

## GOOD PRACTICE GUIDE

### SPECIFYING EDGE PROTECTION SYSTEMS FOR CLASS A AND CLASS B APPLICATIONS

#### Introduction

This document has been developed between the EPF and FASET with the input of the HSE to give general guidance on good practice when considering the specification of temporary edge protection, including systems that allow a fall beyond the roof / floor perimeter or phase edge. This guidance aims to outline the types of system available in hierarchical order in accordance with the Work at Height Regulations 2005 (WAH) to assist in selecting the most suitable system.

#### Selecting a System

All edge protection systems should meet the requirements of BS EN 13374: 2013+A1: 2018 *Temporary edge protection systems - Product specification - Test methods* (BS EN 13374). The selection of a suitable edge protection system should only be carried out by a person with the relevant skills, knowledge and experience who is able to consider the requirements of BS EN 13374 and the legal requirements of the WAH regulations, and where applicable, the Construction Design Management Regulations 2015 (CDM). They should also have suitable relevant product/system knowledge. See Annex A of this document for further guidance on WAH and CDM, and Annex B for information on the classes of Edge Protection Systems.

A competent person who is selecting a suitable edge protection system will, at the very least consider the following during their risk assessment for selection:

- Presence of perimeter steel
- Strength of steel being attached to
- Profile of steel being attached to
- Bay sizes
- Overhangs and height of installation
- Parapet steelwork
- Construction sequencing (which it may be able to change if considered at an early stage)
- Architectural elements
- Additional design considerations such as temporary work classifications
- Location of the edge protection system in relation to other site obstacles (mast climbers, tower cranes, cladding brackets etc.)

## Types of Edge Protection Systems

Typical edge protection solutions for Class A and B applications (see annex B of BS EN 13374: 2013+A1: 2018 for detail on classes) should be considered in the following order:

1. Proprietary system\* **or** Multi-Guardrail (including ladder/lattice beam) - with or without net infill **or** Multi-Guardrail Net Infill system
2. Vertical Netted Guardrail System
3. Vertical Netted System

\* A proprietary system is a pre-designed, engineered and manufactured standard solution, which should only be installed in accordance with the manufacturers user instructions.

**Note** - Where fall arrest safety netting is attached to edge protection, the system should be designed to take the loads indicated in BS EN 1263-2: 2014 *Temporary works equipment - Safety nets - Safety requirements for the positioning limits* and BS 8411: 2019 *Safety nets on construction sites and other works - Code of practice*. Safety nets should have received annual testing for UV degradation, have their individual identification labels intact and repairs appropriately labelled. More information on the requirements of safety nets can be found on the FASET website.

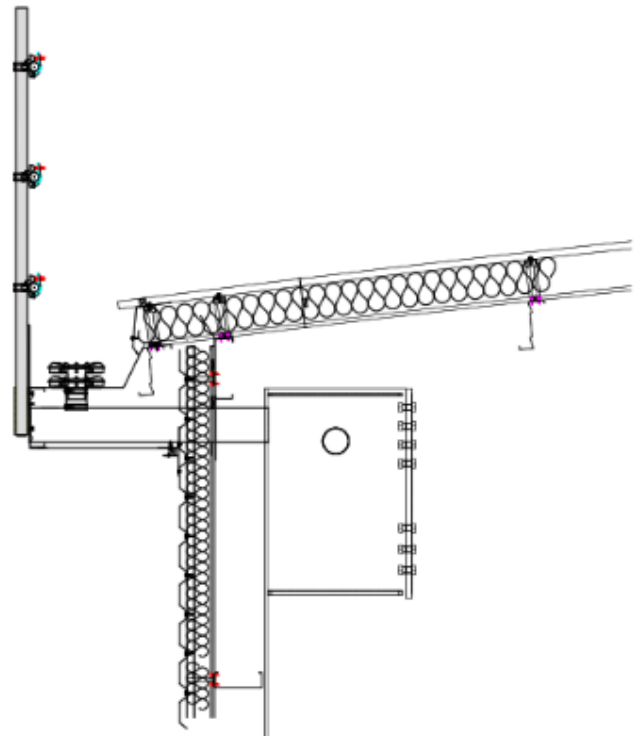
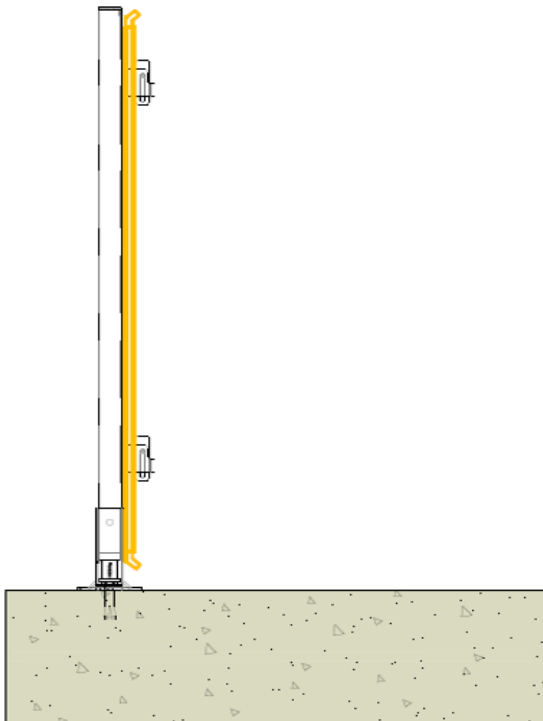
## 1. Proprietary system or Multi-Guardrail system (including ladder/lattice beam) - with or without infill

