BEODD EEUE

by Mark Anthony

This "book" is dedicated to all those people whose lives and livelihoods will be impacted negatively in our pursuit of supposedly cleaner and greener demolition and construction equipment.

Introduction

There are many things I enjoy about working from home and working for myself.

I can come and go as I please. If I want to spend the afternoon fishing or on the golf course, I can do that.

I love not being answerable to anyone. I can write what I like, when I like. I love the constant availability of tea and biscuits. And I love the company of my dogs.

But the best part of my job is that I have time. Time to think. Time to ponder. Time to imagine.

And it was precisely that time that allowed me - inspired me - to write a short series of essays on the likely impact of the impending transition from diesel power to something else: maybe electric; maybe hydrogen; maybe a combination of the two.

If you listen to environmentalists, governments and equipment manufacturers, that transition will be smooth and seamless. The truth, however, is likely to be rather different.

The notion that we will all wake one day to a new diesel-free dawn is, at best, fanciful. At worst, that notion is misleading. The change, when it comes, will be slow and staggered. In all likelihood, there will be slips, trips and false starts on the road to zero emissions.

Furthermore, the switch from diesel to a cleaner energy source will have repercussions beyond the machines, and beyond those who make, own and drive them.

So, having recently seen all the very latest equipment on display at the Bauma exhibition in Germany, I sat down to ponder and to imagine.

The result is Beyond Fuel.

In this short series, we will go beyond the headlines to consider the wider implications of our move away from diesel as the industry's primary fuel source; how it might impact upon equipment manufacturers and on some machine types; how it could destabilise the global trade in used equipment; and how it might exacerbate the existing skills shortage within the demolition and construction equipment sector.

Rarely in my 35 years as an industry journalist has the industry been quite so dynamic; the pace of change quite so rapid.

So I am grateful that I had the time to sit, to think and to ponder.

I hope you enjoy reading, watching or listening to Beyond Fuel as much as I did researching and writing it.

OK. Enough chatter. Let's go Beyond Fuel.

Mark Anthony May 2025

Chapter 1

The Goliath Advantage

For more than a century, diesel power has been the muscle behind the global demolition and construction industry. From remote mine sites in Australia to crowded city centres in Europe, the hum and rattle of diesel engines have signalled progress, productivity, and profit. But that familiar sound is slowly beginning to fade.

In its place comes a quieter revolution: electric and hydrogen-powered machinery. Cleaner, quieter, and potentially more efficient, these machines promise to lower emissions, improve air quality, and reshape how construction and demolition are done.

But behind the environmental promise lies a troubling truth: this transition is not an equal-opportunity event. It favours the giants - Caterpillar, Komatsu, Liebherr, Volvo, Hitachi, XCMG - leaving thousands of smaller equipment manufacturers at risk of being left behind or swept aside entirely.

This is not just an environmental shift. It's a tectonic market shake-up.

Big Tech, Bigger Budgets

The multi-billion-dollar manufacturers that dominate global construction equipment sales are uniquely positioned to lead this green transformation. They have the capital, the scale, and the R&D might to not just adopt clean technologies, but to design entirely new machines around them.

Volvo Construction Equipment, for example, has committed to phasing out new diesel-powered equipment in favour of electric alternatives. Liebherr is trialling hydrogen-powered machinery in Europe. Komatsu and Caterpillar are reimagining machines from the ground up, rather than retrofitted from diesel platforms. These companies aren't just reacting to change, they're orchestrating it.

Why? Because they can afford to.

Developing an electric drivetrain, integrating battery management systems, and optimising machine performance is costly and complex. Building a hydrogen-powered excavator from scratch requires deep pockets, deep partnerships, and a long runway; luxuries most smaller manufacturers rarely enjoy.

The Small Manufacturer's Dilemma

At the opposite end of the spectrum sit thousands of small and mid-sized equipment makers who build everything from site dumpers and skid steers to mini excavators and speciality demolition gear. Many rely on off-the-shelf diesel engines from suppliers like Yanmar, Perkins, Kubota, Deutz, or Cummins. They don't manufacture engines; they integrate them.

These companies often operate on razor-thin margins and tight development cycles. Few have dedicated R&D departments. Fewer still have in-house software teams or battery engineers. Their business model depends on being agile, efficient, and fast to market; not on spending millions reimagining every product line from the ground up.

The transition to electric or hydrogen threatens to derail that model entirely.

