



Flagpole installation and maintenance guide

For ground mounted flagpoles - 4m to 12m - internal halyard

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READ THROUGH THIS GUIDE BEFORE COMMENCING WORK!

Introduction

Thank you for purchasing this quality fibreglass flagpole from Flagpole Company.

If correctly installed, properly maintained and good practice in regard to flag flying weather is adhered to this flagpole will give many years of service.

Flagpole specification

Construction :	Fibreglass.
Heights :	4m to 12m
Finish :	White, hard gel coat finish.
Profile :	One piece, smooth taper.
Halyard :	Internal with flag weight.
Final :	Gold colour, onion shaped (standard) or white flat button / mushroom style (optional).

Flag specification (per size of flagpole)

To prevent damage to the flagpole it is important to fly the correct size and type of flag in the right weather conditions.

We recommend the use of single thickness flags, made in either woven polyester or lightweight knitted polyester, fitted with a heading, line and toggle - and of a size to suit the flagpole as per the below table.

To protect your flagpole flags should not be flown, or should be taken down, when wind conditions reach or are forecast to reach or exceed the upper limits of Beaufort Scale 6. This equates to a wind speed that will exceed 31 mph.

Flagpole height	Flag size (based on flags being in a ratio of 2:1)			
(length)	Yards	Feet & inches	Inches	≈ Centimetres
4m	1 1/2	4ft 6ins x 2ft 3ins	54 x 27	137 x 69
5m	1 1/2	4ft 6ins x 2ft 3ins	54 x 27	137 x 69
6m	2	6ft x 3ft	72 x 36	182 x 91
7m	2	6ft x 3ft	72 x 36	182 x 91
8m	2 1/2	7ft 6ins x 3ft 9ins	90 x 45	228 x 114
9m	3	9ft x 4ft 6ins	108 x 54	274 x 137
10m	3	9ft x 4ft 6ins	108 x 54	274 x 137
12m	4	12ft x 6ft	144 x 72	366 x 183

Health and Safety

We recommend that after reading this guide, unpacking the parts and assessing the weight and handling characteristics of the flagpole that you:

- Wear appropriate PPE at all times.
- When raising or lowering the flagpole we suggest two people assist with heights 4m to 9m and three people where heights are 10m and above.
- Draw up a risk assessment in line with HSE requirements or your own company approved methodology so that you mitigate the risks of this installation at all stages.

The HSE guidelines can be found at this website address: www.hse.gov.uk/simple-health-safety/risk/index.htm

Parts



Flagpole: One piece fitted with bonded in upper base plate.



Lower base plate assembly: The lower section of the hinged base plate and the ground anchors for setting into concrete.

Lower base plate assembly consists of: 3 x M20 x 500mm threaded studs.; 9 x M20 half nuts; 6 x M21 flat washers; 3 x M20 full nuts; 1 x M10 x 140mm partial thread bolt; 1 x M10 full nut.



Halyard: Plaited polyester halyard. With internal halyard type this is pre-fitted!.



Finial (standard): Gold colour, onion shaped, rotating finial with seat.



Flag weight: ring and weight assembly



Keys: one pair for the halyard door

Parts - *optional*



Finial (if specially requested): White, mushroom / button style, rotating finial with seat.



Base plate cover (if specially requested): White, plastic cover to hide the base plate.

Planning

Initial considerations

The following installation guide assumes you will be creating a concrete base foundation into well established, soft, compacted soil.

- Consider carefully the installation location.
- Keep away from trees and overhead power or telegraph wires.
- You will need a clear space, the length of the flagpole, to lower it to the ground for occasional maintenance. Later on, when inserting the lower base plate assembly into the wet concrete you will need the hinge facing the direction you wish the flagpole to fall.
- Check that the installation area does not have services running underneath the ground!
- Ensure the foundation is created well in advance of when you first want to use the flagpole so that the concrete has sufficient time to properly set and go hard.
- We recommend ready mix or hand mix concrete. We **do not** recommend the use of quick drying or postcrete concrete.

Installation

Assembly of lower base plate and ground anchors

Before preparing the concrete foundation assemble the hinged lower base plate and ground anchors.



Place one M20 half nut on each threaded rod to a depth of 70mm - top of nut to top of rod.

Insert each threaded rod through the plate and secure each rod with an M20 half nut. Double check the 70mm measurement and tighten.



