UNFCCC RACE TO ZERO – PLEDGE & PLAN

RACE TO ZERO PLEDGE

Declaration of Participation – Community Member Company

Our company recognises the importance of making a full and lasting commitment to reducing the greenhouse gas emissions from our activities, in support of the wider commitment of the world to limit global temperature increases and the impact on the planet.

As a signatory member of the Network Net Zero Community, we commit to the following:

1. For our company to achieve Net Zero in line with the Science Based targets set out by the UNFCCC i.e., to achieve Net Zero no later than 2050 and target a 50% reduction in emissions by 2030.
2. To set realistic short- and long-term targets that are designed to achieve our Net Zero commitments.
3. To report the total Greenhouse Gas emissions of our business regularly and for our performance to be part of the Community's annual reporting back to the UNFCCC.

We acknowledge that our commitment will be reported on the Network Net Zero website.

Magma Moulding Ltd made its pledge to the Race to Zero via the Network Net Zero Community on the 29th March 2022. The record of the pledge can be found at https://www.futurenetzero.com/un-race-to-zero/.

	Year	Potential Year (if ahead of target)
Pledge to be Net Zero	**2050**	
50% Emissions Reduction	**2030**	

Using this baseline carbon footprint and accreditation report along with the support of the Make it Net Zero programme, our recommendation is for Magma Moulding Ltd to continue its plans to create a sustainability policy and Net Zero roadmap which delivers a costed, target led timeline of the decarbonisation of the company which can be shared with all stakeholders to solidify Magma's commitment to reduce its GHG emissions.

This should be completed within the next 12 months and should include the following goals:

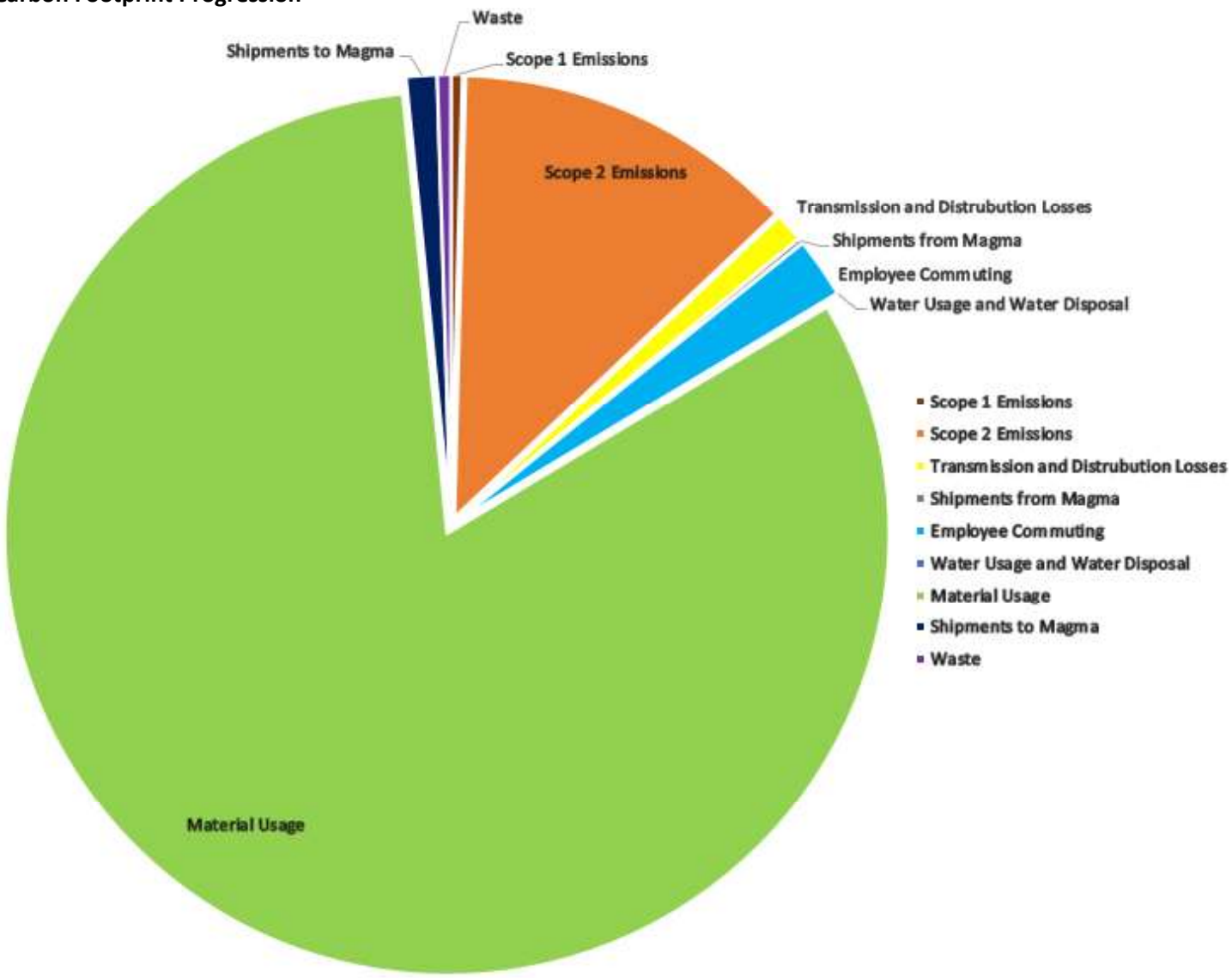
- Continued engagement and training of employees around sustainability and Net Zero.
- Renewable Energy Procurement – buy 100 % renewable electricity contracts when the opportunity arises at end of the current contract.
- Investigate on-site generation.
- Plan to decarbonise heat and eradicate the use of fossil fuels in the operation. Switch to electric heating (Heat pump) and move to an electric forklift.
- Review Scope 3 emissions and look for ways to reduce the most significant ones i.e. materials.
- Engage further with the supply chain, including discussing commitments with sub-contractors who are willing to engage with suppliers that are actively looking to decarbonise their operations.
- Once a full impact measurement is established for all company activities across all scopes and emissions have been reduced as much as possible, the residual should be neutralised with a certified and verified carbon offsetting scheme, but this should be the last mechanism actioned. If offsetting is something that the business wants to do sooner, it should be done in line with mitigation and reduction.

