Polyethylene Pipe Industry – UK

BEST PRACTICE

Recommended Guidelines for the Safe Delivery and Unloading of Polyethylene Pipes

This guide is intended to provide a risk-based framework to assist with the safe planning, delivery and unloading of polyethylene pipes. By incorporating these best practice precautions into supporting local/site procedures; suppliers, hauliers and customers will be able to focus on the site-specific risks and their control in the prevention of incidents and injuries to employees, contractors and members of the public.

To ensure a safe and trouble free delivery your compliance with these guidelines is requested. Deliveries could be at risk if this industry-approved practice is not followed.

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Contents

1. Foreword by HSE
2. Definitions
3. Summary
4. Risk Assessment
5. Order placement
6. Receiving and unloading pipe deliveries
7. Further guidance
8. Contributors

Appendix 1. Pro Forma Health and Safety checklist

Appendix 2. Driver ‘Customer Hazard Spotting Report’
1. Foreword

It is always a pleasure to welcome an example of good practice in developing safe systems of work. It is a particular pleasure to be able to welcome an example where people from different sectors of industry have come together to work out solutions to a common problem – in this case how to be sure that plastic piping systems may be delivered and unloaded safely to a variety of different sites.

One of the greatest obstacles to managing safe deliveries is lack of communication and cooperation between suppliers and customers. So when I first heard that the Plastic Pipes Industry Forum had convened the whole supply chain to get together to tackle this area of risk, I was delighted and I wished them success in their aim of producing a set of guidelines that all the industries represented in the supply chain would feel able to sign up to. Now the results of their hard work are here, expressed in this document as guidelines that are sensible and in proportion to the risk, clear and easy to follow, and comprehensive to the matter in hand.

I think this is an excellent example of what can be achieved when all parties get together to sort out an issue. I commend these guidelines and this cooperative method of developing them to everyone who receives deliveries of plastic pipes and fittings.

Marcia Davies
HSE Head of Injuries Reduction Programme

December 2008
2. Definitions

For the purpose of this document, the following role definitions apply.

1) “Customer” an individual or company placing an order request for the supply of polyethylene pipes to a defined location of their request.

2) “Supplier” the company receiving an order to supply polyethylene pipes to the specification and quantity of the customer’s request.

3) “Haulier” the company or organisation contracted by the supplier to undertake the delivery of the polyethylene pipes to the specified location, as instructed by the supplier.

4) “Driver” the employee of the haulier who will be responsible for the safe delivery of the polyethylene pipes. Where a hiab is requested, the driver is also responsible for the safe off-loading of the polyethylene pipes.

5) “Lifting Assistant” this is a competent person who can assist by holding a guide rope to stabilise pipes during the off-loading process. Other duties of the lifting assistant may include footing a ladder and carrying out traffic management duties.

6) “Site Responsible Person” this individual has the overall responsibility for Health and Safety on the site.

7) “Pro forma Health and Safety Checklist” is to be completed in conjunction with the end user. This ensures that the delivery process has been carefully thought through, reducing health and safety risks and enhancing the overall delivery performance.
3. Summary

There is a common misconception within the industry that polyethylene pipes are lightweight and thus do not require health and safety controls in order to avoid personal injury.

This guide highlights the precautions that should be followed to control plastic (polyethylene) pipes being delivered, off-loaded and stored safely at customer’s sites. The underlying theme is that polyethylene pipe products should be treated with a similar level of caution and respect as afforded to other similar heavy products.

This industry working-group ‘best practice’ will provide tangible benefits across the complete supply chain. The benefits include; enhanced safety levels throughout the delivery and unloading process and an increase in delivery and unloading efficiency.

All parties engaged in the delivery and unloading process have responsibilities under the Health & Safety at Work Act 1974 & associated legislation. Listed at the end of this document are the General Compliance and Safety Requirements that apply to this process.