### Proprietary System

- Prefabricated elements combined to form a system
- Can only be installed where there is a suitable and continuous structure at the point of attachment
- Typically, Temporary Works Category 0
- Installed in accordance with Manufacturers User Instructions
- Can provide a level of debris containment
- Prevents a fall from occurring from an edge

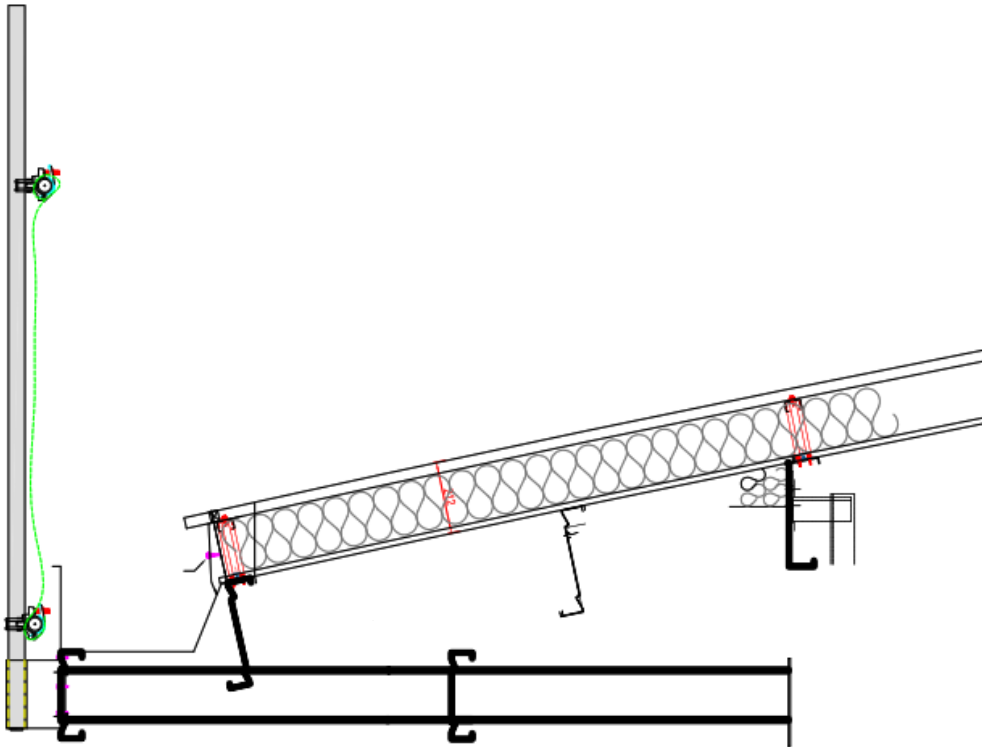
### Multi-Guardrail (including ladder/lattice beam) - with or without net infill

