

M1 STEEL



Steel is an alloy of iron, carbon and other elements that are added for strength, lighter weight and corrosion resistance. Steel sections are produced in various styles, sizes and thicknesses, depending on the specification required. They are commonly rolled steel joists, I-beams, T-bars, H-sections, tubes, channels and mesh. They are of varying quality and finish to suit both structural and architectural finish.

Steel Metal 17 04 05

WASTE STREAMS

DISPOSAL

The landfilling of steel should not be considered. Small pieces that are not easily recovered should be sent to a materials recovery facility to be recovered by magnets.

RECOVERY

Steel can be segregated from other materials and sent for recycling.

RECYCLE

Steel can be readily recycled as there is a strong market for the materials to be used as a feedstock for processing new products, not necessarily for construction.

RECLAIM

Steel sections that are in good condition and easily removed from other substrates should be set aside for reuse or re-manufacturing into other products or steel sections. Whole portal frame buildings can be reclaimed for reuse.

USAGE & PROBABLE LOCATIONS

Steel that is used in construction is mostly for structural purposes. It is used for piles, columns, beams, floors, rafters, roof systems, stairways and reinforcement for concrete. It is also used in lintels and door frames, in the main frame, portal frames, high-rise buildings, structures and infrastructure.

PERSONAL PROTECTIVE EQUIPMENT

PPE requirements indicated are for guidance purposes only. DRIDS has identified the PPE that is mandatory on all demolition projects and ones that may be required subject to site specific Risk Assessment & Method Statement (RAMS).



REMOVAL, SEGREGATION & STORAGE

Steel sections that are destined for reuse should be deconstructed, segregated and stored carefully and safely, to ensure their integrity and good condition. They should be stored flat on a suitably sized pallet or on timber skids, preferably with timber slats between sections to prevent warping. They should also be stored away from plant movements to prevent damage. Steel sections destined for recycling need less attention to detail and should be demolished using plant and cutting equipment and stored in metal

recycling skips. There is little need to store steel sections inside a building or the need for a cover as they are robust against incremental weather.

TOOLS

360 plant and attachments , Crane , Cutting Torch , Large Hammer , Crowbar , Jemmy Bar , Spanners , Air Tools , Chisel , Lifting Chains

FIXTURES, FITTINGS & CONNECTIONS

Steel sections have been traditionally fixed in place with expansion bolts, nuts & bolts, rivets and welding, but some use gravity joints or studs. Some construction elements such as lintels and wall plates often have no fixings, rather they will be built into or atop stone and brick walls using mortar. Steel sections will often be painted or galvanised for harsh environments such as farms, sewage works and on the coast. Structural elements will sometimes be coated in fire retardant paints or lined with fire resistant materials.

HEALTH & SAFETY

Subject to task-specific Risk Assessment & Method Statement (RAMS). Use correct protective equipment for removing bolts and mortar. Wear gloves when handling steel sections with damaged edges, galvanised or coated in fire retardant paints to prevent irritation, cuts and splinters. Wear eye protection when using hand tools. Do not walk on wet and slippery steel. Only use harness protection at height as a last resort. Only use 360 plant, attachments or cutting tools if properly trained. Use appropriate respiratory protection equipment with a cutting torch.

FURTHER READING

Designing out Waste
Demolition Code of Practice
Deconstruction and Reuse
Reuse & Recycling Steel

TRAINING

Working at Height
Manual Handling
Safe Use of Hand Tools
Safe Use of 360 Plant and Attachments