

Willerby

L A N D S C A P E S



Willerby Landscapes Ltd. Carbon Footprint Report 2022

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Date: June 2024

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PURPOSE OF REPORT

The purpose of this report is to highlight and detail the Carbon Footprint of Willerby Landscapes Ltd, for the year 2022. This report will be used as a comparison for subsequent years and will analyse how Willerby Landscapes yearly carbon emissions have changed in comparison to the figures presented in this report.

Please note, this report has been written retrospectively, in May 2024 and published in June 2024, therefore some reference may be made to 2022 and after.

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16/07/2024

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INTRODUCTION

Willerby Landscapes have committed to the following Science Based Target:

- 42% reduction of Scope 1 and Scope 2 emissions by 2030 from a 2020 baseline.
- Monitor and Reduce Scope 3 emissions.

Willerby Landscapes consider these targets to be a minimum requirement and strive to exceed the reduction target. Whilst the target states 42% reduction of Scope 1 and Scope 2 emissions combined, Willerby Landscapes have also targeted a 42% reduction of each scope individually as well to ensure that, although Scope 1 emissions will be the priority, Scope 2 emissions are not ignored.

Additionally, although Scope 3 emissions do not have a baseline figure, nor is there a reduction target, the Scope 3 emissions will be reviewed, recorded and will be reduced as much as feasibly possible, both as a total figure and individually. This report is being written retrospectively; therefore Scope 3 emissions are not available at time of writing for the reported year, however processes and procedures are being developed to allow for accurate recording of emissions.

In relation to this report, Willerby Landscapes also have an analysis document that is used to compare carbon emissions per year from 2020. The comparison document is an internal spreadsheet that is regularly reviewed and updated; the spreadsheet analyses overall carbon emissions, spilt into the respective Scopes, as well as individual emission contributors as set out in the 2022 DEFRA GHG Conversion Factors spreadsheet such as specific fuels and waste types. (*Department for Environment, Food & Rural Affairs, 2021*)

Regular meetings are held with the directors of Willerby Landscapes to review carbon emission figures and discuss any successes or failures relating to reduction techniques. These meetings will drive policy and procedure throughout the company, and highlights that the commitment to the Science Based Target starts at the top of the company.

Willerby Landscapes are accredited to ISO14001:2015 and therefore have an effective Environmental Management System of which this report forms part of. Willerby Landscapes have set this target to demonstrate the commitment to reducing the associated carbon emissions and align to objectives set as part of the ISO14001:2015 accreditation. Willerby Landscapes want to be part of the solution to climate change and therefore transparency in reporting and commitment to emissions reduction in whatever manner is vital to success. Communication of carbon reduction targets and progress, not necessarily this report in its entirety, will be undertaken at regular periods; these periods have not yet been determined nor has the communication method.

This report has been written in accordance with the requirements set out in the government's "Environmental Reporting Guidelines 2019". This report has been written to include all emission figures that form part of the "Operational Control Boundary", which is defined in the Environmental Reporting Guidelines 2019 as "...[an] organisation [that] has operational control over an operation if [the] organisation...has the full authority to introduce and implement its operating policies at the operation." (*Department for Environment, Food & Rural Affairs, 2019*). Additionally, this report has been aligned with the recommendations detailed in the "SBTi Corporate Manual". (*Science Based Targets, 2023*)

DEFINITIONS

Carbon Footprint: a measure of the amount of carbon dioxide released into the atmosphere as a result of the activities of particular individual, organisation, or community. (*Oxford Dictionaries, 2023*)

Scope 1: ...(direct emissions) emissions are those from activities owned or controlled by your organisation. Examples of Scope 1 emissions include emissions from combustion in owned or controlled boilers, furnaces, and vehicles; and emissions from chemical production in owned or controlled process equipment. (*Department for Environment, Food & Rural Affairs, 2022*)

Scope 2: ...(energy indirect) emissions are those released into the atmosphere that are associated with your consumption of purchased electricity, heat, steam, and cooling. These indirect emissions are a consequence of your organisation's energy use, but occur at sources you do not own or control. (*Department for Environment, Food & Rural Affairs, 2022*)