KEY HIGHLIGHTS OF OUR NET ZERO STRATEGY

FUTURE NET ZERO STANDARD - ACCREDITATION REPORT- January 2019 – December 2019

CARBON FOOTPRINT ASSESSMENT

Carbon Footprint Progression



	Benchmark	Year 1	Year 2	Year 3	Year 4	Year 5
CO_2e	1,485,015.2kg					
% Change						

HISTORIC EMISSION REDUCTION PROGRESS DURING THE REPORTING PERIOD

Emissions reduction activity is summarised below:

Emission Reduction	Benchmark Kg of CO2e	Current Kg of CO2e	% Of Carbon Footprint	Change from Benchmark	Previous Year Kg of CO2e	Change from Previous Year
Fuels burnt onsite (Scope 1)	6045.2	6045.2	0.41 %	N/A	N/A	N/A
Purchased Electricity (Scope 2)	186,597.4	186,597.4	12.57 %	N/A	N/A	N/A
Trans. & Dist. (Scope 3)	15,841.8	15,841.8	1.07 %	N/A	N/A	N/A
Material Usage (Scope 3)	1,216,889.7	1,216,889.7	81.94	N/A	N/A	N/A
Shipments to Magma (Scope 3)	16,578.1	16,578.1	1.12%	N/A	N/A	N/A
Employee Commuting (Scope 3)	32,546.2	32,546.2	2.19 %	N/A	N/A	N/A
Shipments out (Scope 3)	2,718.6	2,718.6	0.18 %	N/A	N/A	N/A
Waste (Scope 3)	7,183.4	7,183.4	0.48 %	N/A	N/A	N/A
Water Usage & Disposal (Scope 3)	615	615	0.04 %	N/A	N/A	N/A
Total	**1,485,015.2kg**	**1,485,015.2kg**	**100 %**	N/A	N/A	N/A

