

# Mountsorrel Quarry

Operational Update

16th June 2021



# Introduction

- Mountsorrel Quarry is a granite quarry, locally and nationally renowned for its distinctive pink rock, which is in high demand for some of the country's biggest construction projects.
- Granite quarrying has been at the heart of communities in Charnwood for at least 250 years
- Our rail distribution network, based in Barrow on Soar, is the largest in Leicestershire, which means we can transport our rock efficiently and sustainably.
- We employ over 100 members of staff in a variety of roles, including on-the-ground operational jobs and office-based jobs.
- Many members of our team have a personal connection with Mountsorrel Quarry by following decades of family tradition to pursue a career in quarrying.
- We have different generations of family members working together and some who can trace their family connections back through three or four generations.

# Meet the team



**Trevor Warren**  
Works Manager



**Simon Edwards**  
Heavy Mobile  
Equipment  
Manager



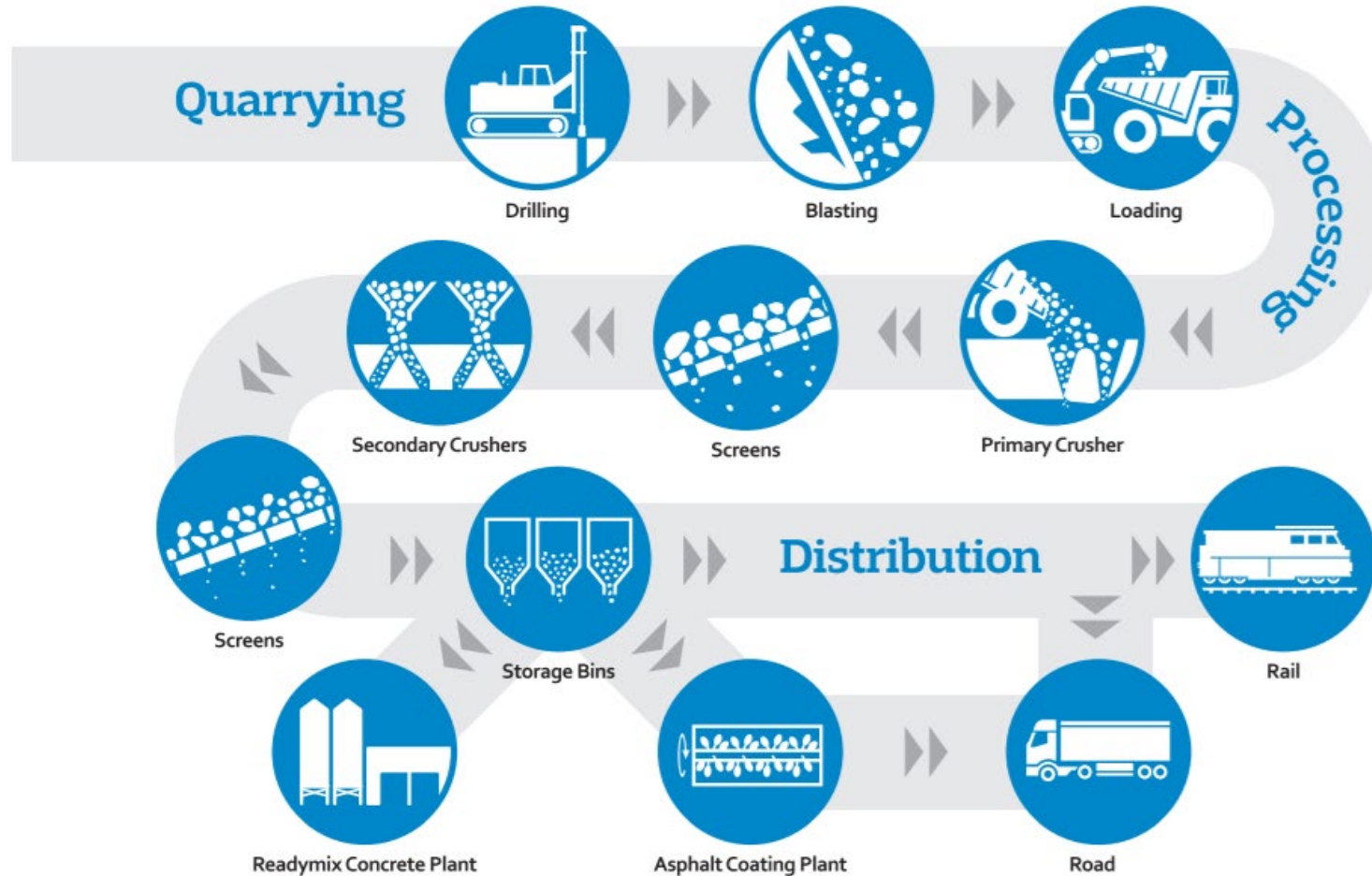
**Mick Stevens**  
Facilities Manager



**Claire Butler**  
PA/Admin



# How a granite quarry operates









# Update on our operations

- During the first lockdown the government announced that people working to maintain air, water, road and rail infrastructure in the fight against COVID-19 were been awarded key worker status
