From Us to
You in No Time

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**Subject: Speedy Fuels Ltd. Storage Facility – Charvil**

This note has been produced following comments received during the previous application by various parties regarding the proposed Oil storage facility for Speedy Fuels Ltd. Charvil, Reading

The purpose of this note is to provide a more detailed and comprehensive overview of the extensive mitigation systems we have designed for the site. We are confident that these measures, which have been engineered using Best Available Techniques (BAT), not only meet but substantially exceed the standards stipulated in **The Control of Pollution (Oil Storage) (England) Regulations 2001**. Furthermore, our designs adhere to the principles outlined in key industry best practice documents, including the Environment Agency's **Guidance for Pollution Prevention (GPP 2): Above ground oil storage tanks** and **CIRIA Report C736: Containment systems for the prevention of pollution**. Our goal is to ensure the complete prevention of pollution during all operational phases.

Our environmental protection strategy is a multi-layered defence system, incorporating primary, secondary, and tertiary containment, alongside advanced automated monitoring and a robust emergency response plan.

**1. Primary & Secondary Containment: Exceeding Regulatory Standards**

Our core storage infrastructure is designed to be inherently safe, providing the first two layers of defence as required by law, but with significant enhancements.

- **Primary Containment:** All storage tanks are, mild steel units designed and constructed specifically for fuel storage to **BS 799-5:2010** standard. This ensures they meet the requirement of **Regulation 3(1)** of the 2001 Regulations, being "of sufficient strength and structural integrity to ensure that it is unlikely to burst or leak in its ordinary use". They are certified for a minimum 20-year structural life and will be subject to a rigorous maintenance and non-destructive testing (NDT) inspection programme to **EEMUA Publication 159** standards, ensuring their integrity far into the future.
- **Secondary Containment:** Every tank is an integrally bunded unit. This modern design provides a secondary containment system that meets the capacity requirement of **Regulation 3(2)(a)** (not less than 110% of the container's storage capacity). This integrated design is inherently superior to a constructed concrete bund, as it eliminates the risk of leaks through construction joints. In compliance with **Regulation 3(2)(d)**, the bunds' base and walls are not penetrated by any valve or pipe which is used for draining the system. These impermeable steel bunds are protected from vehicle impact by Armco barriers, a best practice measure recommended in **GPP 2**.

**2. Tertiary Containment: Site-Wide Protection (Above and Beyond Regulatory Requirements)**

This layer of protection goes significantly beyond the legal requirements of the Oil Storage Regulations, which focus on the immediate tank area. Our approach follows the principles for tertiary containment detailed in **Chapter 6 of CIRIA Report C736**. In the highly unlikely event of a catastrophic failure of both primary and secondary systems, the entire operational area of the site functions as a sealed tertiary containment system.

- The site will be constructed with a continuous, impermeable surface and membrane, with a 350mm containment kerb around the entire perimeter. This creates a site-wide "basin" capable of containing a major spillage or contaminated firefighting water, a key principle of strategic containment design.
- The surface is precisely graded to channel all rainwater and any potential spillage towards a central, controlled drainage point. This ensures that absolutely no liquid can leave the site without being safely processed.

**3. Advanced Drainage & Automated Failsafe Systems (Best Available Technique)**

All surface water collected by the tertiary containment system is routed through a state-of-the-art water treatment and protection system before discharge, as recommended for high-risk areas in **GPP 2** and **CIRIA C736**.

- The system includes a 20,000-litre full retention interceptor which is fully compatitible with Biofuels and a 300,000-litre attenuation tank.
- Crucially, both units are fitted with **Darcy Draintector alarms**. This automated system provides active, 24/7 monitoring for the presence of hydrocarbons. If any contamination is detected, the system instantly and automatically closes the drain outlet via an inflatable balloon, physically preventing any contaminants from leaving the site. This represents a form of BAT that is far more protective than the passive interceptors often deemed sufficient.
- Upon activation, the system sends immediate alerts (email and text) to key staff and activates an on-site audio-visual alarm. The system is equipped with a battery backup and a manual shut-off valve, providing multiple layers of failsafe protection.

**4. Proactive Spill Prevention and Operational Safeguards**

Our operational processes are engineered to eliminate risk at the point of fuel transfer.