If battery-electric power becomes the norm, smaller firms must wait for compatible, affordable, drop-in solutions from engine suppliers, a process that's already lagging behind demand. If hydrogen becomes dominant, they face even greater hurdles: cost, infrastructure, safety systems, training, certification, and component sourcing.

A Shrinking Supply Chain

Engine suppliers themselves are also navigating turbulent waters. Some are investing heavily in hybrid and electric systems; others are hedging, unsure of how quickly markets will shift or which technologies will prevail. The result is a fragmented landscape where small OEMs can't confidently plan for the future.

Even where electric options exist, they may not be suitable. A diesel engine offers robust power in a compact, affordable, rugged form. Replicating that performance in an electric package isn't always possible, especially in niche applications where machines are exposed to harsh conditions, long run times, and brutal power demands.

With limited supply chain options and a growing list of regulatory pressures, many small manufacturers face a bleak choice: innovate or exit.

Market Consolidation in the Making

This is how markets consolidate; not through overt mergers or aggressive takeovers, but by creating conditions where only the biggest survive.

If small and mid-tier manufacturers can't keep pace with regulatory timelines, infrastructure demands, and technological complexity, they risk becoming irrelevant. Customers will gravitate toward suppliers with future-proof products, fleet-wide zero-emission options, and robust service support.

Meanwhile, larger manufacturers will continue to benefit from economies of scale, government grants, regulatory influence, and the ability to shape global standards. They'll set the pace and the tone of the transition. Everyone else will follow or fall behind.

What Happens to Niche Machines?

There's another risk here; more subtle but equally profound: some machine types may simply disappear.

If the economics of electrifying a low-volume, niche machine don't stack up, it may never get redeveloped. That means loss of diversity in the market. It means fewer options for contractors with specific needs. And it means the erosion of the rich ecosystem of machines that make modern construction and demolition possible.

Consider the companies that build truly niche products for very specific applications or for specific geographic markets. Many of these machines are already bespoke, engineered for particular environments. Electrifying them requires re-engineering everything; layout, counterbalance, cooling, hydraulics. For a company making a few dozen units a year, the cost could be prohibitive.

In the name of progress, we risk sacrificing the very machines that make the built world function at its edges.

A Way Forward – But Not Without Help

The danger here is not innovation; it's unequal innovation. The industry must not allow a green transition to become a green monopoly.

There are solutions. Open-source electric drivetrains could be shared across manufacturers. Governments could offer targeted grants to smaller firms, not just industry titans. Collaborative platforms could be formed to develop common electric and hydrogen architectures that reduce cost and complexity for all.

Trade associations, too, have a role to play. By advocating for inclusive standards and resisting one-size-fits-all regulations, they can ensure that innovation doesn't inadvertently crush the very firms that bring agility and diversity to the sector. Finally, engine manufacturers - the traditional linchpins in all of this - must commit to supporting their downstream OEM partners. If they abandon diesel before viable replacements are ready at scale, they risk hollowing out the very market they depend on and that depends upon them.

Progress with a Price

Make no mistake. The shift to clean energy in construction and demolition is necessary. It's overdue. Environmentally and from a sustainability standpoint, it's the right thing to do.

But we must be honest about the consequences. This is not a neutral transition. It's one that heavily favours those with deep pockets, vertical integration, and political influence.

In our drive to decarbonise the industry, we must be careful not to de-diversify it. The market doesn't need fewer players. It needs more collaboration, more support, and more thoughtful policy to ensure the road to zero emissions doesn't become a one-lane highway reserved only for the elite.

Because a cleaner future should not come at the cost of a smaller, less innovative, and less competitive industry.

Chapter 2

The Global Fallout

For decades, a quiet but critical flow of equipment has connected the developed and developing world. In the shadows of headline-grabbing trade deals and climate summits, millions of items of used construction and demolition machinery have moved from Europe, the US, and Australasia to parts of Africa, South America, and Southeast Asia.

These machines - often considered outdated or too emission-heavy for Western markets and tastes - are given second lives in countries where the environmental regulations are looser, the economic constraints tighter, and the need for affordable equipment insatiable.

But this used equipment pipeline - the lifeline that has helped build roads, bridges, homes, and infrastructure in the developing world - is in danger of drying up.

As the West accelerates its shift to electric and hydrogen-powered machines, the consequences will ripple far beyond their own borders. While headlines celebrate zero-emission fleets and futuristic machines, few are asking what happens when there's no longer a surplus of diesel-powered equipment to pass along. Fewer still are examining what happens when developing nations are expected to go green without the infrastructure, investment, or political leverage to do so.