Scope 3: ...(other indirect) emissions are a consequence of your actions that occur at sources you do not own or control and are not classed as Scope 2 emissions. Examples of Scope 3 emissions are business travel by means not owned or controlled by your organisation, waste disposal, materials or fuels your organisation purchases. Deciding if emissions from a vehicle, office, or factory that you use are Scope 1 or Scope 3 may depend on how you define your operational boundaries. Scope 3 emissions can be from activities that are upstream or downstream of your organisation. More information on Scope 3 and other aspects of reporting can be found in the Greenhouse Gas Protocol Corporate Standard (*Department for Environment, Food & Rural Affairs, 2022*)

Well-to-Tank: ...upstream emissions from the production of fuel or electricity. (*Department for Environment, Food & Rural Affairs, 2022*)

Outside of Scopes: Outside of scopes includes biogenic CO₂ factors that should be used to account for the direct carbon dioxide (CO₂) impact of burning biomass and biofuels, including when reporting emissions from electricity consumption. Biogenic CO₂ emissions are one of several activities labelled 'outside of scopes' by the GHG Protocol Corporate Accounting and Reporting Standard because the Scope 1 impact of these fuels has been determined to be a net '0' (since the fuel source itself absorbs an equivalent amount of CO₂ during the growth phase as the amount of CO₂ released through combustion). (*Department for Environment, Food & Rural Affairs, 2022*)

ABBREVIATIONS

| <u>Abbreviation</u> | <u>Definition</u> |
|----------------------------|--|
| CO ₂ | Carbon dioxide |
| DERV | Diesel Engine Road Vehicle |
| EV | Electric Vehicles |
| HVO | Hydrotreated Vegetable Oil |
| kgCO ₂ e | Kilograms of Carbon dioxide equivalent |
| T&D | Transmission and Distribution |
| tCO ₂ e | Tonnes of Carbon dioxide equivalent |
| ULSD | Ultra Low Sulphur Diesel |
| WLL | Willerby Landscapes Ltd. |
| WTT | Well-to-Tank |

METHODOLOGY

Data was collected through invoices, delivery notes, utility bills and other similar documentation. These figures were then recorded on a spreadsheet and separated out to highlight the different sources of emissions. These different sources include the following:

- Bridge Nursery Fuels
- Fleet Fuel
- Site Fuel
- Jerry Can Fuel
- 55 Maltings Natural Gas
- Train Travel
- Other Travel
- Private Mileage

The data was then cross-examined, and identical fuels were combined to create total figures. These total figures were then multiplied by the corresponding emissions factors derived from the 2022 DEFRA GHG Conversion Factors spreadsheet. The figures were calculated in kgCO₂e units and then divided by 1000 to provide a tCO₂e figure. This methodology follows the instructions detailed in the 2022 DEFRA GHG Conversion Factors spreadsheet.

Once each individual fuel type had been given a total figure, these were then added together to provide a total figure per Scope.

Once all scopes had a figure, these were then added together to provide a total figure for the year 2022.

Please note that Scope 3 emissions are only partially available for the year 2022, as information and reporting mechanisms aren't as readily available as Scope 1 and Scope 2 emissions. More information as to what has been included and omitted, as well as more specific methodology for each Scope 3 aspect, can be found in the Scope 3 section.

SOURCE OF DATA

Data collected for each Scope has been used by WLL as per the following:

Scope 1 aspects ^[1] associated with WLL operating processes that have been calculated have been taken from the following locations:

- Fuels supplied to Bridge Nurseries
- Fuels purchased at forecourts for use in fleet vehicles
- Fuels used on construction sites
- Fuels used in Operational Facilities (Bridge Nurseries)

Scope 2 aspects ^[1] associated with WLL operating processes that have been calculated have been taken from the following locations:

- Electricity used at Operational Facilities (Bridge Nurseries)

Scope 3 aspects ^[1] associated with WLL operating processes that have been calculated have been taken from the following locations ^[2]:

