1. **Purpose**
   
   This document defines the minimum safety requirements to ensure safe loading and unloading of vehicles on Corus sites.

   Requirements, denoted by **R** (presented as “must”) are a minimum requirement.

   Good practices, denoted by **GP** should be applied where appropriate.

2. **Scope**
   
   This UWP covers the activities from a driver's arrival at the (un)loading area to the point where either
   
   - The material is loaded, secured and sheeted (where necessary), or
   - The vehicle is unloaded.

   The activities ref loading are shown below:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading Point Design and Control</td>
<td>5.1</td>
</tr>
<tr>
<td>Meet and Greet at Loading Point</td>
<td>5.2</td>
</tr>
<tr>
<td>Check Equipment Suitability and Condition</td>
<td>5.3</td>
</tr>
<tr>
<td>Agree Load Configuration</td>
<td>5.4</td>
</tr>
<tr>
<td>Agree Driver/Loader Roles &amp; Responsibilities</td>
<td>5.5</td>
</tr>
<tr>
<td>Load Vehicle</td>
<td>5.6</td>
</tr>
<tr>
<td>Sheet and Securing Load</td>
<td>5.7</td>
</tr>
</tbody>
</table>

3. **Roles and Responsibilities**
   
   Roles and responsibilities must be clearly designated for loading and unloading activities. This includes the loader (crane driver, forklift driver etc), truck driver (where they are involved) and any other persons involved. One designated person, generally the loader, must take overall responsibility for the loading / unloading activity.

4. **Training & Competence Requirements**
   
   All personnel involved in the loading / unloading process must be competent to undertake the roles and responsibilities allocated. Where slinging is required, personnel must be trained to a level appropriate to the nature of the slinging.
5. Loading and Unloading Process

5.1 Loading Point Design / Condition

Wherever possible, loading areas should be selected and designed to be flat / level.

Where vehicle alignment is safety critical (e.g. when using twin hoist cranes), alignment lines must be clearly marked and the Safe Working Procedure must incorporate this requirement.

The loading / unloading area design must be subject to a full risk assessment. The loading / unloading risk assessment must consider the following attributes of the loading point:

- **Side slope / Long slope.** When loading areas are not flat / level, load stability may be compromised dependent on the nature of the load. This is particularly relevant prior to load restraint being applied, or when removing load restraint prior to unloading.

- **Road Camber.** This can have a similar effect to side slope, and needs to be taken into account particularly if moving loads without full load restraint.

- **Surface condition.** Potholes, ruts and drains can have a destabilising effect on forklifts (and any load being carried) as well as being slip/trip hazards for pedestrians.

5.1.1 Vehicle Access to Loading Points

Wherever possible, reversing should be avoided. Where reversing cannot be avoided, specific controls must be implemented to ensure personnel, plant and equipment are not put at risk.
Where reversing is required, one or both of the following may be appropriate

- **Banksmen.** Trained, competent banksmen may be used to guide and direct reversing vehicles. Where banksmen are deployed, there must be clear rules on signals and safe positioning to avoid potential for trapping.

- **Segregation of vehicles / pedestrians / other traffic.** As an alternative to banksmen, the loading area should be segregated to prevent pedestrian access during reversing. Use of robust barriers to protect plant / equipment may be necessary.

### 5.1.2 Loading Docks

- The exposed edge of loading docks must be clearly marked. Measures to prevent falls from height or mitigate the consequences must be considered.

- Where loading docks extend for some distance, specific loading bays/sections should be identified. A fence or other edge protection should be installed in areas not designated as loading bays.

- Controls must be implemented to prevent inadvertent drive away from loading docks.

### 5.2 Meet and greet at loading/unloading point

- The vehicle driver must park the vehicle in a designated waiting area, and go to a designated “meet and greet” point where he / she will be met by a Corus person.

- During the Meet and Greet process drivers should have access to welfare facilities.

- The Corus person must check the driver

- Has a current and valid transport driver’s safety passport indicating that he / she has been trained in Corus safe loading procedures. Where the driver does not have a valid transport driver’s safety passport, additional controls should be put in place to ensure his/her safety whilst loading/unloading. These additional controls could include chaperoning or providing additional supervision.

- Has received local site induction training.

