water ingress. Tested to BS5834 Grade A vehicle loading, the product can be installed in carriageway, footway, car park and cycle way applications.



Product Benefits

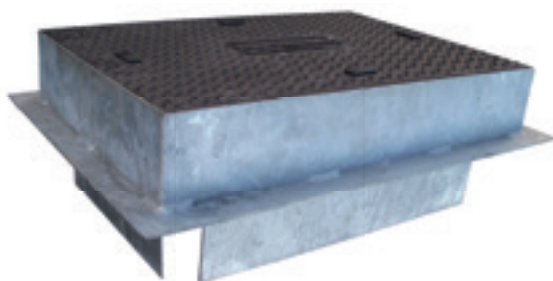
- Suitable for footway and carriageway installations
- Simple core drill installation
- No requirement for expensive resin
- Allows access with minimal traffic management
- Signal unaffected by composite material



Manhole Covers and Frames

Composite Cover

A range of lightweight anti slip composite manhole covers available in both 12.5T (B125) and 25T (C250) loading. All covers weigh less than 25kgs and are supplied with an extra deep galvanised steel raising frame.



Product Benefits

- Lightweight for solo lift
- High slip resistance value
- Min. 80mm frame depth = no mortar surround required
- Frames can be secured to chamber
- No inherent scrap value



Recessed Cover

A range of covers with a single person slide out recessed tray manufactured to EN124 B125 and Kitemarked. Recessed trays are manufactured in galvanised steel with a variety of depths to suit the infill material and available in standard and bespoke sizes.

Product Benefits

- ♦ Central keyhole allow solo lift
- ♦ Tapered sides ensures easy slide out
- ♦ Expanded metal base ensures bonding of infill material
- ♦ Minimal exposed metal
- ♦ Manufactured from 6mm steel minimum



Ductile Iron Cover

A range of ductile iron covers manufactured to EN124 in A15, B125, C250 and D400 loading. Depending on loading, covers are available in lift out, slide out and hinged options.

Product Benefits

- ♦ Wide range of sizes
- ♦ Wide range of vertical load options
- ♦ Bespoke badging available
- ♦ Produced from high quality 500/7 grade ductile iron



Bollards

Weebol Bollard

The Weebol Bollard is a robust reflective flexible bollard which fits directly into the Retention Socket without the need for an adapter plate. It utilises a unique flexible base which is designed to withstand multiple impacts without damage. Reflective panels are recessed to limit the damage to the panel during severe impacts.



Product Benefits

- ♦ Tough one piece moulded construction
- ♦ Simple installation of socket prior to bollard
- ♦ Anti twist design
- ♦ Retention Socket ensures simple replacement
- ♦ Rebated panels protect reflective material
- ♦ Withstands multiple impacts
- ♦ No power requirement





Electrical Products

IP68 Plug and Socket

The IP68 Electrical Plug and Socket system is a range of pre-moulded IP68 watertight cable connectors developed for use with all highway street furniture. They enable quick, simple and safe connection and disconnection of electric cables feeding any illuminated furniture. The connectors can be moulded to a wide range of cable types and sizes which are available with multiple circuit layouts. Each female connector is manufactured with a pre moulded cap which protects the connections when it is not in use or if it is being pulled through a duct network.



Product Benefits

- ♦ Ideal for seasonal events, wide load routes and high risk sites
- ♦ Manufactured to BSEN60309 and EN12767
- ♦ Completely water and dust proof - IP68 rated
- ♦ Available in 3, 4, 5, 6 and 16 pin
- ♦ Can be supplied moulded to a variety of cable types



IP68 Bottle Joints

The reusable cable joints are designed for use with single and multi-core highway electrical cables. The systems unique glanding mechanism eliminates the requirement for sealing resin or gel. This allows joints to be entered and resealed without specialist tools, heat sources or chemical protection being required. The joints can be supplied with a range of internal terminal blocks and the outer canisters are fully transparent.



Product Benefits

- ♦ Eliminates all COSHH requirements
- ♦ Simple entry, re-sealable without resin or gel
- ♦ Fully tested to IP68
- ♦ Transparent enclosure enables easy inspection



Feeder Pillar

The Feeder Pillar system enables pillars to be installed in the Retention Socket allowing civils works to be completed prior to the electrical installation. All pillars are manufactured from stainless steel, with a removable gland tray. This eliminates the requirement for a carcinogenic base seal. The system allows simple removal and future replacement.



Product Benefits

- ♦ Allows all civils works to be carried out prior to electrical installation
- ♦ Retention Socket enables 360 degree orientation of pillar
- ♦ Enables simple and rapid future upgrades
- ♦ Fully ducted system



Termination Enclosures and Vented Pole Caps

The termination enclosures are designed to enable electric cables to be terminated in columns with low level access doors. Manufactured in polycarbonate or aluminium with pre-fitted termination and earth points, the units can fit inside 114mm or greater diameter columns. The vented top cap eliminates the risk of condensation when using a low level termination enclosure.



