Not any old iron

The Road Surface Treatments Association (RSTA) has published a new industry Code of Practice for Ironwork Systems Installation and Refurbishment, collating industry best practice that has been peer reviewed and endorsed by Highways England and ADEPT.

The RSTA ironwork sub-committee produced its new code of practice to help increase the average service life of ironwork installations and refurbishments by illustrating a ‘right first time’ approach.

It highlights that currently there is a wide variety of service life expectation. This is concerning not just in terms of potential hazards but also as research suggests that under typical conditions the materials and components used in ironwork installation account for only about 20% of the overall cost.

Contractors naturally wish to avoid having to repeat the traffic management, installation of the ironwork and reinstatement of the surfacing that make up the lion’s share of the cost.

With cross reference to HA104/09 Chamber Tops and Gully Tops for Road Drainage and Services: Installation and Maintenance in the Design Manual for Roads and Bridges and the Specification for Reinstatement of Openings in Highways (SROH) the code covers all aspects of installation and maintenance:

It provides an invaluable ‘system and product selection’ table in Appendix A, with recommended minimum requirements for different types of road class as well as footpaths and cycle paths. The table covers brickwork, bedding mortar, backfill, edge sealant, surfacing, ironwork and suggested ancillaries.

It also provides handy ‘pre-contract, site and post contract’ checklists for workers to ensure they have considered all the key elements of the work.

The code itself covers by explanation or reference to other key documents all they key processes and issues around the work, with particular advice given for brickwork supporting the frame and cover, bedding mortar selection and backfill selection around the ironwork installation, plus surfacing and over-banding around the ironwork installation.

The code states: ‘A holistic approach should be applied when considering ironwork specification that should extend beyond the product itself with consideration given to location, application, frequency of access, security, safety and efficiency.

‘An ideal specification is constructed in layers starting with any generic product and industry standards then client or application specific requirements added. This approach has been adopted in other sectors, which can serve as guidance when compiling a specification to suit the needs of the client.

‘Ironwork should be specified to BSEN 124.’

BSEN124 divides manhole covers and drainage gratings into six classes as follows:

• A15 areas that can only be used by cyclists and pedestrians
• B125 footways, pedestrian and comparable areas, carparks or car parking decks
• C250 for gully tops installed in the area of kerbside channels of roads when measured from the kerb edge, extending a maximum of 0.5 metres into the carriageway and a maximum of 0.2 metres into the footway
• D400 carriageway of roads (including pedestrian streets), hard shoulders and parking areas, for all types of road vehicles
• E600 areas imposing high wheel loads, eg docks, aircraft pavements, roads with over 1500 commercial vehicles per day (cvd)
• F900 areas imposing particularly high wheel loads, eg aircraft pavements.

The RSTA outlines main areas of failure around ironwork with illustrations of each type.

It notes that ‘the existing frame and chamber cover can be reused if it only needs levelling and both the frame and cover are free from any obvious defects including connecting pins’. However it adds that ‘under no circumstances should the connecting pins be removed’ and argues you should ‘never fit new cover sections into existing frames, as trafficking is likely to produce areas of preferential wear in the frame’.

It also adds: ‘Under no circumstances should the frame be fitted to a sub-standard chamber/shaft, as this will only shorten the life of the installation as the underlying issues have not been resolved.’