A risk-based matrix has been developed below to describe the general dynamic nature of delivery and offloading at customer’s sites and the recommended control measures.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Situation</th>
<th>Control Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Delivering and offloading to a customer’s known main material handling location.</td>
<td>Localised risk assessments, safe systems of work and suitable training provisions.</td>
</tr>
<tr>
<td>Medium</td>
<td>Delivering and offloading to customer’s local operational depots/stores.</td>
<td>Localised risk assessments, safe systems of work and suitable training provisions. For all new depots and stores – customer is to complete a ‘Pro Forma Checklist’. A copy of this is to be forwarded to the supplier. The delivery driver is to complete a ‘Customer Hazard Spotting Report’.</td>
</tr>
<tr>
<td>High</td>
<td>Delivering and offloading to customer’s transient work sites, which could be within the public highway.</td>
<td>Localised risk assessments, safe systems of work, inductions and suitable training provisions. Prior to ordering PE pipes the customer is to complete a ‘Pro Forma H&amp;S Checklist’ (see page 12). A copy of this is to be forwarded to the supplier. Note; upon request a representative of the supplier can assist by carrying out a site inspection.</td>
</tr>
</tbody>
</table>
Any party involved in the unloading activity has the right to stop the process at anytime if they believe there is a risk to safety. Such intervention shall be immediately reported to the named Site Responsible Person and to the haulier. It will be the responsibility of the haulier to report to the supplier.

**PE Pipe Delivery and Offloading**

**4. Risk Assessment**

Depot, site & haulier risk assessments should be documented prior to accepting polyethylene pipe deliveries. The company receiving the pipe delivery are to consider:

- Access and egress to site
- Access to the trailer to remove load securing devices i.e. is this permitted? If it is not permitted then request that the load arrives with strops around the pipe coils and pipe lengths
- SWL and fitness for purpose of slings used in the lifting process
- Traffic management – one way system or road closure to facilitate suitable safe operational space
- Pedestrian management
- Overhead obstructions and height constraints
- Safe zone for off-loading
  - The location for unloading/storage shall be on firm, level ground, free from damaging material
  - Suitability of the off-loading method to the task (if in doubt request a hiab)
  - Ensuring that the off-loading area is of hard standing (vehicle) and that there is adequate room for out riggers to be fully extended without obstructing traffic flow (on-board crane deliveries) typically 6-metre span
- PPE requirements
- Site inductions, to include sharing of risk assessments
- Named Site Responsible Person and trained Lifting Assistant (CPCS or equivalent, see definitions on page 4) and ensuring that there is someone present to witness the off-loading process and sign for the pipe delivery
- Roadside deliveries must be carefully planned to ensure that there is an exclusion zone around the lorry. Traffic management is a major consideration, as pipe must not be unloaded with traffic passing in close proximity to the trailer and the crane operator
- Safe storage provisions
- Emergency procedures
- Fire assembly point
- First aid representatives
- Adverse weather conditions
- Lighting provision

**5. Order Placement**

When placing orders for polyethylene pipe products, the following delivery information should be communicated to the supplier (see the pro forma health and safety checklist for more details).
Off-loading method (hiab or customer off-loading equipment)
Specific arrival instructions
Full delivery address and postcode (site map/photos where possible)
Site/Depot contact name and telephone number (mobile and backup landline number) and an alternative contact name and number
Named Site Responsible Person (if different from the contact name)
Any specific health and safety requirements (PPE, reporting procedures, requirements for pre-slinging loads etc)
Access/Egress constraints e.g. low bridge, narrow lane
Overhead obstructions (including localised height restrictions)
Specific times to avoid (peak traffic, school times etc)
Relevant road closure details
Multi drop requirements; indicate this on a site plan if possible (for stringing out pipe lengths). This is to be agreed at point of order placement

All polyethylene pipes must be mechanically off-loaded. Where there isn't any suitable mechanical off-loading equipment on site, an on-board crane vehicle (hiab) should be requested at the point of order placement, as manual off-loading is not permitted.

The safety of the delivery operation is dependant on the supplier/haulier loading the pipes safely, taking into account the drop sequence and ensuring the load is secured in accordance with the DfT Code.

The receiving customer shall appoint a competent person to oversee the delivery process and to acknowledge receipt of the goods. It is a key safety element that the site responsible person and the driver assess the unloading area and the local environmental conditions, prior to the load being unsecured.

Deliveries will not be made to unmanned sites.

6. Receiving and Unloading Pipe Deliveries

It is the responsibility of the Site Responsible Person to ensure that the site/depot is safe to accept polyethylene pipe deliveries.

