

TRANSPORT SUSTAINABILITY PLAN

2020 - 2024



Aggregate Industries are committed to reducing our transport environmental impacts by utilising rail and ship transport wherever possible for aggregate deliveries.

Using our three quarries with direct rail connection we will maximise the tonnage delivered to our rail terminals and those operated by third parties. Whenever possible we will aim to supply major projects via off loading facilities established for the project.

Aggregates Industries will continue to transport aggregates by ship from our Glensanda quarry to AI and third party operated wharfs. We already use Bennets Barges, a Joint Venture between Chris Livett and A.I., to transport bulk aggregates along the Thames. When feasible we will ship aggregates from South West England via the wharf in Plymouth and Lafarge Cement will ship cement from Cookstown to wharfs on the west and south coasts.

Notwithstanding the above, due to the nature of readymix concrete and asphalt, which have limited workability, these deliveries are restricted to road transport. The main focus of this plan is therefore on road transport.



SCOPE

This transport sustainability plan covers all wholly owned operation of Aggregate Industries including Lafarge Cement.

OVERALL OBJECTIVES : THE “HIERARCHY OF INTENT”

To minimise the environmental and social impact associated with the transportation of our product.

There are 4 main objectives:

- 1. Reduce Pollution**
- 2. Reduce Carbon per Load**
- 3. Reduce Congestion**
- 4. Reduce Incidents**

The overall objectives represent the following outlook, which details a hierarchy of intent as follows:

“When we have to use road, over a transport solution with lower environmental impacts, then minimise the pollution from that road transport. Alternatively, increase the volume per load to improve efficiency with like-for-like environmental impact. The next best course of action is to reduce congestion ; congestion does not improve volume per load, but it causes us to increase carbon usage for the same volume. Similarly, and last in the hierarchy of intent, we should aim to reduce incidents which in turn reduce congestion”

1) ALL ROAD VEHICLES: POLLUTION REDUCTION

1.1 LGV Euro 6 implementation strategy

To improve local air quality standards, Aggregate Industries has embarked on an ambitious project to modernise the core fleet of franchised trucks to Euro 6 compliant vehicles. In Feb 2020 over 74% of this fleet already met these stringent emission standards.

Target 95% compliance by start 2024, with an interim target of 85% by Feb 2022

1.2 Clean Air Zones and London’s Ultra Low Emission Zones (ULEZ) / fleet change strategy

In conjunction with the project to deliver Euro 6 compliance, Aggregate Industries have identified the vehicles which could operate in the cities that have announced the introduction of Clean Air Zones, and in the case of London, the Ultra Low Emission Zone.

A strategic replacement plan for each of these specific vehicles is in place to ensure redeployment or where relevant, disposal of the asset to secure future compliance.

A full briefing-pack has been made available to A.I. stakeholder departments, and is updated monthly, to ensure they understand and can manage our CAZ commitments

Full compliance in current ULEZ and future CAZs as required to ensure commercial business is not affected

1.3 Trial Hydrated Vegetable Oil (HVO)

HVO biofuel is a form of renewable diesel that has been produced from vegetable fats and oils. We intend on working with relevant OEMs (Original Equipment Manufacturers) to trial the use of HVO as an alternative to standard diesel. Those trials are likely to be undertaken at our Battersea London Concrete site, and will be assessed for environmental and commercial benefits.

1.4 Reduced waste through ePoD

The introduction of ePoD (electronic Proof of Delivery) is ongoing during 2020. This will reduce paper usage in the form of delivery tickets and delivery administration, and hence improve waste.

ePoD In place to all Aggregates, Asphalt and Concrete deliveries by end of Q2 2020.

Any parallel running of paper-based systems, alongside ePoD, on Aggregates, Asphalt and Concrete deliveries, to be eliminated by end Q3 2020

Develop a plan for the remainder of the business by Q4 2020

1.5 Third Party Logistics (3PL) / Logistics Partners

Our logistics partners understand that the transport industry plays a major part in releasing emissions into the atmosphere. To ensure our 3PL strategies are aligned to ours, we agree waste reduction targets and continuous improvement systems within their contractual and continuous improvement commitments to Aggregate Industries.