- Is wearing all required PPE

- Has received and understands area specific issues such as local safety rules and procedures
5.3 Suitability of Equipment

Competent Corus Personnel should visually check the suitability of the vehicle and associated equipment against a defined standard. If it doesn’t comply with the defined standard, then loading of the vehicle must not take place.

Equipment used for loading / unloading vehicles must be suitable for the product involved. This applies to lifting equipment, lifting accessories, forklift trucks or other mobile plant.

In selecting appropriate equipment for loading / unloading, take account of the need to minimise work on trucks or touch suspended loads.

The risk assessment for loading / unloading must take into account the following items when determining the suitability of equipment:

- The weight of the load
- The nature of the load – size, shape, integrity, stability
- The means and method of attaching / detaching lifting equipment

5.4 Agree Load Configuration

Before loading, there should be a discussion between loader and truck driver to agree what is to be loaded, and the configuration of the load. This can be documented as a “Pre load checklist”. It is important to note that the agreed configuration must be consistent with relevant load securing guidelines (see UWP XXX).

Where pre-load checklists are used, key rules and requirements can be incorporated. They can also be used to promote standardisation of load configurations – this will aid effective securing of loads as well as reducing potential for misunderstanding and miscommunication during the loading process.
5.5 Agree Drivers/Loaders Roles and Responsibilities

Loading crews should ideally be limited to a maximum of two people, as the more people are involved, the greater the chance for miscommunication or someone entering a danger area.

Where more than one person is involved in the loading / unloading activity, the principle of Can't See…Can't Load should be implemented.

This places the onus on the loader to ensure they can see their colleague(s) at all times. If they can't, then they cannot be sure their colleagues are in a safe place, so the loader must STOP until they can see their colleague in a safe place.

A set of unambiguous signals and verbal instructions must be agreed and documented for loading / unloading activity, in compliance with local legislation.

5.6 Loading

5.6.1 Vehicle preparation

Vehicle preparation (setting out dunnage etc) should be carried out in the loading bay where all required safe systems and processes are already in place. However, site logistics may be such that this activity is carried out in a different location.

In such cases, active driver management is required and this should be part of the meet and greet process. The following must be observed.

- Vehicle preparation must be carried out in a defined area as specified in the collection plan.
- The defined area(s) must be set out with appropriate safe systems of work in place. This should include provision of safe access to and from the trailer.
5.6.2 Exclusion zones

Effective exclusion zones must be implemented at every loading point where mechanical handling equipment is used. This applies whether the loading point is inside or outside a building.

The principles that must be applied are:

Unsafe “Red” zones must be clearly identified. These are the areas that no one is allowed to enter during loading/unloading. The size/nature/position of the zone will vary from product to product and situation to situation, but should be large enough to ensure that should something go wrong during the activity, personnel will be far enough away to ensure their safety.

Safe “Green” Zones must be clearly identified. These are the areas where people should be during loading/unloading.

Note that it is the principles that must be applied – the actual implementation will vary and the identification of exclusion zones (e.g. painting, barriers etc) is not prescriptive.

All relevant personnel should be trained in the principles and implementation of exclusion zones. This training must make clear that it is the crane driver/forklift/mobile plant driver in charge of loading who is responsible for enforcing the exclusion zone.

More detail on establishing and implementing exclusion zones is provided in Appendix 1.
5.6.3 Falling off Trucks

Work on the bed of a vehicle or trailer must be avoided wherever possible. Where a task cannot be completed without accessing the vehicle, appropriate measures must be implemented to prevent falls or mitigate the consequences of falls.

A range of good practice solutions to avoid work on trucks, or reduce risk while working on trucks is provided in Appendix 2.

5.6.4 Suspended Loads

The requirement to touch suspended loads must be avoided wherever possible. Suspended loads must not be taken over people, or be so close to them that they could be crushed or trapped by a swinging or falling load.

When loads are being moved by overhead crane, where possible establish flight paths that avoid travelling over walkways or key equipment.

5.6.5 Unloading

All statements on loading apply equally to unloading points and activities.

Loads must be inspected prior to the removal of any load restraint. This is to ensure, so far as possible, that the load is stable and will not slip / fall when load restraint equipment is removed.