On-board crane Off-loading

When there isn't any suitable mechanical off-loading equipment on site, then a hiab vehicle must be requested (at the point of order placement). The hiab operators are familiar with handling polyethylene pipes and are fully trained and certificated to carry out this task. The hiab operator is responsible for the safe off-loading of the polyethylene pipes.
The area where the delivery vehicle is to travel/stop shall be safe. The area shall be flat, free from potholes and be of hard road specification. The location for unloading/storage shall be on firm, level ground, free from damaging material, with suitable access for vehicles and/or cranes. **An exclusion zone (ideally 6m) should be in place to ensure that all personnel and vehicular traffic are kept at a safe distance from the unloading area.** If in doubt, stop and call for advice from the Site Responsible Person.

It is the responsibility of the on-board crane operator to unload the polyethylene pipe products in a safe and controlled manner. Coils must be supported before the securing devices are removed from the coils. In adverse weather conditions, it may be necessary for a Lifting Assistant to stabilise the product that is being off-loaded, using a guide rope(s). This is only permitted if the operation can be carried out safely. The person(s) holding the guide rope(s) shall always maintain a safe distance from the pipe that is being stabilised.

**Other Mechanical Off-loading**

The mechanical off-loading equipment must be suitable to unload the polyethylene pipe products safely. If the mechanical equipment is not suitable for this application, then the off-loading of the goods will not be attempted and the delivery will be aborted. The supplier reserves the right to recover all associated costs for the aborted delivery.

The area where the delivery vehicle is to travel/stop shall be safe. The area shall be flat, free from potholes and be of hard road specification. The location for unloading/storage shall be on firm, level ground, free from damaging material, with suitable access for site unloading equipment. **All personnel and vehicular traffic shall be kept at a safe distance from the unloading area.** The off-loading equipment shall be suitably rated (SWL) and shall comply with relevant regulations (see below).

The delivery driver is responsible for undoing the load securing devices. The securing devices should only be removed from the product that is to be imminently off-loaded. The safety devices should not be removed from coils unless the coils are being supported by the off-loading equipment. **The driver is the only person authorised to access the trailer.** This may be necessary to undo securing devices and to place straps on the products. Mounting the back of the vehicle should be minimised where possible and be in accordance with the hauliers risk assessment. The haulier should provide a safe means of access to the trailer bed.
When the off-loading operation is about to commence, the driver should retreat to a safe area where the off-loading process can be observed. Under no circumstances will it be acceptable for any person to be on the bed of the vehicle when loading/unloading operations are in progress.

It is the responsibility of the person off-loading the goods (crane operator/telehandler driver etc) to ensure that the off-loading process is carried out safely. It is imperative that all other personnel are kept at a safe distance from the off-loading process. Depots and sites should establish an exclusion zone all the way around the trailer. The minimum guide is six metres.

Pipe should be unloaded in a controlled manner; under no circumstances should pipes be pushed or rolled from the vehicle bed.

The haulier’s drivers can feedback important information to the supplier by completing a Customer Hazard Spotting Report (located at the back of this document). This will provide a vital closed loop activity for the supply chain.

**Near Misses and Accidents**

All parties involved in the unloading process have the right to stop any part of the process where there is a risk to safety. This shall be reported to the Site Responsible Person and to the haulier.

In support of local procedures and promoting lessons learned, all Near Misses and Accidents shall be reported, initially, to the Site Responsible Person and then documented in compliance with RIDDOR.

7. **Further Guidance**

Further guidance and information can be obtained from the Health & Safety Executive at [www.hse.gov.uk](http://www.hse.gov.uk) or through HSE Info line 0845 345 0055.

**General Compliance and Safety Requirements**

Everyone on site has a personal responsibility to behave safely, to the best of their ability. Under the Health and Safety at Work Act, employers have duties to protect their employees from dangers to their health and safety, and to protect others who might be affected by the work activity (e.g. passing pedestrians and motorists). Compliance also requires that an on-site risk assessment be carried out to ensure a safe system of working.

On all highways and roads, the person responsible for signing, guarding, lighting and maintaining the works safety, shall follow the statutory booklet “Safety at Street Works and Road Works – A Code of Practice” published by HMSO for the Department of Transport and Local Government. Failure to comply may lead to criminal prosecution in addition to any civil proceedings. More detailed advice and advice on some situations not covered by this code, can be found in Chapter 8 of the Traffic Signs Manual (HMSO) and this gives authoritative advice rather than statutory advice.
Safe transport by road is set out in the Code of Practice “Safety of Loads on Vehicles” published by the Department of Transport. The Lifting Operations and Lifting Equipment Regulations (LOLER) and The Provision and Use of Work Equipment Regulations (PUWER) cover lifting equipment and the operation of lifting. The Working at Height Regulations covers activities above ground level.