Showing how the lower base plate should look fitted to the three threaded anchor rods - set to the dimensions stated in the pictorial.

Installation - *continued*

Dig a foundation hole

Dig a hole to the approximate dimensions below, according to the size of flagpole you have purchased:

Flagpole heights 4 metres to 8 metres:

Foundation size 500mm x 500mm x 1000mm deep.

Flagpole heights 9 metres to 12 metres:

Foundation size 650mm x 650mm x 1250mm deep.

Mix the concrete

We recommend either of the two following concrete mixes:

Ready mix : C30 quality

Hand mix : One part cement / two parts sand / three parts gravel



Foundation hole



Poured, wet, concrete - move to next stage before it starts to dry!!

Pour the concrete

Agitate the poured concrete to ensure the hole is completely filled.

Smooth off the top to ground level.

Immediately move to the next stage of inserting the lower base plate assembly and ground anchors.

Installation - *continued*

Inserting lower base plate assembly into the concrete

The lower base plate assembly is set in the concrete at the time of casting the foundation.

It is important to have decided on the direction you wish the flagpole to lower to the ground.

Insert the previously made lower base plate assembly into the wet concrete, ensuring the hinge faces the direction you wish the flagpole to fall.

To enable later adjustments ensure there is a gap of about 30mm between the bottom of the lower base plate and the concrete foundation.

Insert a piece of timber underneath the lower base plate to prevent the assembly from sinking into the concrete.

Level the assembly with a spirit level and allow the concrete to fully set.

The setting foundation can become a trip hazard so place a sign over it or mark it off with tape.



Use a piece of timber to help with levelling



Insert the hinged base lower plate assembly. Check the direction of fall!



Put a spirit level on the lower base plate and adjust the timber so that the plate is level in all directions.



Once level allow concrete to fully set.

Installation - *continued*

Prepare the halyard and finial saddle

For these next stages you will find it advantageous to move the bottom of the flagpole over to the installation point and raise the top of the flagpole up on a trestle for ease of working.

With an internal halyard flagpole the halyard is pre-fitted inside the flagpole and the end of it protrudes out the top of the flagpole.

Locate the white plastic fitting that is the saddle or base of the finial.

Locate the end of the halyard protruding from the top of the flagpole and thread the halyard up inside the finial saddle and then out an over the internal slide - either side exit, it does not matter.

Pull the halyard through some way so it can't fall back inside and then then firmly push the finial saddle onto the top of the flagpole. It is a friction push fit so make sure it is fully pushed down.



Installation - *continued*

Fit the finial to the saddle

The finial is fitted with a male screw thread underneath it. Screw this into the finial saddle until it stops turning - **but don't overdo the tightening!!!**

IMPORTANT! From this stage on do not rest the finial on the ground or other surface where it could take the weight of the flagpole! If the flagpole weight is taken by the finial there is a good chance the screw thread or finial will be damaged.



Assemble and fit the flag weight

Locate the ring and weight assembly. Ensure the padlock symbol shown in the picture below is uppermost when assembling.

The ring wraps around the flagpole to close together with the weight fitted inside the small aperture formed when the ends of the ring are secured together. The eye and carabiner clip on the weight need to be uppermost.

The weight needs to be inserted from below the ring and located into each slot as you twist it through the two small rings in order that it is securely locked in place.



continued over.....

Installation - *continued*



Then make a loop in the end of the halyard. A simple, small, overhand knot is more than sufficient.

Secure the loop to the carabina clip until the flagpole is ready for hoisting a flag - detailed further along in this guide. This is how the flagpole should be left when you are not flying a flag - also detailed later in this guide.



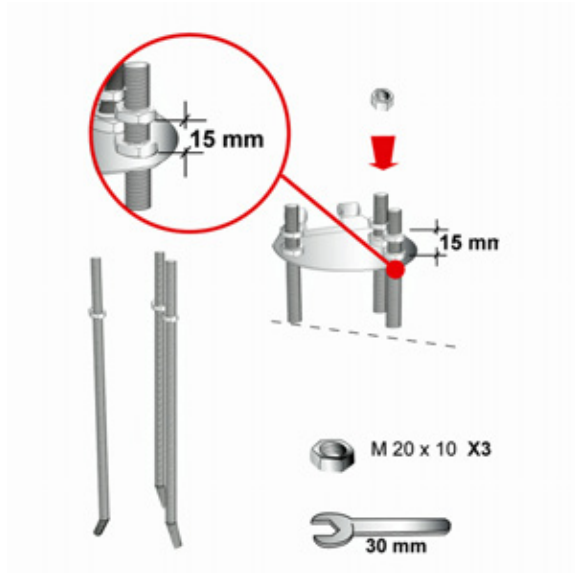
Installation - *continued*

Prepare the lower base plate assembly to take the flagpole

Once the concrete foundation is fully cured remove the timber from beneath the lower base plate.