- Transmission & Distribution – Grid losses at Bridge Nurseries,
- Water Supply – Water delivered through the mains supply network to Bridge Nurseries,
- Water Treatment – Water returned to the sewer system through the mains drains at Bridge Nurseries,
- Waste Disposal – End-of-life disposal of materials at Bridge Nurseries (includes materials returned to Bridge Nurseries, but does not include materials removed from sites by waste contractors),
- Business Travel – Air – Travel for business purposes by plane,
- Business Travel – Land – Travel for business purposes in assets not owned or directly operated by WLL (such as public transport ^[3] and private vehicles used for business purposes),
- Hotel Stays – Overnight stays at hotels for business purposes,
- WTT – Fuels – Upstream emissions associated with extraction, refining and transportation of raw fuel sources to Bridge Nurseries or a WLL owned asset (such as equipment used on sites),
- WTT – UK Electricity – Upstream emissions associated with extraction, refining and transportation of electricity used at Bridge Nurseries,
- WTT – business travel – air – Upstream emissions associated with extraction, refining and transportation of aviation fuel for planes used by WLL personnel travelling for business purposes,
- WTT – business travel – land – Upstream emissions associated with extraction, refining and transportation of raw fuel sources used in assets not owned or directly operated by WLL (such as public transport ^[3] and private vehicles used for business purposes),
- Homeworking – Emissions associated with company staff working from home.

^[1] Aspects have been taken from the individual tabs on the 2022 DEFRA GHG Conversion Factor spreadsheet

^[2] Definitions have been taken from the 2022 DEFRA GHG Conversion Factors spreadsheet and either used verbatim or amended to appropriately reflect how each definition relates to WLL

^[3] Public transport figures include train journeys and a limited amount of tube journeys only; please refer to the section dedicated to Scope 3 for more information.

Scope 3 aspects ^[1] associated with WLL operating processes that have not been calculated at present are as follows:

- Sub-contractor emissions – No information available; process not in place to gather information at time of writing,
- Material Use – No information available, process not in place to gather information at time of writing,
- Waste Disposal – Information from sites is not included in this report,
- Business Travel – Sea – little to no use of ferries in 2022; of the limited number of movements using ferries, there is little, if any, information in regard to distance travelled, quantity of trips taken, and type of ferry,
- Business Travel – Land – accuracy levels of figures calculated and used within this report are low due to various unknowns and lack of information (such as distance of public transport routes and quantity of trips using all means of public transport),
- Freighting Goods – no information available, process not in place to gather information at time of writing,
- Managed Assets – Vehicles – figures are included in “Business Travel – Land” as conversion factors are identical and the parameters for both reporting aspects also appear to be identical,
- WTT – Bioenergy – no biofuels were used in 2022, therefore not WTT information is available,
- UK electricity T&D for EV’s – Grid losses associated with electric vehicle charging; no information available, process not in place to gather information at time of writing,
- WTT – business travel – sea – no information sourced for ferry usage therefore no information is available for this aspect,
- WTT - business travel – Land – accuracy of figures calculated and used within this report are low due to various unknowns and lack of information, although information is provided for this aspect, a large portion is unavailable at time of writing,
- WTT – Freighting Goods – no information available, no information sourced for Freighting Goods therefore no information is available for this aspect,
- Managed Assets – Electricity – no information available for quantity of electricity used by WLL assets on sites owned by a different operating company (such as WLL owned office equipment and/or plant/machinery used on sites); no information available for quantity of electricity used by assets not owned but used by WLL on sites owned by a different operating company (such as hired plant/machinery or task lighting used by WLL but owned by a different operating company)

Outside of Scopes figures refer to the direct carbon dioxide (CO₂) impact of burning biomass and biofuels, including when reporting emissions from electricity consumption; and have been taken from the following locations:

- Diesel purchased from both forecourts and supplied to Bridge Nurseries – these figures have been combined to provide a total “Diesel” figure rather than separated,
- Unleaded purchased from forecourts,
- Electricity supplied to Bridge Nurseries,

ASSUMPTIONS

General

- Assumed that carbon footprint figures have been calculated correctly,
- Assumed that carbon emissions figures have been calculated correctly,
- Assumed no data is missing,
- Electricity usage on site is not included in this report as usage figures are not available,
- Assumed that electricity usage on sites fall under Client's Scope 3 emissions,
- Water usage on site is not included in this report as usage figures are not available,
- Assumed that water usage on sites fall under Client's Scope 3 emissions,

Scope 1

- Assumed DERV and Forecourt Diesel are the same fuel type,
- Assumed Kerosene and Burning Oil are the same fuel type,
- Assumed Jerry Can fuel is unleaded petrol,
- Assumed Gasoil is Red Diesel,
- Assumed Unleaded fuel is being used for power tools on site,