- Component parts (generally tubes and couplers) to form a system of rails and posts etc.
- Can only be installed where there is a suitable structure at the point of attachment
- Typically, Temporary Works Category 1
- Net infill (if included) provides a level of debris containment
- Prevents a fall from occurring from an edge



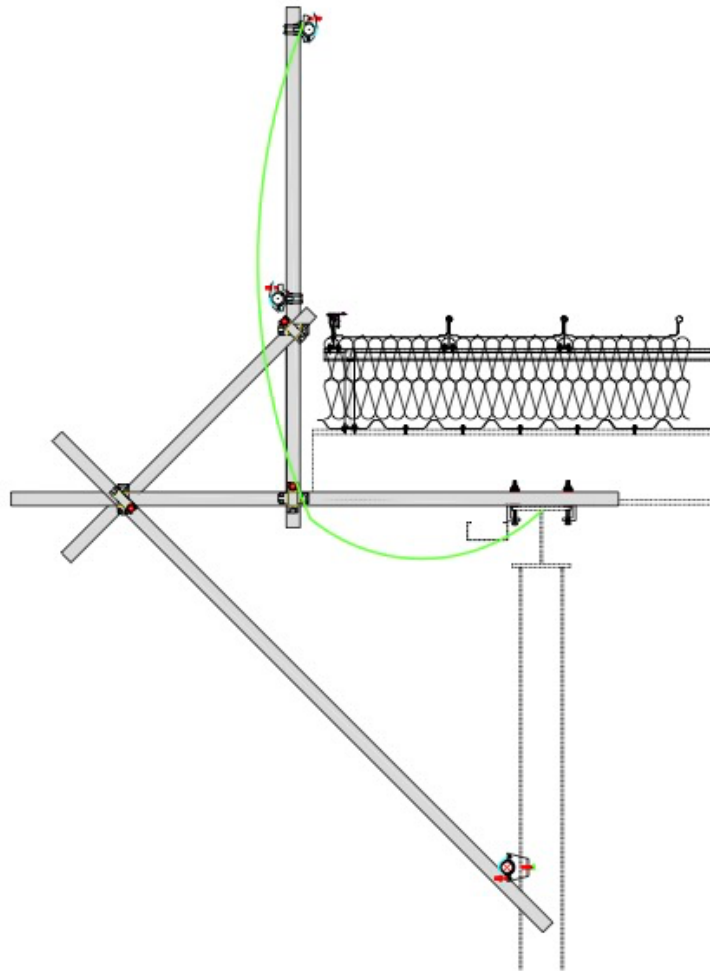
### 1. Multi-Guardrail (including ladder/lattice beam) Net Infill System

- Component parts (generally tubes and couplers) to form a system of rails, posts, safety net etc.
  - Principal guardrail that gives a handhold
  - Bottom guardrail
  - Intermediate safety net infill attached to guardrails
- Can only be installed where there is a suitable structure at the point of attachment
- Typically, Temporary Works Category 1
- Net infill provides a level of debris containment
- Prevents a fall from occurring from an edge