- Completion of overburden placement and soils to Site 4 on the south side of Kinchley Lane. The area has been planted and restoration is in progress to return the land to agricultural use.
- Rock extraction has exclusively been from levels 12-14, which is a haul of >3km from the loading points to the primary crusher. Four new CAT777G dumptrucks were purchased for the longer haul.
- Production reduced to basic hours during 1st lockdown, has progressively increased back to budgeted levels of 4.2Mt for 2021.
- Asphalt plants busy during lockdowns as Highways England maintained roads while available.
- Network Rail demand for rail ballast maintained throughout.



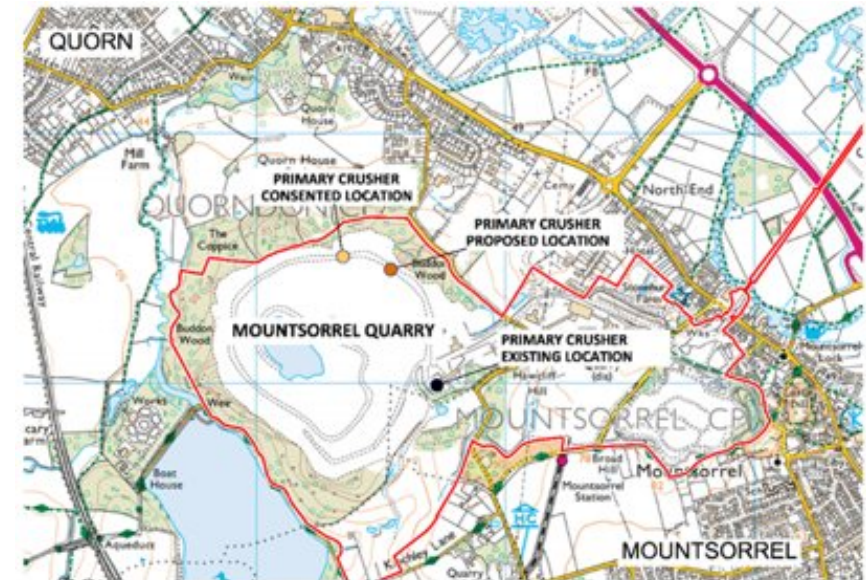


# Primary Crusher



# Revised Position of Primary Station

- Removal of domed surge prompted a review of location
- Proposed to be located 175m from location consented in 2015
- More effective location
- Remains below the rim in the quarry void
- Noise and dust comparable to the 2015 consented arrangement
- Available space to be used to create a temporary store of overburden material and retention of a temporary welfare facility.



# Dust Management

We implement mitigation measures to minimise the potential for dust which have been instated since 2011 through the development of a Dust Management and Monitoring Plan (DMMP) which is approved by LCC and CBC, and reviewed every 5 years.