Scope 2

- Assumed that electricity used for vehicle charging ports at Bridge Nurseries is included in the overall electricity figure,

Scope 3

- The water quantity figure (litres) to be used for "Water Supply" is also to be used for "Water Treatment",
- "Water Supply" and "Water Treatment" figures do not include for water usage by WLL on sites not owned by WLL,
- "Business Travel – Land" – distance figures are assumed based upon Google Maps and are rounded to the nearest integer,
- "Business Travel – Land" – "Average Car" option chosen to for conversion factor as type of vehicle is unknown for private vehicles,
- "Business Travel – Land" – Petrol emissions option chosen for conversion factor as vehicle type for each private vehicle is unknown,
- "Business Travel – Air" - distance figures are assumed based upon Google Maps and are rounded to the nearest integer,
- "Homeworking" – Number of people working from home is assumed and doesn't take in to account sporadic Working from Home days,
- "Homeworking" – Number of hours is assumed and doesn't take in to account half days or equivalent/similar,
- "Homeworking" – Number of days worked per year is assumed and doesn't take in to account sporadic Working from Home days,
- "Waste Disposal" figures are derived from waste removed from Bridge Nurseries and does not take into account waste removed directly from sites.

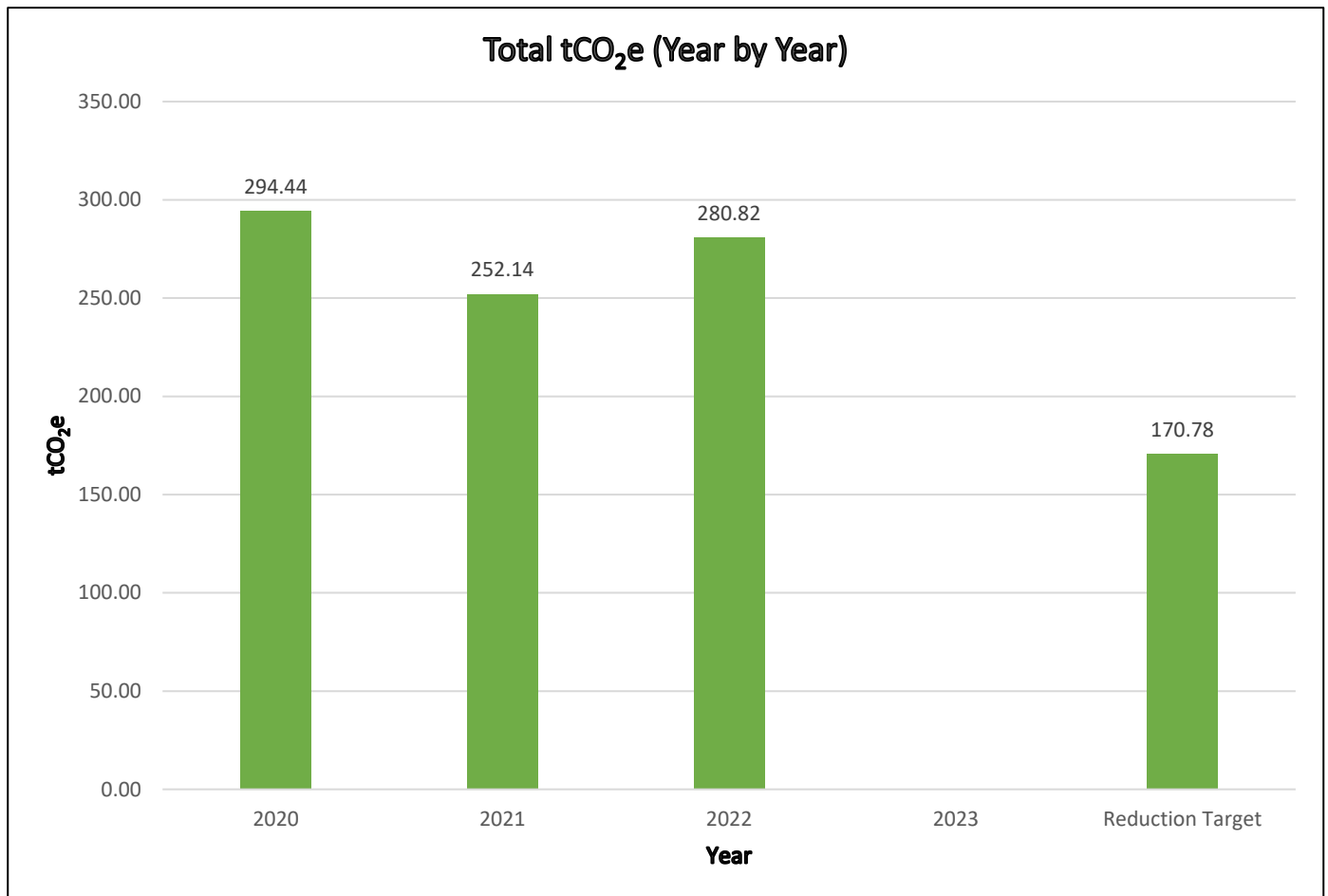
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ANNUAL TREND