Product Benefits

- ♦ Eliminates working at height risk
- ♦ Fits in a 114mm diameter pole or greater
- ♦ Vented top cap ensures no condensation



SIS Quad

The SIS Quad is an electrical isolation system designed specifically for traffic signal installations. The SIS Quad monitor unit provides four channels of monitoring, allowing isolation to four separate structures. It fits on a standard 3U rack within a traffic signal control cabinet. Traffic signal columns are fitted with SIS Sensors which detect any vehicular impact enabling the system to isolate all volts to the affected column.



Product Benefits

- ♦ Fully compliant with EN12767:2007
- ♦ Officially and successfully tested at MIRA
- ♦ Simple installation onto din rail or 3U rack
- ♦ Guaranteed complete electrical isolation of all volts within 0.2 seconds of impact
- ♦ Simple to test periodically



Additional Products

Rotating Mast Arm

The NAL Rotating Mast Arm has been specifically designed to eliminate the need for expensive and disruptive traffic management and lane closures during essential maintenance works. A unique operating mechanism within the Mast Arm allows it to rotate through 180 degrees, enabling maintenance to be carried out safely off the carriageway.



Product Benefits

- ♦ Simple installation in Retention Socket or cradle
- ♦ No requirement for traffic management and lane closures
- ♦ Increases contractor safety during maintenance
- ♦ Available in 5m - 10m outreach





Case Studies

Product: Retention Socket
Project: Trooping the Colour
Client: Transport for London

The annual event of Trooping the Colour takes place on The Mall in Westminster. Before the event can begin traffic signals must first be removed to allow room for the parade. This process has been simplified since Transport for London installed the NAL Retention Socket for the quick and straightforward removal and reinstatement of traffic signal columns. The traffic signals have also been cabled with the NAL IP68 Plug and Socket creating an efficient, fully demountable system.

On the morning of the parade, with the road closed, civils workers can begin demounting and within 30 minutes three NAL demountable sites were cleared for the parade. Power to the signals is isolated from the nearby controller allowing the workers to disconnect the plug and socket cables. With only a key and spanner the columns are then released and removed from the Retention Socket and stored on a truck where they are kept until the event reaches its end. Once the Mall is cleared the workers return to reinstate and reconnect the signals, ready for normal operation to continue.



Product: Composite Detector Chamber
Project: Magnetometer Installation
Client: Transport for London

Transport for London has installed the NAL Composite Detector Chamber to house Siemens magnetometers in central London. The wireless detectors were chosen to replace old faulty loops as it negated the need for extensive ducting works.

The installation composed of a core drill excavation, installation of the chamber and reinstatement with bitumen sealant. The process was completed in under 20 minutes, with minimal disruption to the public. The wireless signal from the magnetometer is unaffected by the composite material of the chambers.

Once installed the system enables simple and rapid access to the magnetometers without the need for extensive traffic management.

As the chambers are clearly visible in the carriageway, the risk of equipment damage during resurfacing works is eliminated.





Product: STAKKAbbox Modula
Project: A303 Refurbishment
Client: Highways England

During the signalisation of the Countess roundabout on the A303, the NAL STAKKAbbox Modula Access Chamber was chosen for accessing the duct network.

The STAKKAbbox has been designed for use in foot ways and carriageways, offering superior strength over traditional plastic chambers and boasting an installation time of 20 minutes compared to the traditional two day construction.

It's unique patented, twin-wall design utilises internal vertical and horizontal support ribs which gives a high resistance to above-ground force such as passing vehicles, as well as continual pressure from ground heave.

Thanks to this innovative design, the NAL STAKKAbbox can withstand a vertical load in excess of 40 tonnes.



Product: Controller Cabinet Base
Project: Malvern Signals Refurbishment
Client: Worcestershire County Council

The NAL Controller Cabinet Base was chosen for simplifying the installation and cabling of a traffic signal controller cabinet at the puffin crossing on Townsend Road, Malvern. To begin, an NAL STAKKAbbox is installed allowing cables to be easily fed from the access chamber later on. The plinth is mounted directly on top of the STAKKAbbox and set in ST4 concrete.

Once set, the gland tray is installed on top of the plinth removing the need for carcinogenic base seal making conditions safer for civil engineers. By utilising this future-proof system local authorities will be able to maintain controller cabinets with ease, adding and replacing cables quickly and efficiently causing little disruption to the public.