Bring the flagpole to the installation area still using a tressle or other device to support the finial end off the ground. Position the base of the flagpole near to the base in the foundation along the line that the flagpole will be lowered.

Place one M20 half nut onto each exposed thread and screw down until there is a gap of 15mm between the lower base plate and the bottom of the M20 half nut.



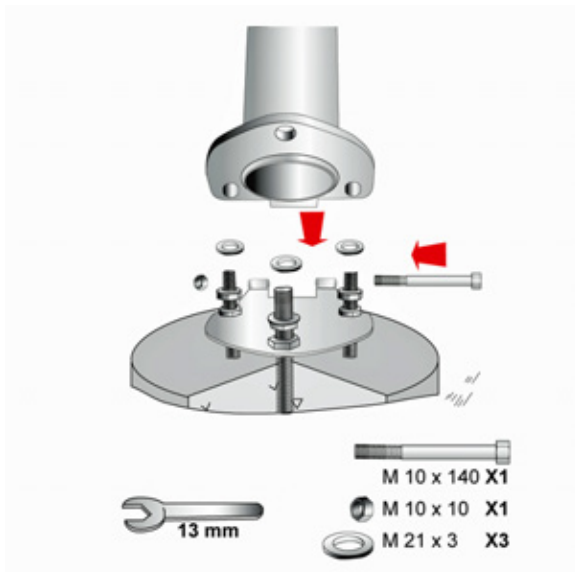
Fit flagpole to lower base plate assembly

It will be easier if two people (for flagpoles 4m to 9m) or three people (for flagpoles 10m and above) take part in this following operation.

Offer up the flagpole base plate to the lower base plate.

When the hinged parts are aligned with each other insert the M10 x 140mm hinge pin bolt and secure in place with the M10 nut.

Place one M21 washer onto each exposed thread of the lower base plate assembly.



Installation - *continued*

Raise flagpole and adjust vertical alignment

Two people should be involved in the job or raising (or lowering) a flagpole of 4m to 9m and three people for a flagpole of 10m and above.

With the flagpole base plates secured together by the hinge pin and the half nut and washer on each exposed thread (all as detailed previously) now locate 3 x M21 washers and 3 x M20 full nuts ready for the next stage.

Walk the flagpole up to vertical making sure the upper base plate holes do not snag on the threaded studding. One person should hold the flagpole secure in this position while another person puts 1 x M21 washer and 1 x M20 full nut onto each thread and hand tighten each nut down. The 'front' washer and nut should be put on and hand tightened first as this will help secure the flagpole taking pressure off the person holding it upright.



continued over.....

Installation - *continued*

With the top nuts hand tight the flagpole can now be adjusted for vertical alignment.

You can use a combination of the following methods to achieve a perfectly vertical flagpole:

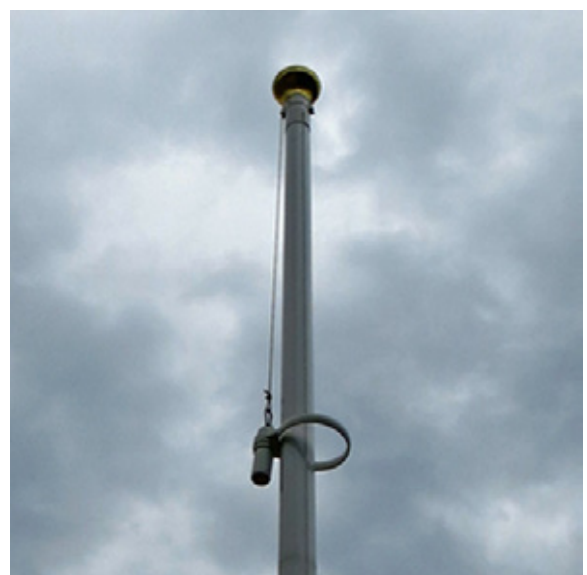
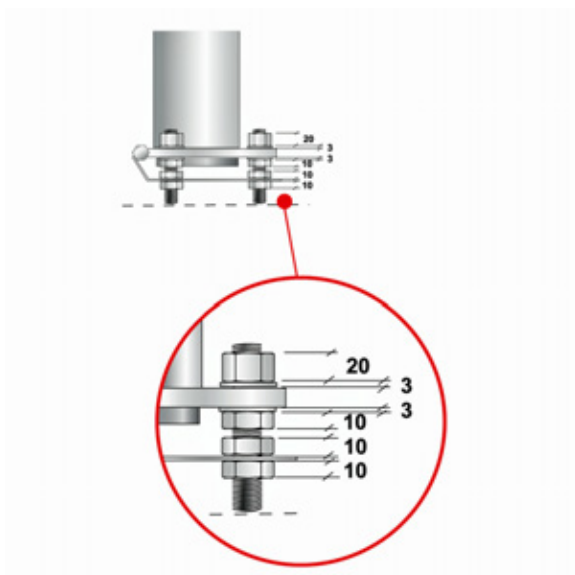
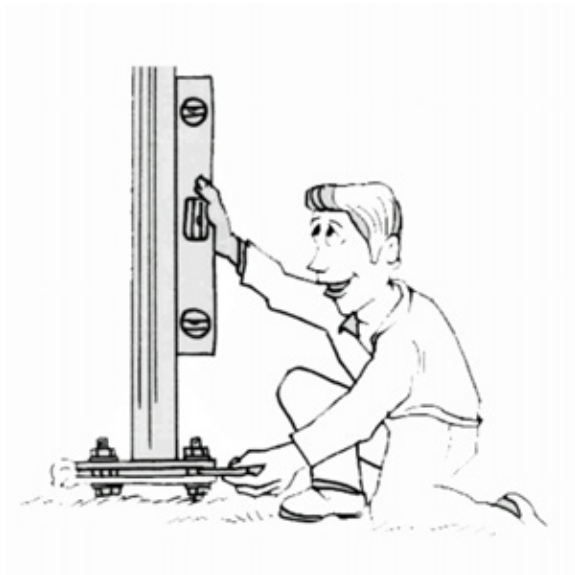
- A vertical spirit level (but take account the flagpole is tapered)
- A horizontal spirit level across the upper base plate.
- Level by eye, by viewing the flagpole from a distance and aligning it by sight and possibly with another object that is known to be vertical.

With the second person still holding the flagpole for security the top nuts can be slightly slackened off and the half nuts, directly under the base plate, adjusted accordingly before re-hand tightening the top nuts and checking the alignment.

Keep with this process until the flagpole is satisfactorily vertically aligned.

Then tighten down the top nuts to fully secure the installation.

Pictures below: top right showing the half nut you need to use for adjustment of vertical alignment; bottom left showing approximate dimensions that you may end up with (this may vary because of manufacturing tolerance on the hinge); bottom right ,showing how the flagpole will look with the weight stowed at top.



Installation - *continued*

Base plate cover - optional

A base plate cover is only supplied if specifically asked for. If you have been supplied with a cover read the following installation notes.

To get the flagpole base plate cover onto the flagpole you will need to remove the finial and the internal halyard door.

The cover simply slides over the flagpole and down to the bottom of the flagpole.

We recommend this is fitted after the flagpole has been secured to the foundation base plate and has been levelled up - else the cover gets in the way of making the leveling adjustments.

It is important that the weight of the flagpole, while laying on the ground, is not left to rest on this cover. It is made of thin plastic and will break. It is better to use a trestle to keep the flagpole off the ground and have a second person to help lift the flagpole up.



Hoisting and lowering a flag

Find the keys and open the internal halyard door.

You will see the inside looking like the picture below.



Pull the halyard out of the jam cleat and slowly, halyard slipping through your hand, let the flag weight and ring descend to a position where you can easily reach it.



NOTE! If you accidentally pull the lower part of the halyard out of the big hole inside the door just push it back in and let some of it descend down inside the flagpole.



continued over.....

Hoisting and lowering a flag - *continued*

The fixings on your flag should look like those in the picture below. You may have something similar in which case read on and you may be able to improvise to attain the same type of secure fixing.

Release the halyard from the flag weight carabiner. Hold onto the halyard else the wind will blow it away from you and you may have trouble retrieving it. Gently move the flag weight to the ground until you are ready to attach it to the flag.