This includes daily onsite observation and regular monitoring at key receptors (12 outside the site, plus permanent monitoring station for PM10 and PM2.5), with reports sent to LCC and CBC with quarterly reviews of results and action plans.

We constantly strive to minimise dust generating activities. For example:

- Cladding operational equipment
- Grass-seeding soil bunds
- Spraying water on internal haul roads
- The use of foam suppression on key feeders and transfer points.
- Sheet lorries and passing them through wheel washes



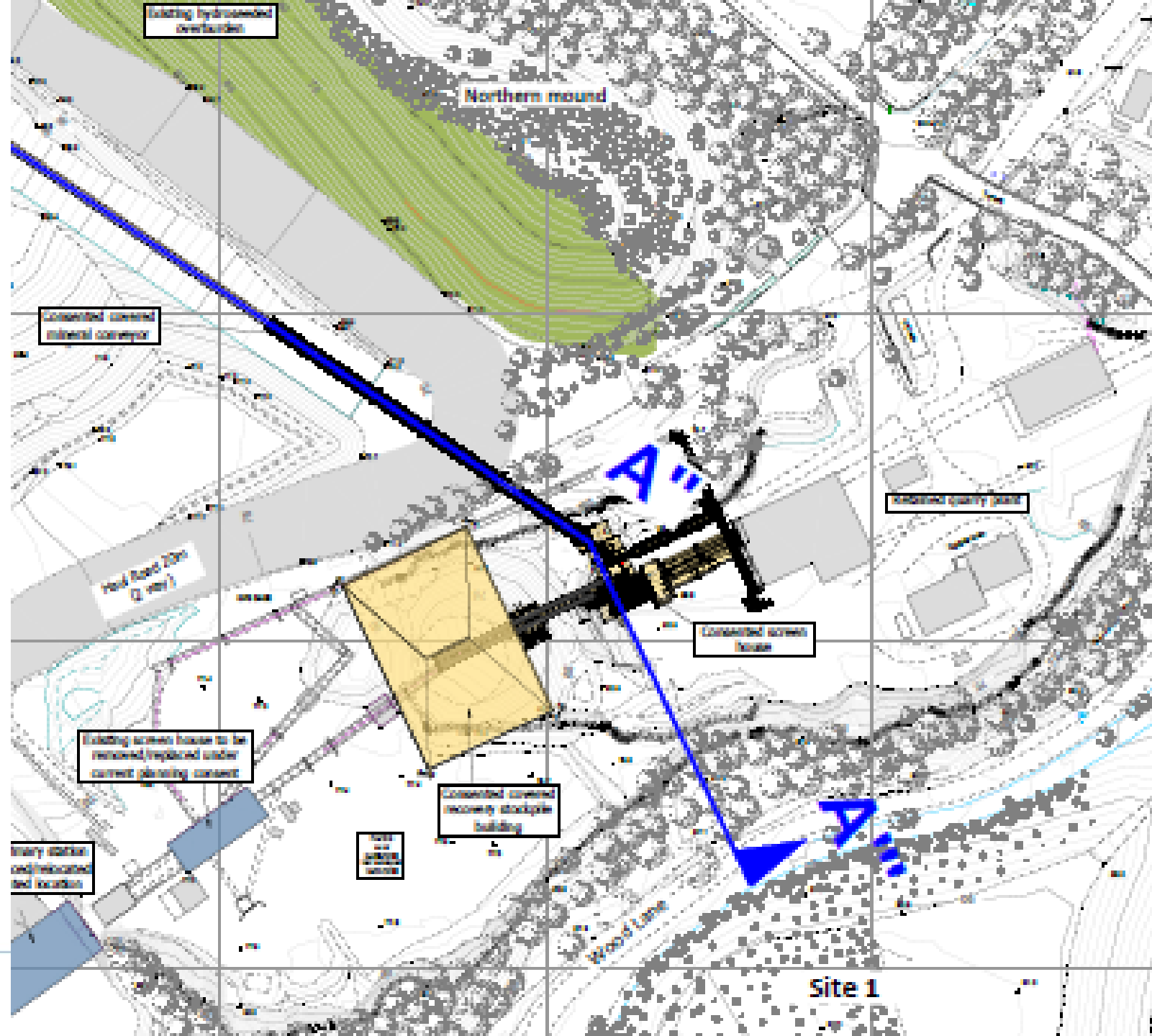


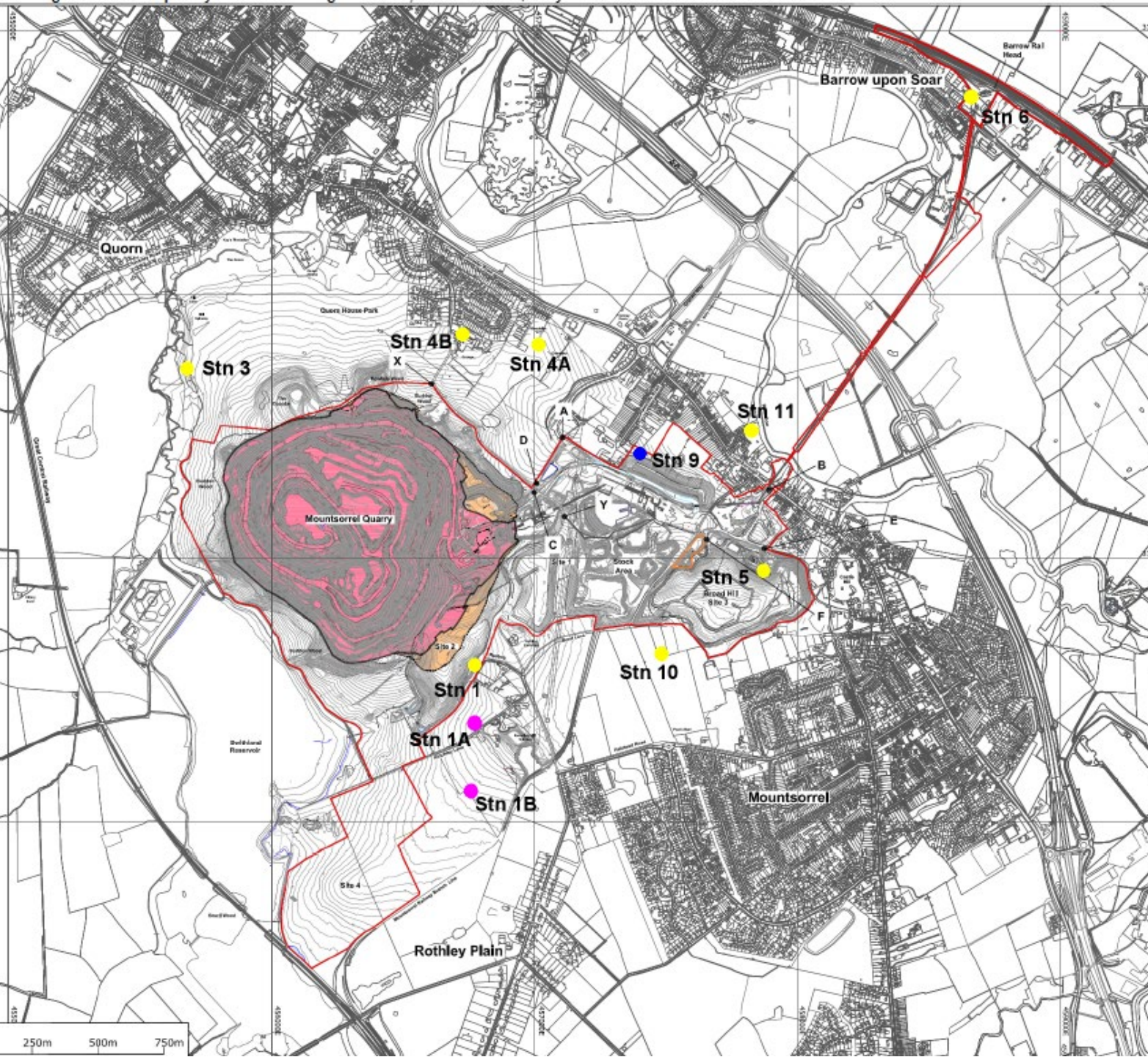
# Dust Management

On windy days it can be difficult to suppress dust generated from rock dropping from the conveyor 20m onto an empty surgepile.