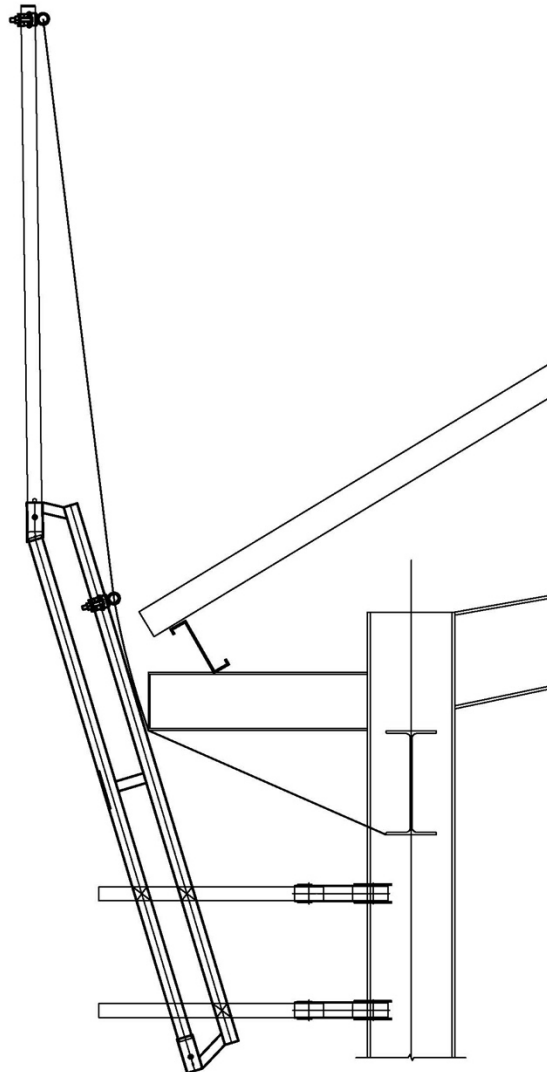
## 2. Vertical Netted Guardrail Systems

- Component parts (generally tubes and couplers) to form a system of rails, posts, safety net etc.
  - Principal guardrail that typically provides a handhold
  - Safety net infill attached to guardrail and structural steel
  - Posts
- Can only be installed where there is a suitable structure at the point of attachment
- Typically, Temporary Works Category 1
- Needs to comply with BS EN 1263 Pt1 & 2 also (Requires 6kn @45° attachment)
- Net infill provides a level of debris containment
- Allows a fall to occur
- Requires a rescue plan in the event of a fall.



### 3. Vertical Netted Systems

- Prefabricated elements and a safety net combined
  - Continuous element that typically does not provide a handhold
  - Safety net infill attached to top rope and structural steel
  - Posts
- Designed for use in Class C circumstances
- Net infill provides a level of debris containment
- Allows a fall to occur
- Requires a rescue plan in the event of a fall



## Annex A

### **The Work at Height Regulations and The Construction (Design & Management) Regulations (CDM)**

Regulation 6 of the Work at Height Regulations contain a clear hierarchy for managing and selecting equipment for working at height as follows:

1. Avoid - avoid work at height wherever reasonably practicable.
2. Prevent - if it's not reasonably practicable to avoid working at height, suitable equipment that prevents a fall from occurring should be selected.
3. Minimise - if it is not reasonably practicable to prevent a fall from occurring, measures should be taken to minimise the fall height and the consequences of the fall.
4. Minimise - if it is not reasonably practicable to minimise the fall height, measures should be taken to minimise the consequences of the fall.

The Construction (Design & Management) Regulations (CDM) aims to improve health and safety in the construction industry by helping to:

- sensibly plan the work so the risks involved are managed from start to finish
- have the right people for the right job at the right time
- cooperate and coordinate contractors work with others on site
- have the right information about the risks and how they are being managed
- communicate this information effectively to those who need to know
- consult and engage with workers about the risks and how they are being managed

This includes temporary safety systems such as edge protection.

## Annex B

### Requirements of Edge Protection Systems

BS EN 13374: 2014+A1: 2018 *Temporary edge protection systems - Product specification - Test methods* clearly defines the classification of edge protection systems as follows:

**Class A Systems** may be used if the angle of the slope is less than  $10^\circ$ . They are designed to provide resistance to static loads only and are intended to support a person leaning on the system, provide a handhold for a person walking alongside the system, and stop a person from falling off the structure.

**Class B Systems** may be used if the angle of the slope is less than  $30^\circ$  without limitation of the falling height or less than  $60^\circ$  if the falling height is less than 2m. They are designed to provide resistance to static loads and low dynamic loads only and are intended to provide all the protection of a Class A system and stop a person sliding / falling off the structure.

**Class C systems** may be used if the angle of the slope is between  $30^\circ$  and  $45^\circ$  without limitation of the falling height or between  $45^\circ$  and  $60^\circ$  if the falling height is less than 5m. They are designed to provide resistance to high dynamic forces and are intended to stop a person sliding / falling down a steep sloping surface.

