

NAYLOR

NET ZERO CARBON ANNUAL REPORT 2021/2022



March 2022



“Naylor cares deeply about the environment and we are sharing our journey to net zero carbon with colleagues, as well as customers and suppliers.

We monitor the environmental impact of our sites at every level. Our aim is to continually reduce this impact by increasing energy efficiency and reducing carbon emissions and waste.

We recognise that to achieve net zero by 2050 we need to explore and develop innovative and energy saving technologies.”

A handwritten signature in black ink, reading 'Edward Naylor'. The signature is written in a cursive style with a horizontal line underneath.

EDWARD NAYLOR
CEO Naylor Industries PLC

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NET ZERO CARBON Group Overview

Naylor Industries PLC is proud to share this report detailing progress made towards achieving 'Net Zero Carbon Emissions' for the financial year 2021-2022.

The report shows the performance of each division represented by the volume of greenhouse gases emitted in tonnes of 'CO₂e' (TCO₂e) and a summary of improvements each division has made

The results in tables 1 and 2 on following page, show that the 2021 Green House Gas inventory has fallen by 7.2% from the 2019 baseline. This year has seen reductions in the emissions associated with scope 1 which are onsite combustion sources, company owned transport and scope 2 emissions for electricity consumption. In contrast, the scope 3 emissions, typically characterised as supply chain emissions, have increased in 2021, driven by increases in well-to-tank (WTT) emissions associated with electricity and natural gas.

7.2%

Reduction in group
CO₂e emissions

26.0%

Reduction CO₂e
emissions per tonne
of product made

89.2%

Reduction in
emissions from electricity
consumption

11.0%

Reduction in
scope 1 emissions
across the group



NET ZERO CARBON Group Overview

See table 3 for summary of group emissions with tonnes of CO₂e per tonne of product metric;

Division	Site	2019 GHG Emissions (tCO ₂ e)	2021 GHG Emissions (tCO ₂ e)	Change in Emission (tCO ₂ e)	% Change
Naylor Drainage Ltd		13,380.8	12,152.8	-1,228.0	-9.2%
	Cawthorne Clay	13,229.7	11,992.9	1,236.7	-9.3%
	Methil	151.2	159.9	8.7	5.8%
	Cawthorne NPP	929.6	964.6	34.9	3.8%
Naylor Specialist Plastics		383.4	335.8	-47.6	-12.4%
	Wombwell	225.1	193.8	-31.3	-13.9%
	Tipton	158.2	142.0	-16.2	-10.3%
	Naylor Technical Solutions - Gainsborough	-	23.6	23.6	
Naylor Concrete		286.0	417.3	131.3	45.9%
	Barugh Green	286	256.6	-29.3	-10.3%
	Garforth	-	160.6	160.6	
Total		14,979.8	13,894.0	-1,085.7	-7.2%

Table 1 - Naylor Industries PLC group greenhouse gas emissions 2019 (Baseline) compared against 2021

GHG Emissions Scope	Source	2019 GHG Emissions (tCO ₂ e)	2021 GHG Emissions (tCO ₂ e)	Change in Emission (tCO ₂ e)	% Change
Total Scope 1 Emissions (tCO₂e)		12,119.0	10,791.5	-1,327.5	-11.0%
Total Scope 2 Emissions (tCO₂e)		406.1	43.9	-362.3	-89.2%
Total Scope 3 Emissions (tCO₂e)		2,454.6	3,058.6	604.0	24.6%
Total GHG Emissions (tCO₂e)		14,979.8	13,894.0	-1,085.7	-7.2%

Table 2 - Group Emissions by scope 2019/2021

Division	Site	2019 GHG Emissions Ratio (tCO ₂ e/Production Tonnage)	2021 GHG Emissions Ratio (tCO ₂ e/Production Tonnage)	Change in Emission Ratio (tCO ₂ e/Production Tonnage)	% Change
Naylor Drainage		0.608	0.658	0.050	8.3%
	Cawthorne Clay	0.637	0.731	0.095	14.9%
	Methil	0.122	0.077	-0.044	-36.5%
	Cawthorne NPP	0.087	0.078	-0.009	-10.1%
Naylor Specialist Plastics		0.127	0.126	-0.001	-1.0%
	Wombwell	0.113	0.112	-0.001	-0.9%
	Tipton	0.154	0.151	-0.003	-2.0%
	Naylor Technical Solutions - Gainsborough	-	0.016	0.016	
Naylor Concrete		0.014	0.012	-0.002	-15.2%
	Barugh Green	0.014	0.012	-0.002	-12.7%
	Garforth	-	0.011	0.011	
Total		0.264	0.195	0.069	-26.0%

Table 3 - Comparison between 2019 and 2021 carbon intensity for each division



NET ZERO CARBON

Cawthorne Clay

(Financial Years)	2019	2021
GHG Emission (tCO ₂ e)	13229	11992
Tonnes of CO ₂ e per Tonne product produced	0.637	0.731



Action taken to Reduce Carbon

Lighting

High Volume of lighting replaced with LED - sensors in place in Gardenware and offices



Air Compressor

Main compressor Replaced in late 2021*
£15,000 in reduced electricity bills per annum
A reduction of 119426kw(h) per annum
Saving 25 tons of CO₂ per annum*



