UMBRELLA ENVIRONMENTAL

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Flood Pollution Risk Assessment

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CIWM

Affiliated Organisation 2025

Together, we stand for a world beyond waste

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Terms and Definitions

Not all terms will be used in this document.

Term	Definition
Auditor	Person with the competence to conduct an audit.
Continual improvement	Recurring process of enhancing the environmental management system in order to achieve improvements in overall environmental performance.
Corrective action	Action to eliminate the cause of a detected nonconformity.
Document	Information and its supporting media.
Environment	Surroundings in which site operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation.
Environmental aspect (EA)	Elements of sites activities or products or services that can interact with the environment.
Environmental impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from sites environmental aspects.
Environmental management system (EMS)	Part of sites management system used to develop and implement its environmental policy and manage its environmental aspects.
Environmental objective	Overall environmental goal, consistent with the environmental policy.
Environmental performance	Measurable results of sites management of its environmental aspects.
Environmental policy	Overall intentions and directions of sites related to its environmental performance.
Environmental target	Detailed performance requirement applicable to site or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.
Interested party	Person or group concerned with or affected by the environmental performance of site.
Internal audit	Systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the environmental management system audit criteria set by site are fulfilled.
Nonconformity	Non-fulfilment of a requirement.

Term	Definition
Organisation	Site/Operator
EP	Environmental Permit.
NTS	Non-technical Summary.
ERA	Environmental Risk Assessment.
SCR	Site Condition Report.
EMS_OT	Environmental Management System and Operating Techniques. Compliant with Permit Condition 1.1.1.
FPP	Fire Prevention Plan.
NVMP	Noise and Vibration Management Plan.
OMP	Odour Management Plan.
Appropriate Measures	Appropriate measures are the standards that operators should meet to comply with their environmental permit requirements.
Site	Location of waste activities.
EA	Environment Agency
HSE	Health and Safety Executive
TCM	Technically Competent Manager
FPRA	Flood Pollution Risk Assessment

1 INTRODUCTION

This Flood Pollution Risk Assessment (FPRA) has been prepared in support of an application to vary the existing bespoke environmental permit EPR/TP3602SH/V001 for the waste installation located at Units 21–22 Roman Way, Longridge Road, Preston, PR2 5BB.

The purpose of this FPRA is to identify and assess the risk of pollution arising from flooding of the site and to demonstrate that appropriate measures are in place to prevent, minimise, and manage pollution incidents during flood events. The assessment considers credible flood scenarios relevant to the site's location, including fluvial, surface water, and residual flood risk, in accordance with Environment Agency guidance.

The site is located within a historically industrial unit and operates as a Waste Electrical and Electronic Equipment (WEEE) sortation and waste transfer facility. Activities at the site include the receipt, storage, and treatment of WEEE-derived waste streams, including hazardous plastic fractions containing Brominated Flame Retardants (BFRs) and other Persistent Organic Pollutants (POPs). These substances have the potential to pose a pollution risk if released to the environment during a flood event.

All waste deliveries are subject to a pre-booking system to control input rates and ensure that on-site storage limits are not exceeded. Waste is managed within designated areas and in appropriate containers to reduce the likelihood of escape under flood conditions.

The main operational activity is a WEEE sortation process, utilising purpose-built mechanical plant and density separation equipment to segregate mixed WEEE shredder outputs into defined recyclable streams. Some wastes are accepted and managed solely as part of a waste transfer operation, with no treatment undertaken on site.

This FPRA identifies potential sources, pathways, and receptors associated with flooding and evaluates the likelihood and consequences of pollution. It also details the preventative and mitigation measures in place, including site layout, storage arrangements, operational controls, and emergency response procedures. The assessment demonstrates that the facility can be operated without causing pollution during flood events and that residual risks are reduced to an acceptable level.

The site location is shown on Drawing 1 027.1_09_001 Permit Boundary, supported by an aerial image included within this document.