5.7. Sheeting and securing

Specific locations must be identified and allocated for the securing and sheeting of loads. This may or may not be the relevant loading point. Selection and control of the securing and sheeting point must take account of the same factors as the loading or unloading point, e.g. slope, gradient, vehicle access, fall prevention and protection etc...

Full load restraint (as defined by UWP XXXX) must be applied prior to moving the vehicle onto the public highway.

Load restraint systems that differ from UWP XXXX may be applied for purely internal (on site) movements. However, these may only be used where a fully documented Risk Assessment in line with HSS-02 demonstrates this is adequate to prevent load movement. A good practice example of such an assessment is provided in Appendix 3.

Wherever possible, manual sheeting of loads should be avoided by agreement with customers or selection of suitable equipment (e.g. Sliding canopies or tautliners). Alternatively, specific sheeting stations may be established. Good practice examples to reduce risk during sheeting / unsheeting are given in Appendix 2.
6. Monitoring & Auditing

Effective and robust monitoring and auditing processes must be implemented to ensure compliance with this Uniform Work Procedure. Responsibility for carrying out monitoring / auditing processes must be clearly allocated to a named role in each unit.

7. Review

The owner of the UWP shall review the detail of the document on a regular basis but also in the light of:

- Lessons learnt from road transport related incident/accident investigations
- New knowledge/technology/legislation
- Results of audits.
Appendix 1 Exclusion Zones

1. About this exclusion zone guidance
   - This guidance is intended to assist loaders, lorry drivers, managers and others with key safety issues when loading and unloading material on Corus sites.
   - The guidance outlines the principles for identifying safe and unsafe areas in relation to loading and unloading activities, and how they can be implemented.
   - The specific detail is indicative only, not prescriptive. Circumstances and requirements will change from product to product and site to site. However, the principles of red and green zones must be implemented at every loading and unloading area.

2. What is an Exclusion Zone?
   - An exclusion zone is an effective means of identifying safe and unsafe areas when loading or unloading is taking place. They are necessary because things can go wrong during loading – loads can slip, swing or fall and if they do, people need to be clear so they don’t get trapped or crushed.
     - **Red Zones** are those areas which *nobody* is allowed to enter during loading/unloading
     - **Green Zones** are the safe areas where lorry drivers, crane drivers or others involved in loading or unloading *should* be.
     - In some circumstances, **Amber Zones** may be necessary – areas where there is a small additional risk but which people need to access for “Operational Reasons”. Wherever possible, these should be avoided and the “Operational Reasons” engineered out.
3. Green Zones

Green zones are the areas where people can stand safely. If something goes wrong, they are clear of any falling product. The size and position of the green zone will vary from product to product and site to site. In some cases it may be beside the vehicle cab, in others it could be a separate area altogether. People can see and be seen in the Green Zone.

4. Red Zones

Red zones are those areas where, if something goes wrong, someone could be crushed or killed by moving equipment or falling product. These areas include:

- **The far side of the vehicle** – e.g. in the diagram, if the forklift (or crane) is approaching from the left, you must not be on the right hand side of the vehicle – there have been many instances of fatalities where people have been crushed in this area.

- **Areas close to moving loads**, cranes or forklifts. As a guide, the red zone should extend at least 2 metres from any moving load or equipment, but the size will vary with product.
  - E.g.1 - When moving galvanised sheet, a larger zone may be necessary as it could slide further if it fell.
  - E.g.2 - When moving long products, it could tend to act as a “spear” if it fell from the crane, so the Red Zone is likely to extend well out from the ends of the section.

When determining Red Zones, think about how things could go wrong and, if they do, what will happen to the load?

Red zones may well vary during the loading process e.g. when loading the front of a trailer, it may be safe to be at the rear of the trailer but when loading the rear, the previously safe zone becomes unsafe. As a result, it may not always be possible to paint areas as red zones – effective segregation may need to be achieved by temporary barriers or other means (see next page).