2) REDUCTION IN CO2 PER LOAD DELIVERED

2.1 Transport Modes

To ensure full utilisation of company fixed assets such as harbours, wharves, railheads and depots now and in the future. To select the most efficient mode of transport; ship, barge, rail or road for bulk deliveries of our aggregates and precast concrete products to the customer.

During 2019, we evaluated whether Lafarge Holcim's NetOp tool, managed by the Logistics Excellence team in Switzerland, could optimise A.I.'s strategic sourcing points from its 3 super-quarries, both on a strategic and dynamic level. Although there were some benefits, the costs outweighed the opportunities. However, such ideas will be revisited as and when they become apparent, such as the development of our Economic Source of Supply (ESS) system.

On-going continuous improvement/ review.

2.2 Asphalt, Aggregates & Concrete Road Vehicle appraisal

Our National Logistics Teams' investigate developments in technology and legislation to identify, and where appropriate implement changes to the overall profile of the vehicle type used within the fleet.

For example, LafargeHolcim have introduced a Hybrid-Concrete Mixer truck which we will be evaluating through its operations.

On-going continuous improvement/ review.

2.2.1 Walking floor vehicles

Walking floor trailers are used for the delivery of our aggregates and asphalt products. They offer improved vehicle stability compared to articulated trailers and an increased payload over a standard rigid tipper of 33%.

Currently 31 vehicles, target more than 50 (20 additional trucks) over the next 5 years – Minimum 4 additional per year.

2.2.2 Rear steer vehicles: 26 tonne

For our rural delivery network and customer locations with restricted access, 26-tonne vehicles with improved manoeuvrability (3-axle, 6-wheeler rear steer) are considered wherever possible. These increase the payload compared to traditional 10-tonne (2-axle, 4-wheeler) vehicles by 60%.

Currently 4 vehicles, target based on opportunities to increase Minimix and asphalt tipper trucks depending on local conditions.

2.2.3 Rear steer vehicles: 32 tonne Tridem

For our customer locations with restricted access, 32-tonne vehicles with improved manoeuvrability (4-axle, 8-wheeler rear steer Tridem) are considered wherever possible. These increase the payload compared to traditional 16 tonne (3-axle, 6-wheeler) vehicles by 25%. Additionally, fuel consumption is improved and non-exhaust emissions (from tyres and brakes) are reduced compared to the standard 8x4 configuration.

Currently 6 vehicles, target based on opportunities to increase restricted access sites.

2.2.4 Ready Mix Concrete: 6m³ to 8m³ trucks

In 2014, 75% of the Concrete Division base fleet were 6m³ vehicles, by September 2017, 69% of that same fleet were 8m³ trucks, and by the end of 2018, we achieved 75%. This increased payload capacity by 33%.

Currently 79% of our RMX Concrete base fleet is 8m³ trucks

2.2.5 Articulated 10m³ deployment where possible

Where customer delivery locations allow, wherever possible, articulated Concrete Mixer vehicles will be sourced; these can offer payload advantages of up to 38% compared to a standard 8m³ Mixer.

Strategy by delivery location: Identify appropriate delivery locations and source articulated mixers accordingly.

2.3 All Vehicles and deliveries

2.3.1 Driver monitoring behaviour

The entire franchise and regular vehicle fleet for Tippers and Concrete, is fitted with driver monitoring equipment which provides instant feedback on driver performance for information such as fuel economy, engine idle time and cruise control usage. The data is reviewed and used for training and development to assist the individual hauliers manage their costs to optimal levels.

Although we work with 3-part logistics providers in our Building Products and Cement divisions, we monitor their uptake of driver-monitoring equipment and encourage increased utilisation.

Ongoing facilitation of Haulier awareness of Driving Style behaviour

2.3.2 Maximise Load capacity

We challenge our suppliers to ensure that the procurement of new vehicles affords the best carry-capacity, emission standards, fuel economy, safety compliance and reliability. For example, we have altered the payment structure for specific vehicle types to create the maximum reward to hauliers who obtain industry leading carry capacity ("Minimum Load Capping").