For this reason, the Primary Development Project involves the replacement of the existing plant on the highest point of the quarry. The new plant will:

- Reduce the drop height
- Smaller storage area to be covered.
- Normally send rock direct to the crusher building for processing rather than covered storage





# Dust Map



**PM<sub>10</sub> Alert Level and weather forecast for Mountsorrel Quarry**



**Date: Thursday 03/06/2021**

Time	Wind Direction	Wind Speed	Temperature	Rain	Alert Level
00:00 - 03:00	↖	Calm	14 °C	0 mm	Low
03:00 - 06:00	↗	Calm	16 °C	0 mm	Low
<b>06:00 - 09:00</b>	↗	Light breeze	<b>19 °C</b>	<b>0 mm</b>	High
<b>09:00 - 12:00</b>	↗	Light breeze	<b>22 °C</b>	<b>0 mm</b>	High
<b>12:00 - 15:00</b>	↗	Gentle Breeze	<b>22 °C</b>	<b>0.1 mm</b>	High
<b>15:00 - 18:00</b>	↗	Gentle Breeze	<b>19 °C</b>	<b>0 mm</b>	Likely High
18:00 - 21:00	→	Light breeze	14 °C	0 mm	Likely Low
21:00 - 00:00	→	Light breeze	13 °C	0 mm	Low

Normal weekday operating hours are in **bold**

The overall Alert Level for Thursday 03/06/2021 is predicted to be High. Predicted alert levels for the following three days are shown below.

Date	Alert Level
Friday 04/06/2021	Medium
Saturday 05/06/2021	Medium
Sunday 06/06/2021	Low

Alert Level	PM <sub>10</sub> prediction	Description
Outside Arc	N/A	Receptors not downwind of site
Low	<24 µg/m <sup>3</sup>	Low PM <sub>10</sub> levels predicted. Take normal precautions
Likely Low	<24 µg/m <sup>3</sup>	Low PM <sub>10</sub> levels possible. Take normal precautions
Medium	24 – <40 µg/m <sup>3</sup>	Medium PM <sub>10</sub> levels predicted. Consider extra dust suppression
Likely High	≥40 µg/m <sup>3</sup>	High PM <sub>10</sub> levels possible. Ensure extra dust suppression is in place
High	≥40 µg/m <sup>3</sup>	High PM <sub>10</sub> levels predicted. Ensure extra dust suppression is in place
No Data	N/A	No data available

If you have any questions about these predictions, please feel free to get in touch.

Tel: (44) 1608 810110

E-mail: [info@DustScan.co.uk](mailto:info@DustScan.co.uk)

Web: [www.DustScan.co.uk](http://www.DustScan.co.uk)

# Noise Management

Noise limits imposed under the current planning permission and subject to a Noise Monitoring and Management Plan, which is submitted to Leicestershire County Council and reviewed every 5 years.

