

Forklift Proximity Detection

System Selection and Installation Checklist — backwatch.co.uk

Use this checklist when selecting, procuring, or commissioning a proximity detection system for forklifts and powered industrial trucks. Complete at specification stage and again at commissioning.

1 — Site Risk Assessment

- Map all areas where forklifts and pedestrians share space
- Identify fixed high-risk points: blind intersections, dock doors, mezzanine lifts
- Assess pedestrian type: employees (tag compliance enforceable) vs visitors/contractors
- Assess environmental conditions: dust, moisture, low light (affects camera system choice)
- Count vehicles in fleet requiring detection systems
- Identify any V2V risk (multiple forklifts in shared aisles)

2 — System Type Selection

- Tag-based (V2P): appropriate if controlled-access site with enforceable tag-wearing protocol
- Camera/AI: appropriate if open-access site or public visitors — no tag dependency
- Ultrasonic: suitable as supplementary rear coverage; not primary pedestrian detection
- Radar: appropriate for outdoor yard/container handling in adverse weather
- V2I: specify for fixed hazard points regardless of vehicle-mounted system chosen
- V2V: specify if multiple forklifts share aisles or operate in proximity

3 — Detection Zone Specification

- V2P pedestrian detection zone confirmed: typically 3–10m
- V2V vehicle-to-vehicle alert zone confirmed: up to 50m outer / close proximity inner
- V2I infrastructure zone confirmed for each fixed hazard point (10–50m)
- Two-tier alert confirmed: outer caution zone + inner stop zone
- System distinguishes person from static pallet/racking (camera systems: HFR calibrated)

4 — Alert Mechanism

- Operator in-cab alert: audible + visual (not audio only)
- Pedestrian alert: tag vibration + audible alarm (tag-based); signage/strobes (V2I)
- False alarm threshold reviewed and calibrated for site environment
- Nuisance alarm rate tested before full deployment — drivers must not disable system
- Automatic speed reduction integration confirmed if system supports it

5 — Regulatory Documentation

- PUWER risk assessment updated to reference proximity detection as a control measure
- Workplace (H&S;&W;) Regs 1992 Reg 17 traffic route assessment documented
- HSE workplace transport guidance (HSG136) reviewed and controls mapped
- Site RAMS/SSOW updated to reflect proximity system as mandatory control
- System log capability confirmed for near-miss data retention

6 — Commissioning and Training

- System walk-tested at all zones before operational use
- All forklift operators briefed on alert progression and expected response
- Tag issue and checking process established at site entry (tag-based systems)
- Maintenance schedule set: calibration check frequency defined
- Near-miss data review cadence established (monthly minimum)
- System audit trail capability verified for regulatory evidence purposes