For some, the environmental transition could be an economic reckoning.

A One-Way Supply Chain

Used equipment sales have long been the foundation of affordability and accessibility in lower-income regions. OEMs in the West sell or trade in older machines. Dealers refurbish and export them. End users in developing countries - contractors, municipalities, family businesses - buy them at a fraction of the cost of new equipment.

This system works because it's mutually beneficial. Western nations reduce their equipment stockpiles, meet stricter emissions rules, and generate revenue. Developing countries acquire proven, durable machines that can operate in harsh environments without requiring cutting-edge parts or high-level diagnostic tools.

But as diesel is phased out, and as more machines are built without combustion engines altogether, the inventory of exportable second-hand equipment will collapse. There is no electric or hydrogen machine lifecycle yet. There is no 15-yearold battery-powered excavator ready for resale. The global second-hand market worth billions - is walking blindly toward a dead end.

Green Tech, Grey Realities

In the West, the move to electric and hydrogen is framed as inevitable. Politicians pledge carbon neutrality. Cities declare climate emergencies. Manufacturers launch glossy green product lines with aggressive timelines. Infrastructure, though under pressure, is slowly catching up.

But in many parts of the developing world, these technologies are still impractical. In fact, for many, they are beyond aspirational.

- Electric machines require reliable electricity. In parts of Sub-Saharan Africa, 600 million people still lack access to reliable electrical power. Blackouts are frequent. Rural construction sites can't support overnight charging or multi-megawatt battery banks.
- Hydrogen machines require fuelling infrastructure that doesn't currently exist. Hydrogen is complex to produce, expensive to store, and dangerous to transport. Even the UK, Germany, and the US are struggling to build scalable hydrogen networks. Expecting Kenya, Bangladesh, or Bolivia to do so in parallel is unreasonable.
- Repair and maintenance for clean machines requires diagnostic technology, specialised technicians, and OEM support. Most developing nations don't have service centres equipped to handle lithium-ion faults, inverter failures, or hydrogen leaks.

This isn't just a technology gap. It's a technology chasm.

The Risk of a Two-Tier World

What could emerge is a world divided; not just by wealth, but by machine and by fuel.

On one side: clean, connected, highly-advanced machinery operated in regulatoryrich nations, supported by charging networks, remote diagnostics, and robust supply chains. On the other: a growing void, where used machines disappear, new ones are unaffordable, and legacy equipment becomes harder and harder to maintain.

This two-tier system risks deepening inequality in global development.

Without access to affordable diesel equipment, and without viable alternatives, developing nations could see progress stall. Infrastructure projects may be delayed or abandoned. Local businesses may fold. Municipal services like waste management or road maintenance may suffer.

In effect, the West will have pulled up the ladder it once climbed.

The Circular Economy, Interrupted

It's ironic. Advocates of clean energy often speak in glowing terms about the circular economy: repair, reuse, repurpose, recycle. But the global trade in used diesel machines is arguably one of the most effective examples of that principle in practice.

Machines are used intensively in high-income countries; then they're refurbished and sold to mid or low-income buyers; then they're used for years, sometimes decades, often undergoing multiple life extensions; and then they're stripped for parts or rebuilt again.

This is circularity. It's not glamorous, but it works. And it diverts from landfill, stretches capital investment, and supports local economies.

The shift to electric and hydrogen threatens to break this cycle. Batteries degrade faster than diesel engines. Software licenses may expire. Proprietary components may not be available in the global south. And complex, high-voltage systems may be deemed too dangerous to repair locally.

What happens to an electric excavator with a dead battery in Cameroon? Or a hydrogen-powered loader in rural India when the fuel cell fails? If the answer is "scrap it," then the circular economy has failed its most basic and most crucial test.

The Moral Minefield of Export Bans

Some Western countries are already debating whether the continued export of older diesel machines should be curtailed altogether. From a climate standpoint, it makes sense; why reduce emissions at home only to export them abroad?

But this raises serious ethical questions.

Developing nations didn't create the climate crisis. At least, they did not do so alone. They are still climbing the economic ladder. Denying them the tools that built the modern world, without offering affordable alternatives, smacks of environmental hypocrisy.

If Western governments want to restrict diesel exports, they must accompany those restrictions with support: funding, training, infrastructure, and access to new equipment at fair prices. Otherwise, they are simply outsourcing the consequences of their own success.