Figure 1 Site Location (Aerial Photo)

2 FLOOD POLLUTION RISK ASSESSMENT

Permit: EPR/TP3602SH

Flood Zone: Flood Zone 2 (Medium Probability)

2.1 Purpose and Scope

This Flood Pollution Risk Assessment has been prepared in response to the Environment Agency request to:

confirm flood risk has been considered and that environmental risks have been appropriately identified and addressed for Flood Zone 2.

The assessment considers credible flood scenarios relevant to Flood Zone 2 and evaluates the risk of pollution arising from flooding, including where waste is stored outside under cover, in accordance with EA requirements for accident and flood risk assessment.

2.2 Flood Risk Context

- The site is located within Flood Zone 2 (medium probability).
- Official Environment Agency flood mapping has been reviewed (Appendix 1 Flood Map).
- The nearest surface water receptors include ordinary watercourses, ponds, and the River Ribble.
- The site overlies a Principal Aquifer with Secondary A superficial deposits.

Flooding is therefore considered a credible accident scenario requiring assessment.

2.3 Flood Scenarios Considered (Flood Zone 2)

The following flood mechanisms have been assessed as relevant:

- Fluvial flooding during extreme events
- Surface water flooding during intense rainfall
- Local exceedance of drainage capacity
- Combined rainfall and runoff events

Tidal and reservoir flooding are not relevant due to site location.

2.4 Identification of Sources, Pathways and Receptors During a Flood Event

2.4.1 Sources (Pollution Sources Present During Flooding)

Potential sources of pollution during flooding include:

- Hazardous WEEE plastics, including POPs
- Process rejects and filter cake residues
- Stored waste awaiting treatment or dispatch

- Small volumes of diesel and hydraulic oils
- Contaminated surface water, including firewater

Waste is stored:

- Inside buildings, and
- Externally under covered Zapp shelters on impermeable surfaces, where applicable also stored on top of pallets with covers

2.4.2 Pathways (How Pollution Could Occur During Flooding)

Potential pathways during a flood event include:

- Overland flow mobilising contaminants
- Ingress of floodwater into storage areas
- Movement of contaminated surface water into drainage systems
- Infiltration to underlying ground or groundwater
- Off-site migration via surface water networks

Each pathway has been assessed against existing controls.

2.4.3 Receptors (What Could Be Harmed)

Receptors identified include:

- Surface waters (ponds, brooks, River Ribble)
- Groundwater (Principal and Secondary A aquifers)
- Designated ecological sites (SSSI, local nature reserves)
- Adjacent commercial premises
- The wider environment

2.5 Risk of Pollution Where Waste Is Stored Outside

Where waste is stored externally, the following apply:

- Waste is stored only under cover (Zapp shelters or containers)
- All external storage areas are constructed on fully impermeable surfacing
- Surface water is segregated from waste handling areas
- No uncontained waste is stored directly on open ground
- External waste storage locations are subject to daily inspection

2.5.1 Flood Scenario Assessment:

Aspect	Assessment
Probability of waste becoming mobilised	Low
Probability of contaminated runoff forming	Low
Probability of off-site migration	Low
Consequence (with controls in place)	Low
Overall residual risk	Low / acceptable

3 CONTROL MEASURES THAT PREVENT POLLUTION DURING FLOODING

3.1 Physical Control Measures

- Fully impermeable site surfacing across operational and storage areas
- Sealed surface water drainage system
- No open internal drains within processing areas
- Covered storage (buildings and shelters) preventing rain ingress
- Bunded storage for fuels and oils
- Perimeter kerbing providing additional containment
- Emergency surface water isolation / shut-off valve

3.2 Operational Controls

- Waste acceptance limited to permitted waste types and quantities
- Waste stored in designated areas only
- Regular inspection of drainage, surfaces, and containment
- Storage durations minimised
- No waste stored near watercourses or site boundaries
- Housekeeping procedures to prevent debris mobilisation

4 EMERGENCY ACTIONS DURING FLOODING

The following emergency actions are in place to prevent pollution during flooding:

- Registration to Environment Agency flood warning services
- Monitoring of flood alerts and warnings
- Cessation of waste acceptance during flood events where required
- Securing or relocation of vulnerable materials
- Activation of drainage shut-off valve to contain site water
- Isolation of any contaminated surface water on site
- Deployment of spill kits if required
- Notification to the Environment Agency in accordance with permit.
- Removal of waste off-site if necessary following an event

5 RESIDUAL RISK ASSESSMENT

Taking into account:

- Flood Zone 2 classification
- Identification of sources, pathways and receptors
- External waste storage under cover only
- Robust physical containment and sealed drainage
- Defined emergency actions and management controls

The residual risk of pollution during flooding is LOW and acceptable.