Case Studies

Product: Weebol Bollard
Project: Keep Left Bollard Installation
Client: East Ayrshire Council

East Ayrshire Council have utilised the NAL Retention Socket system for the installation of keep left Weebol Bollards on refuge islands in Kilmarnock. The local authority required a system whereby damaged bollards could be easily replaced without the need for excavating foundations and re-installing. By using the NAL system the bollards are fully demountable. Should a bollard become damaged it is easily released and replaced from the socket using a key and spanner in under two minutes.

The Weebol Bollard was chosen to replace traditional internally illuminated keep left bollards. Requiring no power source this reflective, one piece design is one of the most durable and reliable bollards. The reflective sign face is rebated ensuring it isn't damaged during impact and the bollard withstands multiple knockdowns.

By utilising this system the local authority saves on maintenance expenditure which would otherwise be used for excavations and civils work for bollard replacements.



Product: SIS Quad
Project: Passively Safe Traffic Signals
Client: Fife Council

The traffic signals in Windyates have been upgraded with a state of the art set of signals costing almost £60,000. The new signals replaced the original set which had developed a fault that could not be repaired. The signals include LED lamps which use much less electricity than the previous set and also require less maintenance.

A key feature of the new signals is the use, for the first time in Scotland, of a Signal Isolation System by NAL which cuts off the electricity to a signal pole if it is damaged in a crash. This system isolates the damaged pole but keeps the rest of the signals at the junction operating.





Product: Temporary Foundations
Project: Temporary Traffic Signals
Client: Transport for London

The NAL Temporary Foundation systems were utilised by Transport for London during the renewal and upgrading of the traffic signals outside Buckingham Palace.

The existing signals were removed for four months and during these works the NAL Temporary Foundations allowed the site to operate as normal with full pedestrian facilities.

This solution was used due to the stable footprint, ability to conceal all cables from the public and the ease of moving them away from site for the London Marathon, parades and state visits.



Product: Temporary Cable Shroud
Project: Traffic Signal Maintenance
Client: Dublin City Council

Dublin City Council have chosen the NAL Temporary Foundation and Cable Shroud System to set up a number of temporary signal junctions and pedestrian crossings during a major infrastructure project in the centre of the city.

The Temporary Foundation system enabled the local authority to surface mount their standard traffic signal posts while also allowing them to be moved or repositioned easily during the project. The Cable Shroud, which is a two-piece unit fits around the foundations concealing all excess cables and electrical joints. This system eliminated the requirement for bulky safety barriers around the foundations, therefore allowing all pedestrians unhindered access to the push button units.

The sloping tops on the shrouds ensures the foundations are not used as litter bins, as well as reducing the overall footprint of the traffic management making it easier and safer for the public to pass through the works while improving the overall aesthetics.



Training Opportunities



Systems and Solutions – Training Day *

Held at our National Infrastructure Centre in Worcester, attendees will hear from leading highways infrastructure experts to gain an in-depth understanding of systems and solutions, designed by NAL and other leading innovators, to support product installations. In addition, delegates will observe systems in action via a live demonstration conducted within our fully operational street scene, to prove product performance in real life situations, to see how they work and the benefits they afford. All sessions are IHE accredited with CPD points awarded to all in attendance and a full buffet lunch, along with refreshments, will be provided with our compliments.

Lunch and Learn *

The perfect option for those with time constraints and travel restrictions. A member of our technical team will visit your premises to deliver a concise presentation surrounding the latest innovations; tailored specifically to your requirements. Upon completion and if external space allows, our mobile demonstration unit ensures delegates are able to witness solutions presented in action, to further enhance understanding. Provided with a complimentary buffet and refreshments, CPD accredited sessions are held during your lunch hour.

Toolbox Talk *

Experience a best practice installation alongside one of our technical experts, who will join your team on site to provide full product and installation training. Offered at a time to suit, site operatives can expect to gain an increased understanding of how products should be installed and utilised for optimum effect, coupled with the opportunity to discuss and witness demonstrations surrounding product maintenance and removal.

Webinars

Delivered remotely and designed in direct response to the implications caused by Covid-19, CPD accredited sessions presented by our technical team, ensure delegates remain informed of the latest solutions to support existing and future projects. Convenient and providing the opportunity to network and connect with members of our industry, a variety of sessions are available weekly, with downloadable supporting documents including product data sheets and technical drawings.

Bespoke Training *

NAL can accommodate and provide bespoke training packages upon request. Please contact us to discuss your needs in order for us to create a presentation specific to your requirements.

Reserve Your Place

All training sessions are provided free of charge. Secure your place via one of the following:

Website – www.nal.ltd.uk

Email – info@nal.ltd.uk

Phone – 01905 427100

* With restrictions in place to control the infection rates of Covid-19, certain training packages may not be fully available at present. Throughout the pandemic we have delivered sessions remotely and will continue to do so. In the event of restrictions easing, our paramount concern is the safety of our delegates and employees, therefore please rest assured all training packages will be delivered in strict adherence to national perimeters.



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