It’s the principle of Red Zones that is important!
5. Amber Zones

Amber Zones are those areas where there is known to be an increased risk, but, for practical reasons, someone needs to enter them. An example could be to position or remove lifting equipment from a load. **Ideally, Exclusion Zones should only have Red and Green areas.** If Amber Zones are necessary, then extra caution needs to be taken and additional procedures may be required – e.g. crane control put down or Forklift truck switched off with handbrake on to prevent unintentional movement **prior to entering the amber zone.**

6. Barriers

Use of some form of physical barrier is strongly recommended to help reinforce the location of exclusion zones. Segregation of people, forklifts, mobile plant or other (un)loading activity will be much more effective when using a barrier, whether permanent or temporary.

Barriers can be cones, plastic chains, retracting belts or whatever suits a particular location. All can be easily and quickly deployed.
7. Exclusion Zones

Putting the Red, Green and Amber (if necessary) Zones together will result in this kind of approach – apply the principles in all (un)loading areas. It is vital that exclusion zones are implemented on a day-to-day basis - the loader, crane driver or forklift driver has a key role.

The Crane Driver or Forklift Driver is in charge of the Exclusion Zone. If anyone enters the red zone, the crane/forklift driver must STOP and instruct the person to leave the area. Loading must not continue until the person has retreated to a safe area (the green zone).

Training and communication is important – ensure everyone involved understands the principles of Exclusion Zones and knows their responsibilities in making them work.

Can’t See…? - Can’t Work!
If you can’t see the person you’re loading with (the lorry driver?) you can’t be sure they’re in a safe position, so STOP until they’re visible and safe.

Be Seen in the Green!
Examples of Exclusion Zone Implementation

Retractable Barrier

- Achieve working exclusion zone without the need for painted area
- Ideal for when flexibility around loading points is required.
Exclusion zone achieved by painting areas on to the floor to guide traffic and segregate

"Red" and "Green" Zones clearly identified

Use of simple chain barrier

Excellent example of driver area
  - Notice boards, induction recorded
  - TV screen with Be Clear Stay Clear DVD on loop
- “Red” and “Green” Zones identified
- Loading Bays sequentially numbered
- Clear markings with roundels
- Go and no-go areas highlighted
Appendix 2 Work at Height / Falling Off Trucks

The following are good practice examples for eliminating or reducing risk of falls from vehicles.

**Portable Safety step**

**Key features**

- Allows quick access to the trailer for restraint, dunnage and preparation etc.
- Portable so can stay with driver.

**Half height mobile platform**

**Key features**

- Allows Driver/Loader to access areas around the trailer with out having to get on it.
- Used as mobile unit can be easily manoeuvred around to different points of the trailer and easily stored away.
- Stairway and hand rail at each end for easy access.
Full height mobile platform

Key features

- Allows access onto the trailer but with the benefit of restraining the driver/loader from reaching the exposed edge of the trailer using a retractable lanyard.
- Completely mobile and lockable in position.
- Stairway and hand rail for easy access.

Fig 1

Full height mobile platform

- With the platform at the side of the trailer (Fig 1) shows the accessible area allowing for every procedure to be carried out that requires being on the back of the trailer.
Full height fixed platform

Key Features

- Sturdy and robust fixed into position
- Can be used incorporating exclusion zone.
- Features such as retractable harness are compatible
- Segregates traffic

Tasks that could be done with this platform include

- Attaching/Detaching load restraint for strangle strapping, wide coils etc…
- Removing replacing well boards.
- Sheeting.
- Constructing loads (blocking out)
- Releasing lift equipment.

Safely standing in green zone
**Portable side barrier with Access**

**Key features**
- Puts a barrier up against one side of trailer
- Allows safe access onto trailer through built-in steps.
- Attaches to the trailer for extra rigidity
- Flexibility of the size allows it to be stored out of the way easier

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**Fall Arrest system**

**Key features**
- Allows access to all areas of the trailer
- Fall arrest system prevents fall from height
- Only safe step access required (no platform needed)
Reach equipment

Key features

- Allows Driver/Loader to reach equipment without accessing the trailer.
- Can guide load without being on the trailer.
- Can guide suspended load without coming into contact with it.

Specific Sheeting solutions

Forklift Attachment

- Using boom attached to the forklift.
Specific Sheeting solutions Cont...

Crane operated Sheeting Station

- Layout the sheet underneath the station
- Lower frame
- Attach sheet to frame and raise
- Drive under
- Lower sheet down and attach to trailer

Specific Sheeting solutions Cont.