Graph #1: Graph comparing the total Scope 1 and Scope 2 Carbon emissions from 2020, 2021 and 2022.

| | 2020 | 2021 | 2022 |
|-------------------|--------------------|--------------------|--------------------|
| Fuel type | tCO ₂ e | tCO ₂ e | tCO ₂ e |
| Gasoil | 41.30986592 | 32.09044481 | 22.6754454 |
| Burning Oil | 13.37261296 | 8.38754228 | 14.04183864 |
| DERV | 167.5949453 | 87.15006463 | 107.1653876 |
| Diesel (ULSD) | 48.56806828 | 110.5550817 | 113.5732117 |
| Unleaded | 5.201838787 | 2.097027055 | 5.74980759 |
| Natural Gas (m3) | 1.52306298 | 0 | 0 |
| HVO Biodiesel | 0 | 0.03212874 | 0 |
| Electricity (kWh) | 16.87187552 | 11.85608254 | 17.61556434 |
| Total | 294.4422698 | 252.1683717 | 280.8212553 |

Table #1: Table comparing emissions from individual fuel and energy sources between 2020, 2021 and 2022.

From the above, the total emissions for 2022 are lower than 2020 emission figures by approximately 14tCO₂e; however, in comparison to 2021 figures there is an increase by approximately 28tCO₂e.

There weren't any reduction methods in place during 2022, however the return to "normal" operating procedures following the lifting of COVID-19 restrictions is likely to be the reason for the sharp increase in emissions, as sites re-opened, and staff returned to work.

This is particularly evident when comparing the individual fuel sources in Table #1, where figures show a (relatively) significant increase tCO₂e for each fuel source (except Gas Oil) including electricity at Bridge Nurseries, likely impacted by the return of staff to the head office.

Natural Gas figures will likely remain at 0 (zero) in subsequent reports as the location where Natural Gas was used, is no longer leased by WLL. Equally, HVO Biodiesel was a contractual requirement for a specific site in 2021 and is likely to remain at 0 (zero) until such a time that HVO biodiesel is the approved fuel sources for WLL plant/machinery in later years or WLL become contractually obliged to use HVO Biodiesel as the fuel source on sites.

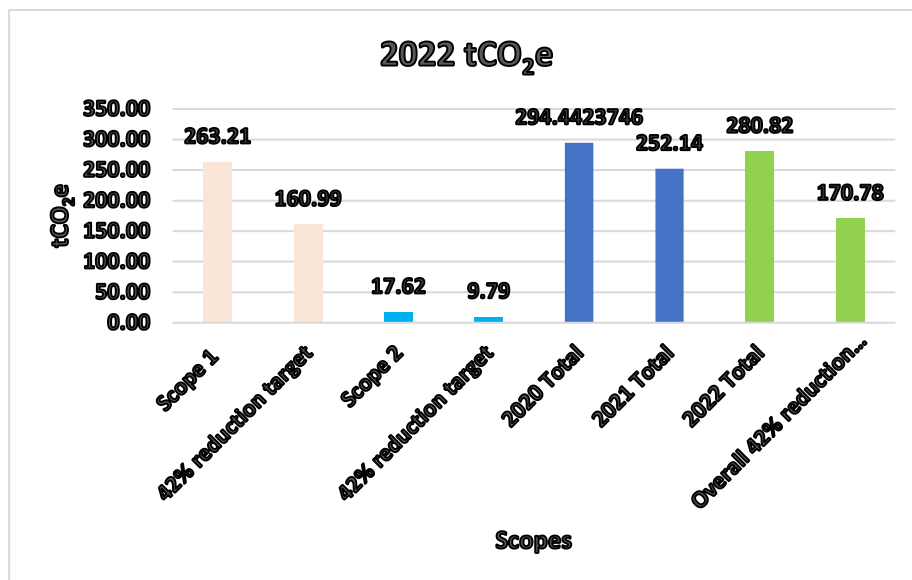
Electricity increased to a larger figure than 2020 and significantly increased from 2021. The difference in figure between 2020 and 2022 is negligible (~0.8tCO₂e) however the reason for the larger increase in emissions value between 2021 and 2022 (~6tCO₂e) likely stems from more staff returning to Head Office, thereby more electrical equipment is being used.