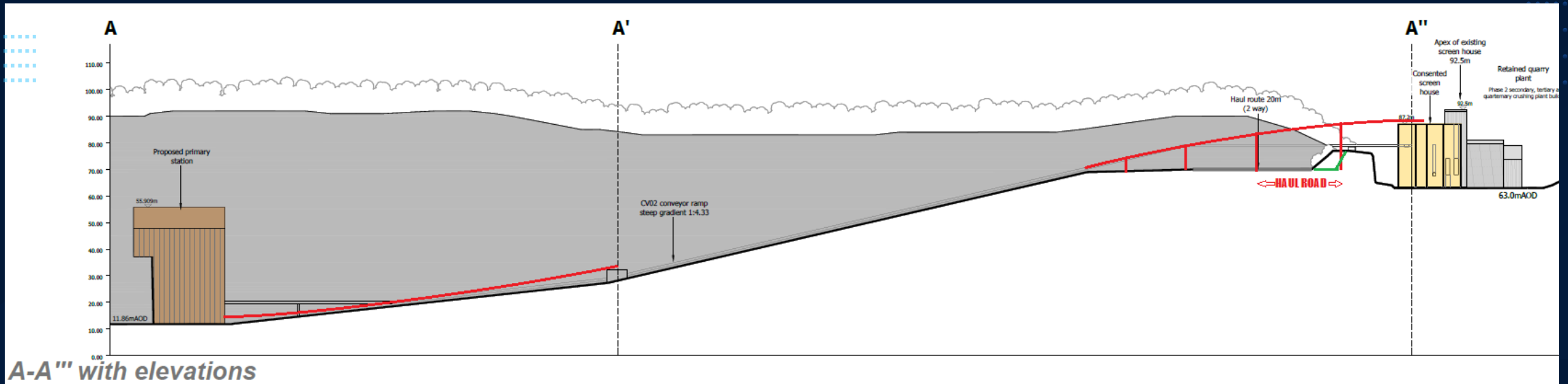
This involves noise monitoring equipment at identified locations in the local area (12 outside the site). Monitoring is carried out quarterly, and the results shared with LCC and CBC for review, along with progress against action plans.

We constantly strive to minimise noise generating activities. For example, in the last year, we have:

- Installed new technology to minimise noise on the Standard Havens asphalt plant during start up
- Completed noise barriers at the loadout points under both asphalt plants
- Installed acoustic guarding on the rail ballast rinsing plant







# Noise Management

- Noise of dumptrucks on the haulroad as they climb above the rim and tip at the primary crusher, has been difficult to mitigate, particularly as we needed to remove mounds to develop the area for the new primary station.
- A key benefit of the Primary Development Project will be the position of the primary station 3 benches below the quarry rim, which means that the dumptrucks will operate 40m below the quarry rim rather than above it.
- The new primary conveyors and screen building will also be below the existing plant and better shielded by existing plant buildings and tree planting.

# Noise Map

Northage  
Close

Woodside  
Farm

Hawcliffe  
Road

Waterside  
Drive

Hugh Lupus  
Court

Crown  
Lane

Rushey  
Lane



# Blasting

- Blasting usually occurs at the site each day between 11:00 and 16:00, however this is typically scheduled for 12:30pm. Should we need to deviate from 12.30, we contact local Parish Council officers and people signed up to our contact database (recent addition).
- Blast vibration limits imposed under the current planning permission and subject to a Blast Vibration Monitoring and Management Plan, which is submitted to Leicestershire County Council and reviewed every 5 years.
- This involves vibrograph monitoring equipment at 4 permanent locations in the local area : Rushey Lane, Mill Farm, Quorn Grange, Swithland Reservoir. A mobile unit is taken to monitor at the nearest affected property to each blast.
- The limits on blast vibrations which travel through the ground are 6mm per second for 95% of blasts and no more than 8mm per second for any given blast.
- Every blast is monitored and the predicted levels, as well as the results, are submitted to LCC monthly.

# Blasting

- Several different energy waves are created during a blast: ground vibration and air vibration.
- The design of a blast minimizes ground vibration as it has the potential to cause damage to buildings.
- A change in air vibration (known as 'air over pressure waves') can make blasts feel bigger than they are.
- Air over pressure waves dissipate with distance and can amalgamate after interference with objects (e.g. quarry faces) or different weather conditions.