Enclosed Manual Sheeting Station

- Drive trailer into station
- Fully enclose cage system that connects to side of trailer to eliminate gaps
- Full protection from falling off the trailer while sheeting.
- Safe access built into barrier

Wheels allow cage wall to be easily moved to trailer
Specific Sheeting solutions Cont...

Inflatable Fall Protection

- Allows fall to happen but minimises consequence
Appendix 3 Risk Assessment – Partial Load Restraint

The following process is an example of a risk assessment specifically designed to determine whether material can be transported within a site without applying the full load restraint necessary for transport on the public road. This is reproduced courtesy of BlueScope Steel.

Partial Restraint Assessment - Process Explanation

1. Introduction

Whether to permit partial restraint of loads for short distances has always been a controversial topic. Some areas want to keep truck drivers in their cabs while in the supply or despatch bays. To do this, the load restraint will have to be applied or removed in another location, and the load driven partially restrained for some defined distance.

Moving loads partially restrained carries with it a risk. The level of risk varies with the site geography and interactions, and products involved. It is important to be aware that a partially restrained load is a hazard that has the potential to inflict serious injury or death. So understanding the risk factors and developing controls are essential.

The Partial Restraint Assessment process is ONE TOOL in the process of managing the risks of loading vehicles.

In all risk management exercises, there is a need to balance competing objectives and balance one set of risks against another. However, always remember that wherever possible the risk should be eliminated. In other words, unless outweighed by other imperatives, the load should be fully restrained before moving.

2. What is meant by “Partial Restraint”?

The law requires that all loads carried on public roads be restrained against a prescribed set of forces. The BlueScope Steel Load Restraint Guidelines have been developed to comply with or exceed this standard. Anything less than the BSL Load Restraint Guidelines will be considered as partial restraint.

The term “partial restraint” will be used rather than “unrestrained” because there will be varying levels of restraint allowable depending on the circumstances. Also, even loads that have no chains or straps holding them are restrained to some extent by cradles, packaging, dunnage, gravity and friction.

3. What is the Partial Restraint Assessment Process?

The Partial Restraint Assessment is a tool to help assess the level of risk involved in moving a vehicle with only partial load restraint.
4. The Process of Deciding If and What Partial Restraint System to Use

Completing the Partial Restraint Assessment does not complete the decision or process. It is a tool that forms part of the decision and management process. The broad steps to making a decision to allow partial restraint and then managing the risks are summarised below.

Step 1 - Recognise the potential need for partial restraint
If full restraint in the loading area presents too high a risk to truck driver safety, and/or restricts loading capacity, there is a case for assessing partial restraint as a potential alternative.

Step 2 – Put together one or more proposals
Put together one or more proposals for improvements that include partial restraint movements. It is a good idea if you are working from scratch, to read through the assessment tool. This will give prompts on the things to avoid and design in your proposed systems.

Step 3 - Assess the risk of moving the vehicle with partial restraint.
See detailed explanation of the tool in Section 5 – Detailed description.

Risk factors are grouped into 3 types:

Site layout
Interactions with people and other vehicles
Product factors

Assess each risk type and assign scores.

Combine the risk scores to produce an overall risk score.

Use this score to assess whether partial load restraint procedures are practicable.

It is always advisable to use the calculator, and the thinking behind it, to develop new or improved partial restraint proposals. It becomes necessary to do this when the initially assessed process fails the risk score.
Step 4 – Decide on the best system for loading

Whether or not the score from the assessment indicates partial restraint is acceptable, the result is only data to feed into the final decision or system design.

A decision will have to be made on the best process for loading or unloading at each site. There are several decisions that may need to be made:

1. Deciding which, if any partial load restraint system is allowable, appropriate and best.

2. Importantly, the alternatives should include FULL restraint. (Managing risks to truck drivers in the loading area via other means)

3. Deciding whether to use one standard partial restraint system, or vary by product.

To make these decisions, area management needs to be clear on the objectives they are trying to achieve; the benefits they hope to achieve and the risks they are trying to minimise.
Step 5 – Risk Management

It is the responsibility of site management to manage the risks generated by partial restraint systems. Approval for a partial restraint system is based on site layout and interactions, the product involved, and controls put in place to reduce the risk. Should any of the above change, it must trigger a re-assessment of the system.