Scope 3 emissions do not factor into these figures.

2022 CARBON FOOTPRINT OVERVIEW

| | 2022 tCO ₂ e | |
|------------------------------|-------------------------|---------|
| Scope 1 | 263.21 | 93.73% |
| 42% reduction target | 160.99 | |
| Scope 2 | 17.62 | 6.27% |
| 42% reduction target | 9.79 | |
| 2020 Total | 294.4423746 | 100.00% |
| 2021 Total | 252.14 | 85.63% |
| 2022 Total | 280.82 | 95.37% |
| Overall 42% reduction target | 170.78 | 58.00% |

Table #2: Table showing Scope 1, Scope 2, and Total emissions figures for 2022 and percentage progress against 2020 and 2021



Graph #2: Bar graph showing Scope 1, Scope 2 and Total emissions figures for 2022

The above table and graph show the overall 2022 carbon emissions figures for Scope 1 and Scope 2 along with the respective reduction targets for both the specific scopes and overall.

Scope 3 figures have not been included in the above for two reasons; firstly, the specific reduction target is focussed on Scope 1 and Scope 2 only; secondly, a limited number of Scope 3 emissions have been calculated, therefore, to include these in total carbon emission figures would skew the total and render the reported figures as inaccurate. Until such time that all Scope 3 emissions are able to be effectively calculated and inclusion in the overall emissions total is deemed appropriate, these will remain separate to the combined carbon emission figure.

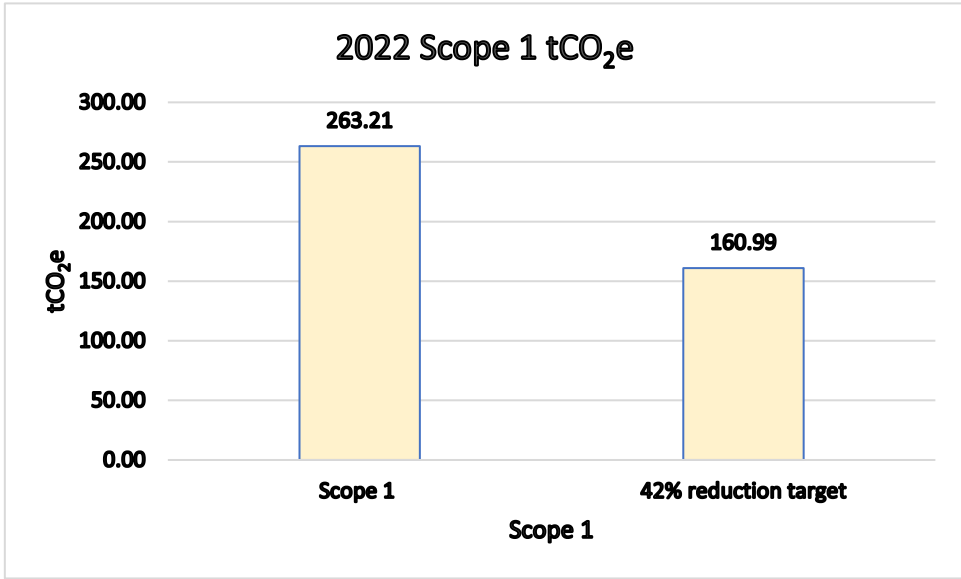
From the above table, Scope 1 emissions contribute a little under 95% to the company's targeted carbon footprint and this is the area where the reduction methods will be largely focussed on. As stated previously, no reduction methods were in place during 2022 so figures are as a result of "normal operation" and have not been influenced by reduction practices.