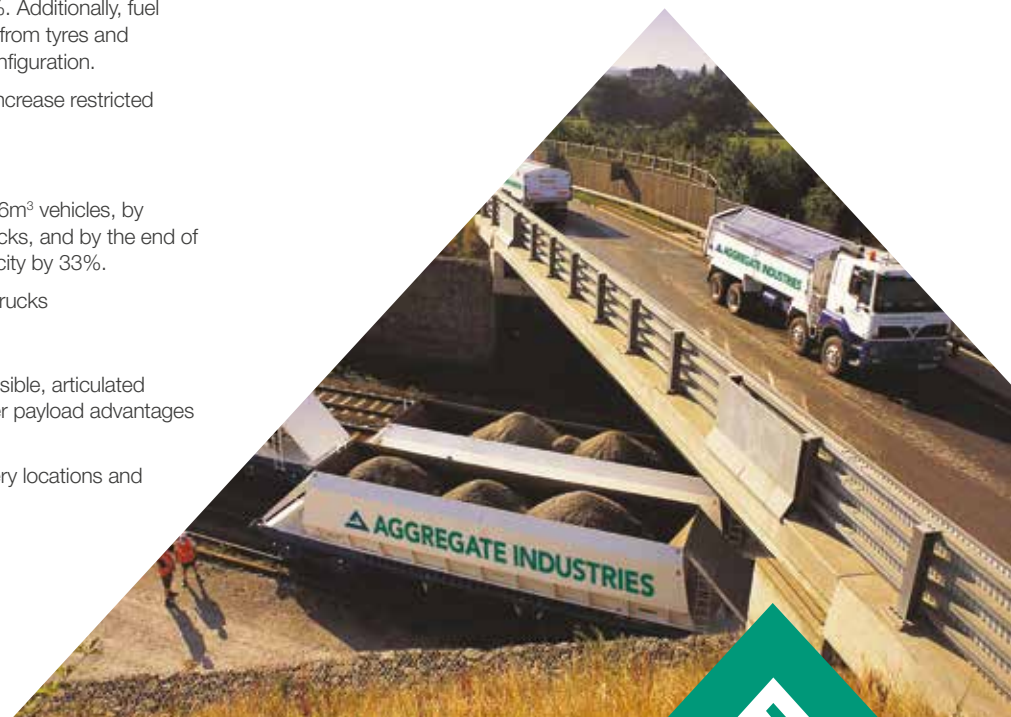
A recent initiative to employ a Fleet Management Partner, to ensure consideration of the Whole Life Assessment of a new vehicle, unfortunately was not viable. However, the procurement advice we give to hauliers ensures they consider factors important to the environmental performance of their new vehicles.

Review and document all Fleet renewal procedures by H2 2020.

2.3.3 3PL/ Logistics Partner

Our major logistics partners participate in industry forums such as the Logistics Carbon Reduction Scheme (LCRS). This strengthens their commitment to tackling climate change not only from their perspective but within the transport industry as a whole.

All of our logistics partners use driver performance monitoring equipment to improve driver performance and the corresponding fuel and maintenance benefits.



3) REDUCTION CONGESTION

3.1 Delivery optimisation

Aggregate Industries allow our franchisee fleet to work from competitors operations. In addition, we load vehicles operated by our competitors. This benefits society in general by reducing congestion and emissions by maximising the loaded miles for the whole sector.

3.1.1 Increase loaded miles: Core fleet

Through the ongoing development of our delivery planning system (DPS) for the Midlands tipper fleet, we aim to increase the vehicle utilisation and proportion of loaded miles travelled. The aim is to make improvements to loaded travelled miles, to reduce the unproductive time and mileage our vehicles spend on the road network. For hauliers the additional motivation comes from maximising utilisation and earnings, so they continue to offer us their services.

For commercial reasons, the DPS will remain in the Midlands for the foreseeable future, so we continue to better understand its capability and develop our people to maximise its output. When we get to a point where we can prove its commercial worth, we will promote its use in other regions.

Where possible, loads will be combined, for example, within the Concrete Division a small number of vehicles able to deliver to multiple locations have recently been added. This delivery mode negates the requirement to return to the production unit to be loaded.

On-going continuous improvement/ review.

3.1.2. 3-PL

Our building materials division work closely with their 3pl's to maximise the opportunity to "pair" loads together which are going to similar locations. Improved communication has improved allowing for the identification of the opportunities to combine products on the same truck.

On-going continuous improvement/ review.

Commercial strategies to target delivery locations that are close to the production units are considered to reduce travel distances, hauliers close to the production units are encouraged to become part of our delivery solution while minimising travel into a production site.