Flood risk has been appropriately considered, and suitable measures are in place to prevent pollution during flood events.

Flood Pollution Risk Assessment – Summary Table

Permit: EPR/TP3602SH

Flood Zone: Flood Zone 2 (Medium Probability)

EA Requirement (Point 9)	Assessment Summary	Evidence / Controls in Place
Flood scenarios relevant to Flood Zone 2 identified	Flooding has been assessed as a credible accident scenario consistent with Flood Zone 2, including fluvial and surface water flooding during extreme rainfall events.	EA Flood Map reviewed; flood risk identified in ERA and EMS.
Sources of pollution during a flood event identified	Potential pollution sources include hazardous WEEE plastics (including POPs), process residues, externally stored waste under cover, fuels (diesel), hydraulic oils, and contaminated surface water.	Sources identified in Environmental Risk Assessment and EMS.
Pathways during a flood event identified	Potential pathways include overland flow, mobilisation of surface water, ingress into	Pathways assessed using source-pathway-receptor model in ERA

EA Requirement (Point 9)	Assessment Summary	Evidence / Controls in Place
	drainage systems, and potential infiltration to ground or groundwater.	
Receptors identified	Identified receptors include surface waters (ponds, brooks, River Ribble), groundwater (Principal and Secondary A aquifers), designated ecological sites, adjacent commercial premises, and the wider environment.	.Receptors mapped and listed within ERA.
Risk of pollution where waste is stored outside assessed	Where waste is stored externally, it is fully covered (Zapp shelters or containers) and located on impermeable surfacing with sealed drainage. The risk of pollution during flooding is low.	No uncovered waste stored externally; daily inspections; controlled storage locations.
Assessment of pollution risk during flooding	With controls in place, the likelihood of pollution during flooding is low and the consequence is low, resulting in an overall low residual risk.	Risk evaluation consistent with EA approach.
Control measures to prevent pollution during flooding described	Controls include impermeable surfacing, sealed drainage, emergency drainage shut-off valve, covered storage, bunded fuel storage, waste segregation, and housekeeping procedures.	Physical and operational controls set out in EMS sections.
Emergency actions during flooding described	Emergency actions include monitoring flood warnings, ceasing waste acceptance if required, securing materials, isolating	Flood response included within EMS Contingency Plan and Accident Management procedures.

EA Requirement (Point 9)	Assessment Summary	Evidence / Controls in Place
	drainage, containing surface water on site, deploying spill kits, notifying the EA, and removing waste if necessary.	
Confirmation environmental risks have been identified and addressed	Flood-related environmental risks have been identified, assessed, and mitigated through engineering, operational, and emergency controls appropriate for Flood Zone 2.	FPRA, ERA, and EMS collectively demonstrate compliance for validation.

6 APPENDICES

Appendix 1 Flood Map

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
Unspecified	**358134/432768**	**10 November 2025 16:02**

Your selected location is in flood zone 2, an area with a medium probability of flooding.