SCOPE 1

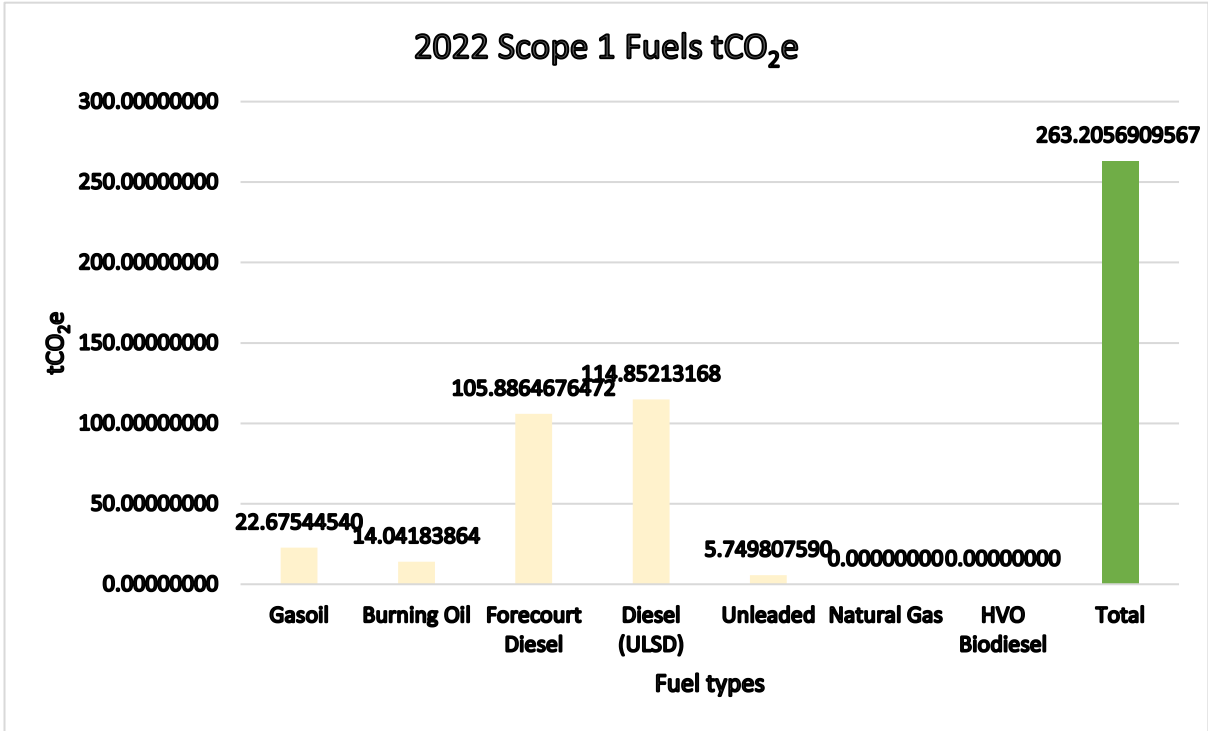
RESULTS

| SCOPE 1 | | | | | |
|------------------------|------------------|-----------|---------------------------------------|---------------------|--------------------|
| Raw Data | | | | | |
| | Fuel type | Litres | kgCO ₂ e conversion factor | kgCO ₂ e | tCO ₂ e |
| Yard Fuels | Gasoil | 7221 | 2.75857 | 19920 | 19.91963397 |
| | Kerosene | 0 | 2.54013 | 0 | 0.00000000 |
| | Burning Oil | 5528 | 2.54013 | 14042 | 14.041839 |
| | Derv | 0 | 2.55784 | 0 | 0.00000000 |
| | Diesel (ULSD) | 42402 | 2.55784 | 108458 | 108.45753168 |
| Fleet Fuel | Forecourt Diesel | 41,396.83 | 2.55784 | 105886 | 105.8864676472 |
| Site Fuel | Gasoil | 999 | 2.75857 | 2756 | 2.755811 |
| | Burning Oil | 0 | 2.54013 | 0 | 0.000000 |
| | Diesel | 2000 | 2.55784 | 5116 | 5.115680 |
| | DERV | 500 | 2.55784 | 1279 | 1.278920 |
| | Red HVO | 0 | 0.03558 | 0 | 0.000000 |
| Jerry Can Fuel | Unleaded | 2,659.67 | 2.16185 | 5750 | 5.749807590 |
| 55 Maltings Gas | Natural Gas | 0 | 2.01574 | 0 | 0.00000000 |
| Adjusted Data | | | | | |
| | Fuel type | Litres | kgCO ₂ e conversion factor | kgCO ₂ e | tCO ₂ e |
| | Gasoil | 8220 | 2.75857 | 22675.45 | 22.67544540 |
| | Burning Oil | 5528 | 2.54013 | 14041.84 | 14.04183864 |
| | Forecourt Diesel | 41,396.83 | 2.55784 | 105886.47 | 105.8864676472 |
| | Diesel (ULSD) | 44902 | 2.55784 | 114852.13 | 114.85213168 |
| | Unleaded | 2,659.67 | 2.16185 | 5749.81 | 5.749807590 |
| | Natural Gas | 0.00 | 2.03155 | 0.00 | 0.00000000 |
| | HVO Biodiesel | 0.00 | 0.03558 | 0.00 | 0.00000000 |
| | Total | | | | 263.2056909567 |