Overpressure Effects and Equivalent Units			
dB	psi	kPa	Effect
180	2.90000	20.0000	Structural Damage
170	0.91706	6.3246	Most Windows break
160	0.29000	2.0000	
150	0.09171	0.6325	Some Windows Break
140	0.02900	0.2000	OSHA Maximum for Impulsive Sound
130	0.00917	0.0632	
120	0.00290	0.0200	Pressure produced by 20 mph wind
110	0.00092	0.0063	
100	0.00029	0.0020	
90	0.00009	0.0006	OSHA Maximum for 8 Hours
80	0.00003	0.0002	



# HGVs - Granite Way

- We received a number of complaints from road users relating to spillage of aggregates around the roundabouts.
- Investigation showed that this was resulting from vehicles collecting from site with low sided bodies and sheets designed for waste and similar
- Briefings were given to internal HGV drivers, and also collect customers about keeping loads secure on the public highway.
- No improvement from collect customers so decision taken to load these vehicles to 2t under their capacity.
- Approval has been given to supply a solar-powered radar speed sign which can be mounted on an existing post approaching the first roundabout.
- Wood Lane - discussion with Parish Council regarding the supply of similar sign, subject to LCC Highways approval



# Community Liaison Group

For over 30 years we have worked closely with our local parish councils and other local representatives through our Quarry Liaison Group (QLG).

We care about our surrounding local communities, and through our engagement with the QLG we have continued to protect the welfare of our neighbours while we carry out our work at the quarry.

The QLG meets twice a year to discuss our work and future plans for the quarry. We are in contact with members on a regular basis in between meetings to update them on the latest news from the quarry and to listen to their views.



# Sponsorship and Donations

- Quarry holds monthly meetings to consider sponsorship and donations requests
- Over £20,000 in sponsorship and donations committed to so far in 2021
- Community groups can apply for funding by emailing [mountsorrelquarryfeedback@tarmac.com](mailto:mountsorrelquarryfeedback@tarmac.com)



**Mountsorrel employees give back to local charity**

January 15, 2021



**Tarmac supports Quorn in Bloom**

January 27, 2021



**Tarmac support helps Rothley and Mountsorrel Heritage Centre expand car park**

May 17, 2021



**Tarmac support Barrow in Bloom footpath project**

May 26, 2021



**Mountsorrel Quarry donates PPE to local hospital**

April 8, 2020



**Mountsorrel Quarry donate memorial stone to Woodhouse WW2 Aircrew Memorial Project**

March 4, 2021



**Mountsorrel Quarry donates 400 face masks to the NHS**

April 17, 2020

# Get in touch

**For all enquiries related to the quarry please email:**

[mountsorrelquarryfeedback@tarmac.com](mailto:mountsorrelquarryfeedback@tarmac.com)