Your flag should have a toggle at the top and a short length of line protruding from the bottom. If the short length of line does not have a loop tie one in it now.

Make a loop in the end of the halyard by passing the rope through the small loop already made on page 10.

Fit the toggle through this loop and pulley the rope tight to secure the toggle.

Now bring the ring and flag weight up the flagpole so that you can attached the line protruding out the bottom of the flag to the carabiner on the weight.

That's it - you are ready to start hoisting.



continued over.....

Hoisting and lowering a flag - *continued*

Now that the flag is secured at both ends simply pull on the halyard that protrudes from the top hole inside the door until the flag reaches the top of the flagpole.

When the flag is at the top push the halyard into the jam cleat to secure it.

The long length of rope that results from the hoisting is pushed inside the large hole in the door so that it drops towards the bottom of the inside of the flagpole.

Once the rope is tidied away put the door back and lock it.



Lowering the flag is the reverse procedure to the hoisting description above.

Make sure you control the lowering speed with the halyard else the ring and weight may hit the ground and become damaged.

Note! During the time when a flag is not going to be flown we recommend that the ring and flag weight is attached to the halyard, as you did when initially setting the flagpole up, and hoisted to the top of the flagpole. This will deter people from tampering with it, including theft, and is also the mechanism by which the halyard is returned to the bottom of the flagpole when needed.

Do not hoist the halyard up the flagpole without the weight attached else you may need to lower the flagpole to retrieve it!

Lowering the flagpole

The flagpole will need to be lowered down for occasional maintenance and cleaning. We recommend this operation is performed by two people and that a raised platform or trestle is used to support the flagpole.

The procedure is the reverse of raising the flagpole described earlier and consists of the following steps:

1. Remove any flag flying on the flagpole.
2. Make sure the area where the flagpole is going to lower down onto is clear of hazards.
3. While one person holds the flagpole the other person can undo and remove the three top nuts and washers of the base plate.
4. Now both people (or more as previously advised per flagpole size) can walk the flagpole down to the raised platform so the weight of the flagpole is not rested on the finial.

You can now carry out the required work as detailed under the next section **Maintenance**.

For re-erecting the flagpole follow the steps detailed earlier in this guide.

Flag flying advice

Flag flying and the weather - important!

Although very strong, standard commercial flagpoles are designed with certain limitations when it comes to the size and type of flag and the wind conditions it is likely to be exposed to. Therefore please heed the following information.

To prevent damage to the flagpole it is important to fly the correct size and type of flag in the right weather conditions. For the correct size of flag for your flagpole refer to the table on page 2.

We recommend the use of single thickness flags, made in either woven polyester or lightweight knitted polyester, fitted with a heading, line and toggle - and of a size to suit the flagpole as per the table on page 2.

To protect your flagpole from damage flags should not be flown, or should be taken down, when wind conditions reach or are forecast to reach or exceed the upper limits of Beaufort Scale 6. This equates to a wind speed that will exceed 31 mph.

Flag flying days

Many people fly the flag of their choice every day but in the United Kingdom there are designated days, set by the Government, for flying the Union flag.

The UK Government Department for Digital, Culture, Media & Sport have a detailed website page dedicated the flying the Union flag in the United Kingdom. This can be accessed through the link below:

www.gov.uk/guidance/designated-days-for-union-flag-flying

The UK Government also have a website page that is worth reading: Flying flags: a plain English guide:

www.gov.uk/government/publications/flying-flags-a-plain-english-guide/flying-flags-a-plain-english-guide

The **Flag Institute**, advisors to HM Government, have a very comprehensive website and guide to flag flying:

<https://www.flaginstitute.org/wp/uk-flags/british-flag-protocol/>

and a calendar of flag flying days:

www.flaginstitute.org/wp/uk-flags/calendar/

Half mast

There will be times when it is appropriate to fly your [Union] flag at half mast.

The Flag Institute advises:

"Half-mast means the flag is flown two-thirds of the way up the flagpole, with at least the height of the flag between the top of the flag and the top of the flagpole." This advice can be accessed here:

www.flaginstitute.org/wp/uk-flags/british-flag-protocol/#index21

Maintenance

Your flagpole is a structure and as such it will need occasional maintenance and periodic safety checks.