Commentary

The data for this audit refers to the facilities located in Plymouth. Regarding Scope 1 and 2 emissions, Magma Moulding Ltd. has 6 energy meters across the site. The electricity consumption and profile is consistent and to be expected based on the sector, the operation and size of the building. We recommend when electricity contract is up for renewal, the company consider buying a 100 % renewable or zero carbon contract. This is an effective and easy first step on the Net Zero journey and will offer significant carbon savings.

The gas usage is split into 2 sections: The relatively small boiler usage for office space heating, and the much higher gas usage from the gas powered forklift. This can be mitigated by leasing an electric forklift. There are also options in the market to buy green gas, however this is currently sold at a premium.
https://www.crowngas.co.uk/green-gas-for-businesses/

Green gas is produced through an AD plant (Anaerobic Digestion). This turns crops, grass, animal waste and other organic matter into gas. This is then injected into the network.
The other alternative would be to replace the gas boiler with either an electric one or an air source heat pump.

All relevant Scope 3 emissions have been calculated for the business, with raw material usage being the highest source of emissions, due to the nature of the business activities. We recommend recycled and renewable raw material sources are investigated, which will enable Magma to significantly reduce their emissions.

Other Scope 3 areas of note are employee commuting, shipments to Magma, (focusing on material shipments), and transmission and distribution losses, all of which are unavoidable. A large percentage of employees already travel to work by green methods, i.e. bus, walking, or cycling. Magma Moulding could review whether incentives for their employees to switch to greener commuting methods like car sharing, would help employees adapt their behaviour. Also investigating on-site generation and energy efficiency projects will aid in reducing transmission and distribution losses. As emissions from material shipments are difficult to reduce, Magma should ensure no material is lost, and look to reduce any scrap produced.

Scope 1 and 2 emission data derived for this section was formulated using data and a sample energy bill provided by Magma Moulding. Scope 3 data was created using the appropriate BEIS conversion figures by the client – these have been checked by SWMAS.

Intensity Metrics	Benchmark Kg of CO2e	Current Kg of CO2e	Change from Benchmark	Previous year	Change from Previous year
Per Employee	33,000.3 Kg	33,000.3Kg	N/A	N/A	N/A
Per £1,000 Turnover	530.4 Kg	530.4 Kg	N/A	N/A	N/A
Per kwh Electricity	2 Kg	2 Kg	N/A	N/A	N/A

Company Overview

Magma Moulding are a production facility, specialising in technical and engineering mouldings. They are also skilled in: In-mould labelling, insert moulding, two shot moulding, and have full automation capability utilising Cartesian and six axis robotics. They add further value to products by offering a full assembly process, state of the art Tampo print, and ultrasonic welding.

During the Audit period Magma Moulding had a FTE of 45.

Action Plan (including short term targets) to reduce carbon footprint and achieve net zero

This audit report covers the whole organisation.

Using this baseline carbon footprint and accreditation report along with the support of the Make it Net Zero programme, our recommendation is for Magma Moulding Ltd to create a sustainability policy and Net Zero roadmap which delivers a costed, target led timeline of the decarbonisation of the company which can be shared with all stakeholders to solidify Magma's commitment to reduce its GHG emissions.

This should be completed within the next 12 months and should include the below inputs.

- Engagement and training of employees around sustainability and Net Zero.
- Renewable Energy Procurement – buy 100 % renewable electricity contracts and consider procuring green gas.
- Investigate on-site generation.
- Plan to decarbonise heat and eradicate the use of fossil fuels in the operation (Gas/LPG). Consider an electric forklift and heat pump.
- Review each Scope 3 emission and look for ways to reduce emissions – prioritising the use of recycled materials.
- Engage further with the supply chain, including discussing commitments with sub-contractors, who are willing to engage with suppliers that are actively looking to decarbonise their operations.
- Once a full impact measurement is established for all company activities across all scopes and emissions have been reduced as much as possible, the residual should be neutralised with a certified and verified carbon offsetting scheme, but this should be the last mechanism actioned. If offsetting is something that the business wants to do sooner, it should be done in line with mitigation and reduction.