This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see https://www.gov.uk/guidance/flood-risk-assessment-standing-advice)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2025 AC0000807064. https://flood-map-for-planning.service.gov.uk/os-terms

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Environment Agency
Flood map for planning
Your reference
Unspecified
Location (easting/northing)
358134/432768
Scale
1:2,500
Created
10 Nov 2025 16:02
Selected area
Flood zone 3
Flood zone 2
Flood zone 1
Flood defence
Main river
Water storage area
0 20 40 60m
Page 2 of 2
Roman Way
N
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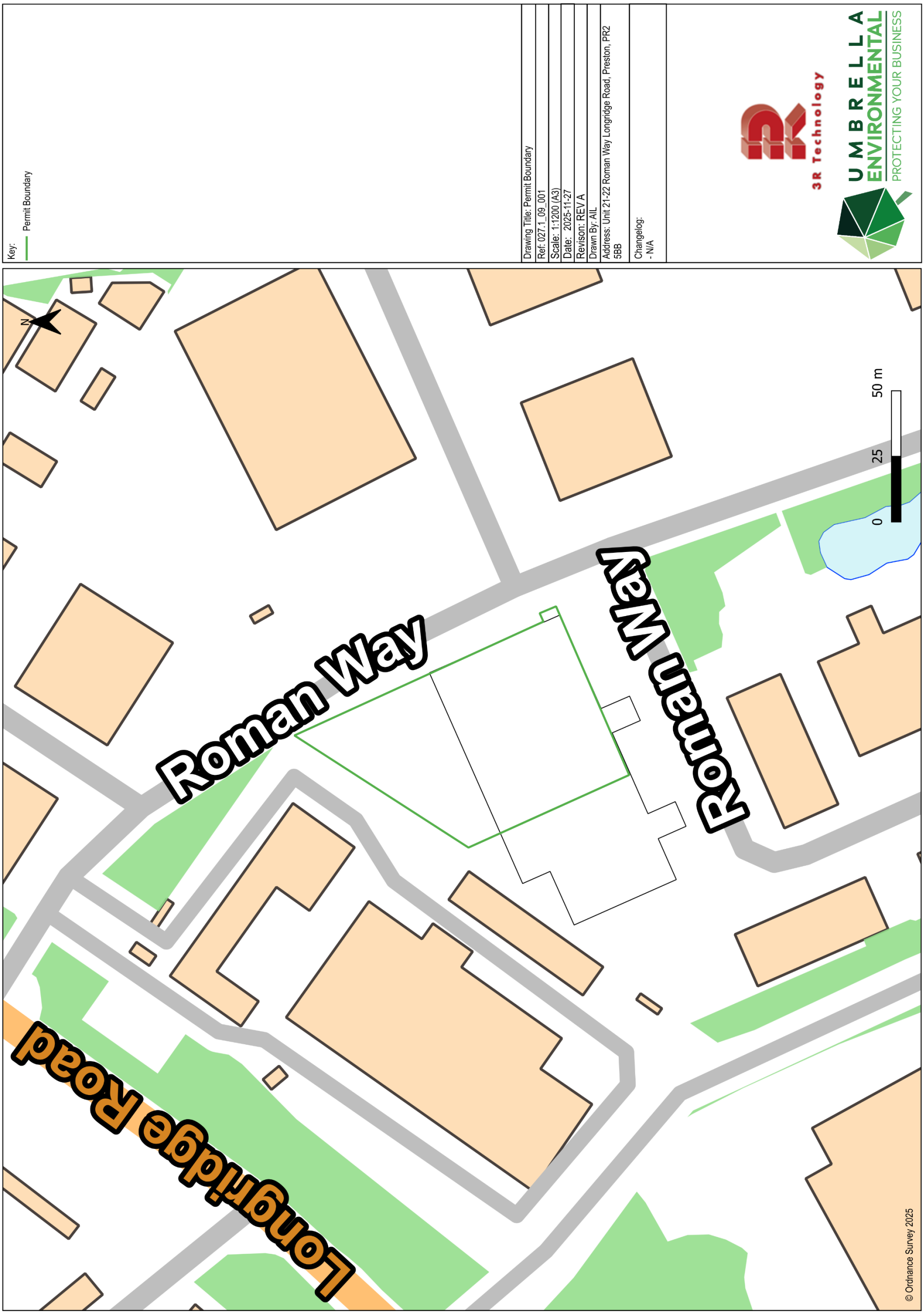
7 DRAWINGS

Drawing 1 027.1_09_001 Permit Boundary



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