To assist with maintaining the above requirements, it is recommended that:

• This risk and its controls are included in the department or site Risk Register.

• The Partial Restraint Assessment document should be filed as part of the controls in the Risk Register. This is because the level of risk accepted in the assessment is completely dependent on controls such as site geography, travel distance, interactions and products handled.
5. Detailed Description of the Risk Types and Factors

The table below lists the risk factors, their scores, and an explanation of why and how to deal how to deal with them.

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Score</th>
<th>Description &amp; Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Site Layout</td>
<td></td>
<td>The straighter the path the better The scores here represent the relative risk of bends. Generally choose the worst case for the site layout score. However, if turning while on a ramp, the score can be cumulative. To keep it simple, all possibilities have not been included. For example, a “flick-flack” or s-bend would score between a bend and a roundabout. The severity would depend on speed, bend angle, distance between the bends. When in doubt, refer to a suitably qualified engineer.</td>
</tr>
<tr>
<td>1.1. Straight line (gentle curve less than 15 degrees)</td>
<td>NIL</td>
<td></td>
</tr>
<tr>
<td>1.2. Curves (less than 45°)</td>
<td>+10</td>
<td></td>
</tr>
<tr>
<td>1.3. Ramp or cross-slope (Noticeable to 1:12)</td>
<td>+20</td>
<td></td>
</tr>
<tr>
<td>1.4. Curve or corner (greater than 45°)</td>
<td>+30</td>
<td></td>
</tr>
<tr>
<td>1.5. Roundabout (except simple left turn of less than 90°)</td>
<td>+60</td>
<td></td>
</tr>
<tr>
<td>Travel distance before full restraint:</td>
<td></td>
<td>The distance travelled presents 2 risks:</td>
</tr>
<tr>
<td>1.6. Less than 100 metres (OR low risk of exceeding walking speed)</td>
<td>NIL</td>
<td>• The further the travel, the higher the speed tends to go.</td>
</tr>
<tr>
<td>1.7. Less than 500 metres (OR likely speed under 20 kph)</td>
<td>+10</td>
<td>• Speeds increasing to 40kph will dramatically increase risk if emergency braking is required.</td>
</tr>
<tr>
<td>1.8. Greater than 500 metres (OR risk of exceeding 20 kph)</td>
<td>+40</td>
<td>The scores for site layout and travel distance are added together because they compound on each other.</td>
</tr>
<tr>
<td>2. Interaction Risks</td>
<td></td>
<td>For each type of interaction there is a large range of possible risk scores. These scores are influenced by:</td>
</tr>
<tr>
<td>During travel from loading to restraint location:</td>
<td></td>
<td>• Frequency/likelihood of interaction</td>
</tr>
<tr>
<td>2.1. Pedestrians - per crossing</td>
<td>+10-20</td>
<td>• Speed of the interacting vehicle</td>
</tr>
<tr>
<td>2.2. Other road vehicles crossing path</td>
<td>+10-20</td>
<td>• Line-of-sight for either party.</td>
</tr>
<tr>
<td>2.3. Forklifts operating in area</td>
<td>+10-40</td>
<td>• The quality of controls in place to manage the interaction.</td>
</tr>
<tr>
<td>2.4. Rail - per crossing point</td>
<td>+10-30</td>
<td>• Whether the person or vehicle is working with the truck. If so, the likelihood of a bad interaction is reduced.</td>
</tr>
</tbody>
</table>