- **Automated Overfill Prevention System:** In accordance with **Regulation 4(4)**, all tanks are fitted with a sophisticated, multi-stage automatic overfill prevention system. This system goes significantly beyond a basic device, providing multiple layers of automated intervention to make a tank overfill highly unlikely. The system comprises:
- **High Level Alarm:** An initial audio-visual alarm (flashing beacon and siren) is triggered when the tank contents reach 80% of their total volume, providing a clear first-stage warning to the operator.
- **High-High Level Alarm & Automated Shut-Off:** If filling continues and the fuel reaches a critical high-high level (set at 450mm from the tank ceiling), a secondary, more urgent alarm is activated. Simultaneously, this triggers an **automated motorised valve** on the tank's fill

line to close instantly, physically stopping the flow of fuel into the tank and preventing a spill without requiring human intervention.

- **Fail-Safe Power Design:** The motorised valves are configured to be "normally closed". This means that in the event of any power interruption, including a site-wide power cut or the deliberate switching off of power at night as part of our site security procedures, all valves automatically default to the closed position. This fail-safe design ensures the tanks are securely isolated, preventing any unauthorised discharge or filling outside of operational hours.
- **Filling Operations:** All fill lines use dry-break/snap-shut couplings to prevent drips and spills. A formal filling procedure is in place, and all equipment is subject to a strict maintenance schedule.
- **Air Quality:** To control Volatile Organic Compounds (VOCs) and odours during filling, all tank breather vents are fitted with **EMCEL Granular Activated Carbon (GAC) filters**. This is a proactive measure of BAT to protect local air quality and prevent odour, which goes beyond the scope of the Oil Storage Regulations.

**5. Vehicle and Fleet Management Safeguards**

In addition to the fixed installation safeguards, our operational procedures for our delivery fleet provide another layer of risk reduction. All delivery tankers parked on-site overnight will not contain bulk stores of fuel. Vehicles are loaded on a daily basis from the bulk storage tanks, taking only the necessary volume for that day's deliveries. If a vehicle returns with any remaining fuel, it will be safely unloaded back into the bulk storage tanks. This procedure eliminates the risk of a pollution incident from a parked vehicle, a significant consideration for overall site safety and environmental protection.

**6. Immediate and Professional Spill Response**

Finally, a comprehensive spill response plan, as part of a site-wide Environmental Management System, will be in effect before operations commence. This includes having a 24/7 emergency response contract with our Group specialist company, Crown Oil Environmental, ensuring expert assistance is always available. The site will also be equipped with spill kits, back-up pumps, and tankers for immediate deployment.

We trust that this detailed overview demonstrates our unwavering commitment to environmental protection. The integrated system of enhanced physical containment, automated failsafe technology, and procedural safeguards has been designed to make any contamination event from our storage highly unlikely, going above and beyond the requirements set out in the regulations.

**Construction phase**

During the construction phase, we will take all reasonable measures to minimise the environmental impact on the surrounding area. To achieve this, we have developed a comprehensive Construction Environmental Management Plan (CEMP) that will be fully implemented.

The CEMP serves as a comprehensive framework designed to proactively eliminate or significantly reduce the risk of environmental damage during the entire construction phase. Its core strength lies in its "prevention-first" approach, particularly concerning water pollution. By installing the site's permanent, sealed tertiary containment, interceptor, and automated drainage shut-off system *before* any major works begin, the plan ensures that no contaminated water can leave the site. This immediately protects surrounding soil and any nearby watercourses from silt-laden run-off or

accidental construction-related spills (e.g., diesel, hydraulic fluid). This single measure is crucial for safeguarding aquatic habitats and preventing contaminants from impacting local flora and fauna that rely on clean water sources.

Beyond water protection, the CEMP establishes strict controls over other potential impacts. The measures for air quality, such as active dust suppression and managing vehicle emissions, are vital for protecting surrounding flora. Preventing a layer of dust from settling on leaves ensures that local plants can photosynthesise effectively, maintaining the health of the local vegetation that provides food and shelter for wildlife. Similarly, the controls on noise, such as adhering to strict working hours and using modern, silenced equipment, are designed to minimise disturbance to local fauna, reducing stress and preventing displacement of species during sensitive periods like breeding or nesting seasons.

Finally, the plan's rigorous management procedures for waste and spill control provide a robust defence against physical and chemical pollution. The use of site hoarding and a formal waste management plan prevents litter from escaping and posing a threat of ingestion or entanglement to animals. The detailed spill response protocols, combined with comprehensive staff training and regular environmental inspections, ensure that any potential incident is managed swiftly and effectively at its source. This systematic, risk-assessed approach means that environmental protection is an integral part of the daily construction process, not an afterthought, thereby ensuring the safeguarding of the local ecosystem and its resident species