3.2 Satellite tracking

Satellite tracking forms part of the in vehicle monitoring system. This allows our agents to understand the real time locations of the entire fleet. Not only does this enhance customer service, it also allows our agents to assess any delays on the road network, production unit performance and customer off-load frequencies. Here, unnecessary bottlenecks and holdups are avoided by faster and enhanced decision making.

The ePoD system will give us the ability to run reports to identify delivery points which cause the most delays, and hence take appropriate action. Similarly, being able to identify incoming deliveries will allow customers to prepare for their delivery, therefore reducing on-site congestion. Contracting gangs will have confidence of inbound product, meaning they will start their paving earlier, thus reducing site delays.

3.3 LGV Navigation

All core franchise trucks include LGV specific navigation equipment. This ensure vehicles take the most direct route, where sensible (reducing miles), and will help prevent vehicles being driven on inappropriate sections of the road network and the associated local disruption.

3.4 Load optimisation

3.4.1 Fleet profile review/ strategy (Small loads / big loads)

A team of logistics professionals regularly review the overall make-up of the core franchise fleet and compare this to historical deliveries and future order book requirements. Using this data, they use computer modelling to create a fully optimised virtual fleet. The results are analysed and compared against the current and planned profiles to ensure any changes within the fleet will create future optimisation benefits, thus reducing overall vehicle movements for comparable delivery requirements.

On-going continuous improvement/ review.

3.4.2 Satellite tracking

The satellite tracking offers full visibility of vehicle locations to the planning, production and distribution personnel. This allows real time identification of the most suitable vehicle in an area to match to a customer load, thus improving load optimisation.

3.4.3 Delivery time and routing profiles

In line with Government policy, Aggregate Industries is capable of supplying significant volumes of asphalt during the night to the motorways and major trunk roads within the UK highway network, thus keeping these vehicle movements and the disruption of the works in general away from daytime peak traffic. Increasing double-shifting of our franchise fleet is a key strategy: we constantly look for ways to encourage hauliers to double-shift vehicles, traffic volumes and to influence the work profile to allow this.

Where possible, bulk aggregates and powdered tanker materials are delivered overnight to reduce daytime congestion.



4) INCIDENT REDUCTION

4.1 Safety Equipment

Since 2013, all new vehicles added to the core fleet are FORS Silver and CLOCS compliant with respect to safety equipment.

Additional safety equipment fitted as standard to our trucks include all around camera systems for improved visibility of other road users, scanning technology to alert the driver of the presence of a potential hazard in the blind spot areas of the trucks, audible warnings to communicate that the vehicle intends to turn left, and signage. This technology provides safety critical information to the driver, reducing the likelihood of an incident.

Full fleet implementation to all Aggregates, Asphalt and Concrete trucks by 2023.

4.2 In Vehicle Monitoring Technology / driver performance

Since 2018, all tipper Franchise and Regular vehicles are fitted with monitoring technology which displays and reports harsh braking, cornering and acceleration events. Not only do these events have an impact on the fuel economy of the vehicle, they also indicate when the driver uses inappropriate driving techniques. This will enable hauliers to develop targeted training and coaching sessions for specific individuals and ensure that appropriate road manners and behaviour are observed.

4.3 Use of Low Entry Cabs

We have recently developed a Vulnerable Road User Strategy to increase the use of Low Entry cabs in urban environments, which in turn will protect VRUs and reduce incidents.

4.3 Training

As a member of the Minerals Processing Association (MPA) we insist that all the drivers who regularly deliver our product undertake a Vulnerable Road User training course as one of their CPC modules.

In addition, any driver entering our sites is required to attend a site induction. To supplement the MPQC and inductions, we are trialling a Driver Foundation Approval Programme which must be pre-completed before driving for A.I. If successful we intend on rolling this out to all new tipper and RMX drivers.

Periodically, we cascade e-learning subjects to our haulage community, with a view to increasing their safety awareness and thus reduce incidents. We chase to ensure minimum 50% completion rate.

Implement the DFAP for all new tipper and RMX drivers by the end of H1 2020. Thereafter, develop an approach for existing drivers.

4.4 3PL/ Logistics Partner

Our logistics partners are aligned with the safety technology, in vehicle monitoring systems and driver training standards that we manage within the core fleet.



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