New Equipment

Shrink Wrap machine has replaced gas guns – improved efficiency



Other

Kiln Car Improvements – reductions in heat loss

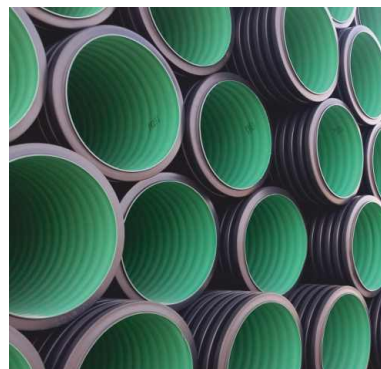




NET ZERO CARBON

Cawthorne Plastic

(Financial Years)	2019	2021
GHG Emission (tCO ₂ e)	929	964
Tonnes of CO ₂ e per Tonne product produced	0.087	0.078



Action taken to Reduce Carbon

Lighting

95% of all lighting is LED -
- utilizing PIR sensors where appropriate



Air Compressor

Main compressor Replaced in late 2021*
£15,000 in reduced electricity bills per annum
A reduction of 119426kw(h) per annum
Saving 25 tons of CO₂ per annum*



New Equipment

Line 2 Extruder and Haul Off on Line 4 converted from DC to AC with inverter drives - improved energy efficiency



Other

Maximising recycled product into product composition ensuring as much recycled material is used as possible





NET ZERO CARBON

Methil

(Financial Years)	2019	2021
GHG Emission (tCO ₂ e)	151	159
Tonnes of CO ₂ e per Tonne product produced	0.122	0.077



Action taken to Reduce Carbon

Lighting

80% converted
to energy efficient
LED
from 500w
to 200w
(PIR where
possible)



Air Compressor

Air leaks
reduced
and
addressed
as part
of PPM's



New Equipment

Heat exchanger and Free chiller/
cooler system upgrade – saved
151173kwh per annum (£19456 p/a)
(From capex)



Other

Water use and discharge reduced – water bath
system now recycles 90% of water instead.
Reducing reliance on mains water





NET ZERO CARBON Tipton

(Financial Years)	2019	2021
GHG Emission (tCO ₂ e)	158	142
Tonnes of CO ₂ e per Tonne product produced	0.154	0.151



Action taken to Reduce Carbon

Lighting



90% of lighting LED with sensors in communal office areas

Air Compressor

100 leaks repaired in last year
Increased frequency of use of sonar technology to trace leaks
Using Fixed system with variable speed as backup
Ducting in place to ensure efficiency of equipment

New Equipment

Extruders were DC & now AC plus Barrel insulation improved



Other

Minimised idling of equipment to reduce energy demand
Improved efficiency of raw material recycling





NET ZERO CARBON Wombwell

(Financial Years)	2019	2021
GHG Emission (tCO ₂ e)	225	193
Tonnes of CO ₂ e per Tonne product produced	0.113	0.112



Action taken to Reduce Carbon

Lighting

100%
LED
with sensors
in communal
spaces



Air Compressor

Report commissioned
and repairs 90%
complete

Ducting in place to
ensure efficiency
of equipment



New Equipment

Replacing 4x inefficient moulders
– saving 309,163kwh per
annum (approx.)



Other

Four-strand dryer for X-filler
(Switch to Vacuum) – saving
12,269kwh per annum (approx.)





NET ZERO CARBON

Barugh Green

(Financial Years)	2019	2021
GHG Emission (tCO ₂ e)	286	256
Tonnes of CO ₂ e per Tonne product produced	0.014	0.012

Action taken to Reduce Carbon

Lighting

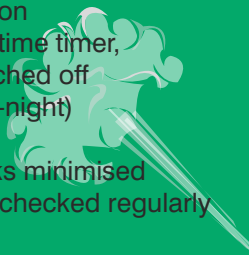
90% of
lighting
converted to
LED



Air Compressor

Used optimally
(set on
day-time timer,
switched off
over-night)

Leaks minimised
and checked regularly



New Equipment

Prensoland 1 – improved production
output and improved energy
efficiency relative to production
output increases



Other

Limpet heating reduced kerosene
demand by 92.5%





NET ZERO CARBON Garforth

(Financial Years)	2019	2021
GHG Emission (tCO ₂ e)	n/a	160
Tonnes of CO ₂ e per Tonne product produced	n/a	0.011



Action taken to Reduce Carbon

Lighting

All of the
Garforth site
has LED
lights



Air Compressor

Leaks identified and repaired regularly
Compressor serviced every year to maintain optimum efficiency
Screw compressor – more efficient compared to piston
Turned off when not in use
Waste warm air used to heat aggregates
AC driven - most efficient available

New Equipment

Propane heating system optimised to improve curing times and energy efficiency



Other

Roller Doors kept shut to retain heat
Machines all turned off during break and at end of shift (Only mixers required to stay on)





NET ZERO CARBON

Gainsborough

(Financial Years)	2019	2021
GHG Emission (tCO ₂ e)	n/a	23
Tonnes of CO ₂ e per Tonne product produced	n/a	0.016

Action taken to Reduce Carbon

Lighting



Bottom shed full LED
- looking to implement LED in top shed

Air Compressor

New efficient 'screw' air compressor installed



New Equipment

New more efficient air compressor installed



Other

Sales personnel use Hybrid cars

Machines all turned off at break and at end of shift

All doors and windows including insulated roller shutter doors to be replaced by property owner



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