IGEM IGE/TD/3 Edition 4 Supplement 1 gives recommendations on best practice for “Handling, transport and storage of PE pipes and fittings”.

HSE guidance (best practice) document “Avoidance of danger from overhead electric power lines”. HS (GS) 6 ISBN 07167613488

HSE guidance (best practice) PDF document “protect yourself, protect the load” Securing loads for safe transport and safe unloading.

8. Contributors to this Agreement

The following organisations contributed to the development of this document, and as such are committed to upholding the principles therein.

- AMEC
- Anglian Water
- Balfour Beatty Utility Solutions
- Chesterfield Ductile Group
- George Allinson Transport Ltd
- HSE/HSL
- GPS PE Pipe Systems
- National Grid
- Radius Systems Ltd
- Saint-Gobain
- Scotia Gas Networks
- Severn Trent Water
- United Utilities
- Wavin Plastics Ltd
- Williams Transport
- Wincanton
## Delivery Pro-Forma Checklist

This form was produced by GPS PE Pipe Systems to help facilitate a safe and troublefree pipe delivery service.

Please complete in full for all direct to site deliveries and return by e-mail to name.name@gpsuk.com or by fax to 01480 458829.

### Delivery Address and Contact Information

<table>
<thead>
<tr>
<th>Main company name</th>
<th>Name of company receiving</th>
<th>Name of developer (if applicable)</th>
<th>Street</th>
<th>City/Town/Area</th>
<th>County</th>
<th>Full postcode</th>
</tr>
</thead>
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**Please note deliveries cannot be made to unmanned sites**

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### Site access and egress

Deliveries are usually on 40-Ft flat-bed trailers - provision of more specialist vehicles needs prior arrangement and is subject to availability. Can the location accommodate:

- 40ft articulated truck and trailer?  **Y/N**
- If no, is a 20ft rigid truck required?  **Y/N**

For deliveries of product lengths >12m and/or with a requirement for hi-ab offloading. Can location accommodate:

- 60ft articulated truck & trailer?  **Y/N**

### Product Handling and Offloading

All pipe product has to be mechanically offloaded. Manual offloading will not be permitted under any circumstances.

<table>
<thead>
<tr>
<th>Is hi-ab offloading required?  <strong>Y/N</strong></th>
<th>If yes, can 6M-wide outrigger legs be accommodated?  <strong>Y/N</strong></th>
</tr>
</thead>
<tbody>
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</table>

### General

Please note deliveries cannot be made to unmanned sites

- Are there any time restrictions on site?  (* these cannot be guaranteed)  **Y/N**
- Please detail any booking in requirements
- Is somebody on site to aid and guide the driver?  **Y/N**
- Are there any access and egress restraints?
- Are there additional PPE requirements other than the standard (hard hat, hi-vis clothing and safety footwear)?
- Please provide any other detail you believe will be useful to help with a safe and efficient delivery

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All deliveries will be undertaken in line with our Recommended Guidelines for the Safe Delivery and Unloading of PE Pipe. Contact our Sales Office on 01480 52121 to receive a copy.
## Industry Forum Customer Hazard Spotting Report

<table>
<thead>
<tr>
<th>Customer Details:</th>
</tr>
</thead>
</table>

**Driver Name:**  
**Haulier:**  
**Date:**

**Is an articulated vehicle suitable to make this delivery?** Y/N. **If no give details.***

**Are there any height or weight restrictions en-route to customer?** Y/N. **If yes give details.***

**Are there any hazards associated with the actual offload?** Y/N. **If yes give details.***

**During offload do you have to park across pedestrian walkways?** Y/N

**Do you have to reverse to offload point?** Y/N

**Do you have to manoeuvre over uneven ground?** Y/N

**Are pedestrians in the vicinity of your vehicle during offload?** Y/N

**Do you believe that the area of offload is sufficiently illuminated?** Y/N

**Are there any areas that you believe safety can be improved on site?** Y/N. **If yes give details.***

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You are required as a delivery driver to complete the above report when you believe that one or more hazards are present, or you are delivering to a new site/depot. This report is to be handed to your Transport Manager, who will then copy and send the original to the supplier for action.