**TARMAC**

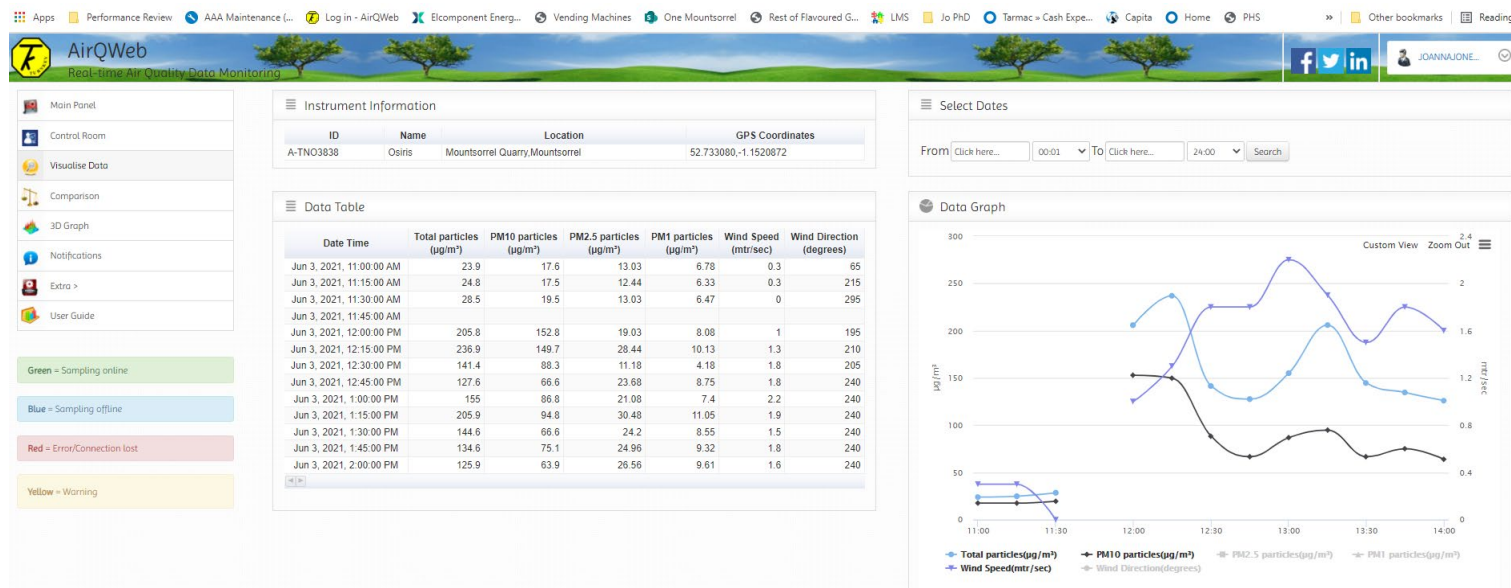
**A CRH COMPANY**



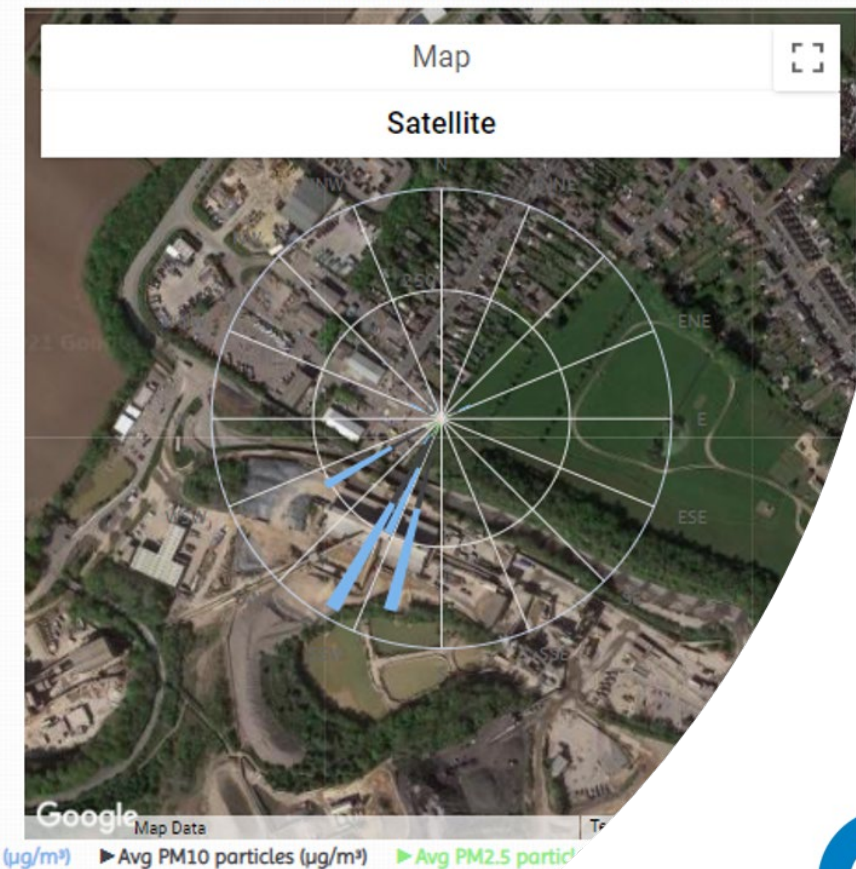


**Insert map of noise / dust monitors / vibration monitors**





Average Wind Rose Chart on Map



# Wood Lane Entrance Works