Toward an Inclusive Transition

There is a better path; one that acknowledges both environmental urgency and economic reality.

- **Develop tiered technology pathways.** Allow the co-existence of low-emission diesel, hybrid, electric, and hydrogen machines tailored to each region's capabilities and infrastructure.
- **Create global trade incentives.** Rather than banning diesel exports, offer tax breaks or subsidies to companies that refurbish and export low-emission equipment to the developing world.
- **Support parts and service independence.** Open access to software, spare parts, and training to empower local mechanics and reduce reliance on OEMs.
- Fund innovation in off-grid charging and hydrogen solutions. Solar charging trailers, micro-grid energy storage, or modular hydrogen pods could bridge infrastructure gaps.
- **Partner with regional stakeholders.** Listen to the governments, contractors, and businesses on the ground. Let them shape the transition, not merely absorb it.

Who Builds the Future?

The drive toward a clean construction and demolition industry is necessary. But if it is led by the wealthiest, for the wealthiest, with consequences exported to the poorest, then it is not justice. It is green colonialism.

Real sustainability must be global. It must recognise that progress isn't made with mandates and declarations, but with machines in the dirt, steel in the ground, and fuel of some kind in the tank.

If we abandon the developing world in our sprint toward zero emissions, we risk building a greener, cleaner, and deeply unequal future.

The question is not just what kind of machines we build next, but who gets to build with them.

Chapter 3

Vanishing Skills

There is a man - let's call him Mick - who can tell you what's wrong with a diesel engine just by listening to it run for a few seconds. He can smell overheating oil, feel worn injectors through the vibrations in the frame, and fix most faults with a socket set and a stubborn refusal to be beaten. For decades, people like Mick have kept the wheels of the construction and demolition world turning.

But soon, their kind will disappear.

Across the globe, the march toward electric and hydrogen-powered construction equipment is accelerating. We hail this as progress; and in many ways, it is. Cleaner air, reduced emissions, quieter job sites, and smarter diagnostics.

But beneath that gleaming vision lies a silent casualty: a generation of diesel engineers whose knowledge, experience, and instinct cannot be replicated by software or replaced with code.

And as the world moves forward, we may be leaving behind those who built it.

The Art of the Diesel Whisperer

Diesel engineers are more than just mechanics. In many ways, they are interpreters; reading the unique language of combustion, pressure, timing, and friction. They know the sounds of strain, the smells of burning, the feel of imbalance.

They don't plug in laptops: they tune by ear, by hand, by experience.

They've spent years - sometimes decades - learning the quirks of different engines, understanding how machines age, how they fail, and how to bring them back to life. And they've done it in the cold, the rain, the dark, often with limited parts and less-than-ideal conditions.

They are craftsmen. Field doctors. Diesel Whisperers. Warriors with grease under their fingernails and stories etched into every scar on their hands.

But their tools are no longer enough.

A Mechanical World Gives Way to the Sealed Box

Electric machines don't have injectors, timing chains, turbos, or head gaskets. They don't leak oil or overheat coolant in the same way. Instead, they come with inverters, high-voltage circuits, battery management systems, and sealed components.

They break differently, and crucially, they are often designed not to be repaired by independent engineers at all.

The transition to electric and hydrogen propulsion systems shifts the centre of gravity in maintenance from mechanical intuition to software access. The job becomes less about problem-solving and more about code-reading. And if you don't have the diagnostics tool or the OEM's permission, you're locked out.

This is not an evolution of skill. It's a revolution in system access. And revolutions always leave someone behind.

Caught Between Two Worlds

We now find ourselves in a strange liminal period:

- Diesel is no longer the future,
- Electric is not yet the norm,
- And hydrogen remains years away from widespread adoption.

In this in-between hinterland world, many companies still run diesel fleets. But as those machines age and new ones come with electric or hydrogen systems, the gap between what exists and what's coming grows wider.

Young engineers entering the trade will soon not know which skill set to chase. Should they master diesel, which still dominates many fleets? Or should they learn electric systems and risk being under-experienced for the jobs that still make up most of today's workload?

Meanwhile, veteran engineers - those who can rebuild an engine blindfolded - are being subtly pushed aside. Their knowledge is seen as legacy. Their salaries seen as cost centres. Their training seen as sunk investment.

And so we teeter on the edge of a skills vacuum.