If you are a private individual with the flagpole installed in your garden or on your house you have a responsibility to maintain the flagpole in good safe condition else you may be exposed to private prosecution if the installation fails and causes damage or injury.

If you are a Company or entity you have specific responsibilities covered by the Health and Safety at Work Act 1974 and its related legislation.

Refer to the section further along in this guide: **Maintenance - Health and Safety Legislation**

Foundation

The concrete foundation should be inspected to make sure it is holding the flagpole securely upright with no movement.

Depending on how well the installation was carried out concrete can crack over time and the ground can dry out leaving the foundation to move about in the soil.

Base plate

Check the holding down bolts and tighten as required.

Check the hinge bolt and nut and tighten as required.

Flagpole

Although extremely strong the flagpole does need to be checked for damage.

If a flag has been left flying on the flagpole in wind speeds above 31 mph the flagpole could fracture in a strong gust. Therefore the flagpole surface should be checked for cracks or damage.

Halyard

The halyard will need replacing from time to time. In the UK this could be about every 3 years.

The rope becomes brittle and the exposed areas become degraded by UV exposure.

Replacing the halyard before it breaks will make for a much easier job than waiting until it fails.

The new halyard can be carefully joined (securely sewn) to the old one and pulled through the flagpole.

Replacing the halyard once the one in the flagpole has failed can be tricky but achievable with a small weight to help the rope drop down inside the flagpole and down to the halyard door.

Finial

The finial should be periodically checked to ensure it is safe on the top of the flagpole.

The finial should be screwed securely to the saddle and the saddle should be firmly mounted on the top of the flagpole.

Check the finial is free to rotate around 360 degrees.

Being made of plastic this will slowly degrade through exposure to the elements and will need replacing at some time during the life of the flagpole. The plastic will become brittle and the gold colour will eventually fade. This may be 5 or more years from initial installation - depending on the amount of UV exposure.

Maintenance - *continued*

Internal halyard door lock

The internal halyard door itself needs no maintenance but it is wise to put a drop of oil on the lock spindle and in the key hole to help prevent corrosion.

Washing the flagpole

Dirt and pollution accumulating on the surface of the flagpole can be washed away with warm water mixed with a mild detergent. The smooth gel coat finish protects the flagpole surface from pollutants but should be given a wash down as the suggested schedule below.

Maintenance schedule

Annually (minimum)

Inspect the foundation.

Inspect the base plate holding down nuts and bolts.

Inspect the base plate hinge pin and nut.

Lower the flagpole.

Inspect the flagpole surface throughout its length.

Inspect the halyard.

Inspect the finial.

Lubricate the internal halyard door lock mechanism.

Wash the flagpole.

If the flagpole is in a very exposed area make the maintenance schedule once every six months.

After gale force winds and beyond

When wind speeds reach Beaufort scale 8 and above damage can occur even if the flag has been removed (which of course it should have been according to the weather forecast)

Carry out the annual checks as detailed above.

The above is a suggested minimum schedule and the location and prevailing weather conditions may mean this has to be carried out more often. Your risk assessment should take account of all possible circumstances in the installation environment.

Flagpole Company are available to offer advice on all aspects of your flagpole so if in doubt do ask! We also offer a maintenance service if this is an aspect of flagpole ownership that you do not want to do yourself.

Maintenance - Health and Safety Legislation

The Health and Safety at Work Act 1974 is the main and overarching legislation covering occupational health and safety in the United Kingdom. This legislation together with the Workplace (Health, Safety and Welfare) Regulations 1992 and the Management of Health and Safety at Work Regulations 1999 places responsibility on business owners, directors, management, supervisors and employees for the health and safety and a duty of care for all people affected by their operations.

In addition, the Provision and Use of Work Regulations 1998 (PUWER) place duties on people and companies who own, operate or have control over work equipment. PUWER also places responsibilities on businesses and organisations whose employees use work equipment, whether owned by them or not.

You won't find specific reference to flagpoles in any of the above documents but the legislation applies to them all the same.

Flagpole Company offer a maintenance and inspection service designed to keep your flagpole in safe working condition. Often positioned near to or overhanging the general public, flags and flagpoles are exposed to continuous movement and at times tremendous strain. We recommend annual maintenance as a way to keep a check on the safety of your flagpole. All inspections and maintenance work are fully documented with a written report that is issued to you as a pdf for inclusion in your building maintenance records.



Flagpole Company

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