Again, the scores for the different interactions are added because each interaction compounds the risk.
<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Score</th>
<th>Description &amp; Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Product Risk Factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Bore Horizontal Coils:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1. In coil racks (typically equivalent to 0.4g rolling resistance)</td>
<td>+20</td>
<td>Assess all products. Use the highest/worst rated product as the risk score. Product risk numbers DO NOT compound. CAUTION: Be cautious of allowing partial restraint for some products but not others. Unless the procedures and understanding are robust, there is a high potential for confusion and error.</td>
</tr>
<tr>
<td>3.2. On Poly Cradles (very low rolling resistance)</td>
<td>+60</td>
<td>Bore horizontal coils are generally well restrained for short slow moves, especially those in the deep steel racks. Specialist Robbo Racks actually provide full restraint (except or the 0.2g upwards) without further lashings. The exception is poly cradles that provide very little rolling resistance.</td>
</tr>
<tr>
<td>3.3. In Jumbo Racks (designed for partial restraint)</td>
<td>-20</td>
<td></td>
</tr>
<tr>
<td>3.4. In Robbo Racks (designed for minimal restraint)</td>
<td>-100</td>
<td></td>
</tr>
<tr>
<td>B. Bore Vertical Coils:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5. Less than 940 mm high (low risk of toppling)</td>
<td>NIL</td>
<td>Bore vertical coils become higher risk as their height increases. Below 940mm high, these coils will always fail by sliding. Over 1200mm takes the coils into high risk of toppling and therefore fail from the truck.</td>
</tr>
<tr>
<td>3.6. Greater than 940 mm but less than 1200 mm high (medium risk of toppling)</td>
<td>+20</td>
<td></td>
</tr>
<tr>
<td>3.7. Greater than 1200 mm high (high risk of toppling)</td>
<td>+50</td>
<td></td>
</tr>
<tr>
<td>C. Tin Plate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.8. On wooden pallets (nil risk of toppling, medium risk of sliding)</td>
<td>+20</td>
<td></td>
</tr>
<tr>
<td>3.9. On anti-slip material (nil risk of toppling and low risk of sliding)</td>
<td>-20</td>
<td>Bare beams are quite good, but paint reduces the friction.</td>
</tr>
<tr>
<td>D. Welded Beams and Structural:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.10. Normal bare steel surface</td>
<td>+ NIL</td>
<td></td>
</tr>
<tr>
<td>3.11. Painted finish</td>
<td>+20</td>
<td></td>
</tr>
<tr>
<td>3.12. Long lengths (i.e. greater than 12 metres)</td>
<td>+10</td>
<td></td>
</tr>
<tr>
<td>Risk Factor</td>
<td>Score</td>
<td>Description &amp; Explanation</td>
</tr>
<tr>
<td>-------------</td>
<td>-------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>E. Slit Coils and Mini Top Hats:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.13. With plastic wrapped intermediate dunnage or corflute top</td>
<td>+40</td>
<td>Plastic or corflute on the surface of dunnage reduces the friction.</td>
</tr>
<tr>
<td>3.14. On raw hardwood dunnage or timber pallet</td>
<td>+10</td>
<td></td>
</tr>
<tr>
<td>F. Sheet Packs:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.15. On timber pallets or dunnage</td>
<td>+10</td>
<td></td>
</tr>
<tr>
<td>3.16. On steel pallets</td>
<td>+30</td>
<td></td>
</tr>
<tr>
<td>G. Plate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.17. Normal</td>
<td>+ NIL</td>
<td>Plate normally has high friction characteristics steel-to-steel or steel-to-timber.</td>
</tr>
<tr>
<td>3.18. Bisalloy and other low friction plate</td>
<td>+40</td>
<td>There are some exceptions including Bisalloy and stainless steel.</td>
</tr>
<tr>
<td>H. Rod-in-Coil:</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>I. Other:</td>
<td>+ TBA</td>
<td>There are many products not referred to precisely. This is especially the case for incoming goods. It is recommended that these products be referred to a suitably qualified engineer.</td>
</tr>
</tbody>
</table>
An assessment can be documented to consider the scoring and process described above. The summary of the scores can be recorded as shown below:

---

### Site Details

- **Division:**
- **Site:**
- **Despatch Point:**

### Auditor Details

- **Auditor’s Name:**
- **Dept.:**
- **Date:**
- **Telephone:**

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### Results Analysis

1. **Site Layout**
2. **Interaction Risk**
3. **Worst Product**

\[ \square + \square + \square = \square \]

- **up to 90** ⇒ **Risk is acceptable for moving before applying full restraint** *(see Note 1)*
- **91 to 119** ⇒ **Vehicle movement may be allowed with partial restraint**
- **120 or over** ⇒ **Full restraint required** before moving vehicle *(refer to Load Restraint Guidelines)*

Approved by: ___________________________ Date: ________________