When Experience Becomes a Liability

Let's be clear: diesel engineers are not stubborn Luddites unwilling to change. Most would happily upskill if they were given the chance, the tools, and the respect.

But in too many cases, companies see no value in retraining. Why invest in someone nearing retirement? Why waste money bridging the gap when younger, cheaper engineers can "learn digital from day one"?

This short-term thinking ignores two hard truths:

- 1. Electric machines still share common ground with their diesel ancestors hydraulics, undercarriages, final drives, track systems, cooling systems, structural stress all still fail.
- 2. Wisdom takes years to earn. You can teach a new recruit how to replace a sensor. But you can't teach them how to know when that sensor is lying, or how to improvise when the replacement part is two days away and the job has to be done today.

Without those veterans, we risk losing the "unwritten manual" of real-world maintenance; a body of knowledge that lives in the fingertips of seasoned fitters, not in corporate training modules.

Who Will Fix the Fixers?

OEMs increasingly restrict who can maintain or repair their equipment. Proprietary diagnostics, locked-down software, and even physical tamper-proofing mean that independent fitters and in-house mechanics are being frozen out.

This isn't just bad for old-school engineers. It's bad for contractors, bad for productivity, and bad for long-term cost control.

Imagine a world where every issue from a blown fuse to a sluggish actuator requires a factory-certified technician to attend. Imagine fleets sidelined because no one local has the tools or authority to make a simple repair. Now stop imagining. It's already happening.

And while this reality slowly descends upon the West, its effects in the Global South where second-hand diesel machines are still king could be even more disruptive. [See Chapter 2].

If Western fitters are being left behind, technicians in developing countries may not even be invited to the new era.

A Dignified Sunset or a Bridge to the Future?

We face a choice.

We can treat diesel engineers as relics of a dying era; watching them quietly retire or be pushed out with a pat on the back and a cheap clock. Or we can honour their experience, document their knowledge, and empower them to guide the next generation.

Imagine a training centre where veteran diesel engineers pair with young apprentices explaining the why behind every worn bolt and misaligned bearing, even as those same apprentices teach them how to read schematics for EV control systems.

That's a bridge. Anything less is a burn pile.

What We Lose When We Forget Where We Came From

Progress is inevitable. But wisdom is not.

The diesel engine powered more than machines: it powered careers, families, identities. And those who kept them running did more than just fix equipment. They kept sites operational, projects moving, and downtime minimal.

They are not disposable. Their knowledge is not outdated. It is the foundation on which this new era is being built.

So as we chase electric dreams and hydrogen hopes, let us not forget those who still carry spanners, who still know what a rattle in the manifold means, and who still believe that fixing something with your hands is as noble as building it with code.

Because one day, when the lights go out or the software fails, we may need someone who remembers how machines used to speak before they went silent.

Chapter 4

A Beginning Disguised as an Ending

For more than a century, diesel has been the workhorse of the demolition and construction equipment world. Its ubiquity is not just a matter of engineering or economics; it's cultural. Generations of engineers, operators, and manufacturers have grown up with diesel's distinctive roar in their ears and its oily residue under their fingernails. It has powered everything from 1-ton mini diggers to 100-ton dozers, shaping skylines and carving highways across continents.

But that era is coming to a close. Not immediately, but soon...and forever.

Across the three parts of this investigation, we've examined the deep and complex consequences of this transition. The move towards electric and hydrogen power is not merely a technological upgrade; it's a seismic shift in global industrial culture. It will redraw the competitive map of manufacturers, reshape the economies of developing nations, and force a generational rethink of the very skills and tools that keep machinery running.

And yet, the story of diesel's demise is not a story of death. It is a story of transformation, and possibly birth.

A Shift in Power—Literally and Figuratively

In Part One, we explored how the shift to electric and hydrogen technologies is poised to tilt the scales in favour of the industrial titans: companies like Caterpillar, Komatsu, Volvo, and Liebherr. These giants have the resources to redesign machines from the ground up, to invest in research and development, and to absorb the long, expensive runway of bringing new technology to market. By contrast, thousands of smaller manufacturers - those who have long depended on third-party diesel engine suppliers - face a real risk of obsolescence if they can't keep pace.

But even here, there's nuance. Disruption always creates space for new players. In a diesel-dominated world, the market was mature and saturated. Electric and hydrogen represent a frontier; a land grab for those bold or nimble enough to stake a claim. Start-ups, innovators, and niche manufacturers who can master battery management systems, software integration, and zero-emission performance may yet rise to fill the gaps left by those who falter. Just as Tesla redefined the car

industry from a standing start, there is room in this transition for unknown pioneers and unexpected leaders to emerge.

