Retractable Bollard Installation Guide

1. Determine where the bollard is to be situated and ensure the correct placement and alignment for the purpose in hand.

2. Check for utilities and perform a visual inspection for any obvious obstructions. Scan the location for live cables and underground services with a cable avoidance scanner will be necessary. Once you have identified where you will be locating the bollard mark out the area to be excavated.

3. Excavate a surface cube in the substrate according to the bollards specification. A normal surface cube measuring 300 mm x 300 mm is suitable for any standard telescopic with an in ground depth of up to 800 mm. The larger spec anti ram raid telescopic bollards will need a cube measuring approx 400 mm x 400 mm with a depth allowance of up to 1250 mm.

4. For a concrete or tarmac surface a stone cutting saw with an appropriate diamond blade will need to be used to cut out your surface cube.For block paving consider the finished install with consideration for your paved surface pattern. The blocks will need to cut around the top of the bollard after installation. If at all possible, try to ensure you align the bollard adjacent to the pattern of your paving.

5. Excavate a hole uniform in shape, down to the full depth of your bollard and allow for an additional stone base of 100 mm of 20 mm stone beneath the outer unit. Periodically check the depth and allow for the finished level of the top of the bollard to be approx 10 mm above ground level. (This is to redirect dirty surface water away from the bollard and prevent surface debris from building up inside the unit). Once you have reached the required depth you are now ready to begin lowering the complete outer casing into the ground.

6. Place a layer of clean loose 20 mm stone, 150 mm deep into the bottom of the hole to allow for drainage and to act as a platform for the bollard to sit on. Do not place the bollard casing directly onto the soil, as the inner bollard will act as a syringe and will draw up all of the dirt inside the tube as soon as you begin to use the bollard. This will eventually cause you problems and will cause the bollards to fail. Don't cut any corners, get down to the correct depth for your chosen bollard.

7. Ensure you have located the root cross bar (if one is supplied with your bollard) and that it is fitted into the base of the outer casing. Locate the outer casing of the bollard centrally in the hole and onto the loose stone whilst also ensuring that the very top of this outer casing is sitting 10 mm proud of the existing ground surface level.

8. Raise the inner bollard up from its sleeve and locate it into the upright position. Back-fill some more 20 mm shingle around the base of the outer casing to a depth of about 200 mm to steady the bollard casing. During this initial back-fill, check that the extended inner bollard is sitting vertical to all planes by attaching the magnetic levels to both sides of the bollard.

9. When you are satisfied the inner bollard is vertical and plumb, lower it back into the outer casing and raise it up again to check for it's smooth operation. Whilst still checking for vertical, gradually back-fill the hole around the outer casing with additional 10 or 20 mm shingle until approx 300 mm from the top of the outer casing. Periodically compact the shingle during this stage of the back-fill with a long stick or temper to ensure the stone is tight around the outer casing.

10. When you are satisfied with the alignment of the outer casing and the inner bollard operates smoothly, fill the remainder of the bored hole around the casing with a good concrete mix (preferably with a rapid hardening agent or cement) to a medium wet slump. Before the concrete has hardened and set, lower and raise the inner bollard to double check that it is still vertical to all planes. Once you are totally happy then lower the inner bollard back into the outer casing and begin to reinstate your existing surface around the top of the casing to give a tight surface finish around your bollard.

11.The 10 mm allowance above the ground level will now need to be chamfered around the outer casing down to the surface level to leave a smooth slightly sloped finish. Ensure the finish is as smooth as possible so as to allow for good surface water run off and to eliminate any form of trip hazard. Use a concrete / cement dye to match the colour of your surface, rather than leave a white concrete slab around the bollard. Why ruin all your hard work. The detail in the finish does make all the difference to the appearance of your new bollard.

12. Protect any concrete from inclement weather or frost until it has fully cured.The bollard should not be used until the concrete has fully cured, so you should allow at least 24 hours before any vehicles are allowed to drive onto the top of the outer casing.