By following this approach, it gives a clear and planned methodology to tackle emissions in a calculated way enabling the business to formulate a business plan from an environmental and CapEx perspective.

Our recommendation in the short term would be to focus on the procurement of utilities, ensuring procurement of genuine renewable tariffs which would provide substantial carbon savings.

Magma do not currently have on site generation, we would highly recommend this is investigated. Generation of clean energy at site makes the business less reliant on the energy network. With the surge in wholesale energy prices, the return on investment can be as little as two years and has a big impact on carbon output.

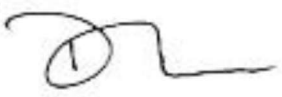
Our final recommendation would be to stress that in our view, carbon offsetting shouldn't be used instead of mitigation. Offsetting is an important part of a Net Zero Strategy if it goes hand in hand with reduction and mitigation. The best strategies are based on cultural change and behavioural shifts, if successfully implemented into an organisation, then carbon savings and cost savings will be apparent.

Assessor's comments

A excellent report with achievable targets in the timeframe that build swell on the previous scopes.

From the report it would appear that the vast majority of emissions are generated by the materials imported to the site for the processes. This appears to be a difficult area to improve performance but developing processes to reduce waste should help. The use of electricity in the manufacturing process is still a major problem, so the need for a 100 % renewable or zero carbon contract is self-evident.

The introduction of an electric forklift and a heat pump should be considered.



Assessor Signature:

Assessor Name: David Roberts
Date: 28th November 2022

Standard and methodology used

Magma Moulding Ltd categorises its Greenhouse Gas (GHG) Emissions as Scope 1, 2 or 3 as referred to in the WBCSD

– WRI Greenhouse Gas Protocol (revised edition, dated March 2014). Emissions in Carbon Dioxide equivalent (CO_2e) for all scopes are calculated using the conversion factors listed in BEIS Greenhouse Gas Conversion Factors for the relevant 12-month period over which the Carbon Footprint is calculated. Procured renewable electricity and gas is calculated in accordance with the WBCSD – WSI Scope 2 Guidance on procured renewable energy (2015).

Data Quality / Confidence

The data used to generate this report has been collected from various sources and converted to CO_2e using BEIS conversion factors. These are recognised under the future Net Zero Standard and accepted as true and fair reflection of the both the units of consumption and the resultant GHG emissions of the reporting firm.

***Scope 3 Emissions**

Magma Moulding Ltd is committed to measure and act to reduce its emissions in all 3 categories. This report reflects the amount of Scope 3 emissions that it has been technically feasible and cost effective to measure and take action against. Magma Moulding Ltd remains committed to work with its entire supply chain to ensure as much of its Scope 3 emissions are able to be accurately measured and to develop actions that target long term reductions in this emissions category.

****** Offsets**

As part of the commitment of Magma Moulding Ltd to target reductions in its GHG emissions and, ultimately, attain Net Zero the company will review and report all offsetting that it enters into. All offsetting options will be considered and reported included, formally certificated schemes (e.g., Gold Standard) as well as more informal schemes. Where offsetting is done against informal schemes, details of the calculation logic will be reported.

Offset schemes (if appropriate)

Scheme name	Details including weblink

Signed on behalf of **Magma Moulding Ltd**

Name: Tony Newbold
Position: Technical & Commercial Manager
Date: 21 Dec 2022

Signed on behalf of **SWMAS**

Name: Paul Gilbert
Position: Net Zero Programme Lead
Date: 21/11/2022

The data in this report has been produced using the CBN Expert dashboard and the figures have been certified under the future Net Zero Standard. The certification and licence number for the period for this report is shown here.

Signed for future Net Zero

Date: 20/12/2022
Name: Sumit Bose
Position: Founder