The Global Ripple Effect

In Part Two, we widened the lens to look at how the West's march towards clean technology might inadvertently leave others behind. For decades, the global used equipment market has relied on a trickle-down model. As emission standards tightened in Europe, the US, and parts of Asia, used diesel machines found a second life in Africa, Latin America, Southeast Asia, and beyond. It was an informal but effective redistribution model that gave ageing machinery a longer working life while supporting infrastructure development in emerging economies.

But what happens when there is no longer a flow of used diesel machines to ship abroad? Electric machines are not just expensive, they are context-dependent. They need charging infrastructure, reliable power grids, trained operators, and digital diagnostics. They are, in many ways, the opposite of diesel's plug-and-play universality. Hydrogen, similarly, brings its own challenges: volatility, storage complexity, and a near-total absence of supporting infrastructure in most parts of the world.

Unless we think globally, there is a risk that the West's zero-emissions push could create a two-tier equipment ecosystem where clean machines dominate rich countries and older, higher-polluting equipment continues in use elsewhere simply because no viable alternative exists. We must avoid a scenario in which the global South becomes a technological dumping ground or, worse, is excluded from progress altogether.

The Vanishing Touch

Part Three turned the spotlight onto people - the engineers, mechanics, and fitters whose hands-on expertise with diesel is often taken for granted. These men and women have accumulated thousands of hours of tactile knowledge. They can tune an engine by ear. They know when a turbo is dying by smell alone. Their tools are manual, their instincts sharp, their presence often invisible until something breaks, and then they are indispensable.

Electric and hydrogen machinery, by contrast, will require a new kind of expert. These new machines are as much computer as they are mechanical. Diagnosis will be done via tablets and data logs, not socket sets and spanners. Repair may involve replacing sealed battery units or coded modules. The smell of burning oil will be replaced by the silence of system faults and firmware updates.

The worry is not that new engineers won't rise to meet the challenge. They can, and some will. The worry is that we will lose a whole generation of knowledge in the gap between old and new. Unless we find ways to honour, capture, and transition that wisdom, we risk discarding more than just engines. We risk discarding the craftspeople who made the industry run.

A Chance to Rebuild - Cleaner, Smarter, Fairer

Despite the hurdles, there is much to be hopeful about. The move away from diesel offers a once-in-a-generation opportunity to rebuild the global construction and demolition machinery ecosystem.

We can design equipment that's quieter, cleaner, and safer. We can rethink ownership models, embracing leasing, modularity, and sharing to reduce costs. We can reduce the health impact of diesel particulates on workers and nearby residents alike. And we can begin to decouple economic growth from environmental harm.

But to get there, we MUST plan holistically:

- For manufacturers, this means supporting smaller players with shared technology platforms, open-source control systems, and access to standardised battery or hydrogen modules, rather than locking them out through proprietary ecosystems.
- For the developing world, this means supporting infrastructure development for charging and refuelling, and perhaps even rethinking aid to include technology transfer, training, and affordable access to clean machines.
- For the workforce, it means building bridge programmes where retiring diesel engineers help mentor the next generation of tech-focused fitters, blending the best of analogue and digital.
- And for the industry as a whole, it means resisting the temptation to greenwash. A zero-emissions badge means nothing if the machine is built using exploitative labour, powered by coal-fired grids, or designed for planned obsolescence.

The End of the Road—Or the Start of a New Path?

Diesel will not vanish overnight. It will linger in fleets, especially in remote or infrastructure-poor regions. But its dominance is ending, and what comes next will be different; not just in fuel type, but in design, supply chains, training, and usage.

And that's OK.

Every major transition in industrial history has felt daunting at the outset. The move from steam to internal combustion engines. From analogue to digital controls. From paper blueprints to 3D BIM models. Each time, there have been winners, losers, doubters, and pioneers. But over time, the industry adapts. It always has.

The end of diesel is not a cliff edge. It's a hill; and yes, it's steep. Not everyone will climb it at the same pace; and for some, the climb will prove impossible. But those who do will reach a vantage point from which the future becomes clearer.

Diesel wrote the first chapters of our industry. The next chapters - cleaner, fairer, and filled with promise - are ours to write.

Mark Anthony May 2025