Table #3: Table showing Scope 1 raw and adjusted data for 2022



Graph #3: Bar Chart showing overall Scope 1 data for 2022



Graph #4: Bar Chart showing individual fuel data for 2022

The above table and graphs highlight the overall Scope 1 emissions and emission contributors for Willerby Landscapes in 2022. Please note the below

- Forecourt Diesel and ULSD are considered the same fuel type, however, the fuels are separated because forecourt diesel is used as fleet fuel and is only sourced at forecourts; whereas ULSD is supplied to either Bridge Nurseries or direct to individual sites and is used by plant and machinery.
- Kerosene and Burning Oil are considered the same fuel type; however, the fuels are separated at the “Raw Data” sections different fuel suppliers were used and then names for the fuel were different for each company.
 - At the “Adjusted Data” section Kerosene and Burning Oil are combined to form the “Burning Oil” fuel, this is because the term “Burning Oil” will be the only term for Burning Oil and equivalent fuels.
- Natural Gas was used as heating fuel for the 55 Maltings office which is no longer leased by WLL; however reference to Natural Gas will remain throughout this report and subsequent reports for continuity purposes only.
- HVO Biodiesel was used on a specific site in 2021 however the fuel was not used in 2022. In the future HVO biodiesel is likely to be used as an alternative fuel source for diesel vehicles and therefore reference to HVO Biodiesel will remain throughout this report and subsequent reports for continuity purposes only.

The Scope 1 fuels highlighted above are used in the following processes:

- Gasoil – Used for plant/machinery
- Burning Oil – Used for heating at Bridge Nurseries
- Diesel (ULSD) – Used in plant/machinery and the company HGV
- Forecourt Diesel – Used in fleet vehicles
- Unleaded – Used in fleet vehicles and site construction/maintenance tools
- Natural Gas – Used for heating at 55 Maltings office
- HVO Biodiesel – Used as an alternative fuel source for diesel powered vehicles

ANALYSIS

Overall

From the data highlighted above, the largest source of Willerby Landscapes carbon emissions in 2022 was Diesel, contributing approximately 83% of the overall tCO₂e produced for the year. ULSD has been used slightly more than forecourt diesel but the difference between the two sources is minimal.

These figures are not unexpected as most fleet vehicles and plant/machinery run on diesel and these vehicles are in use every day. The figures highlight an alternative, sustainable source of fuel to replace diesel and replacing vehicles with more energy efficient alternatives will significantly reduce the carbon emissions produced by Willerby Landscapes; these are the opportunities that Willerby Landscapes will explore in order to achieve the 2030 target.

In comparison to 2020 figures for overall Diesel emissions, usage has increased by approximately 2% (~4tCO₂e); in comparison to 2021 figures, diesel emissions have increased by approximately 11%

(~23tCO₂e). The return to “normal” operation following the relaxation of COVID-19 restrictions has had a clear impact on diesel usage with more vehicles, plant and machinery able to operate.

Gasoil usage continued to reduce at a comparatively consistent rate between 2020, 2021 and 2022 with an approximate 10tCO₂e reduction per year, although there isn’t an obvious reason for the reduction.

In 2022 Burning Oil and Unleaded have returned to similar figures as 2020 with an obvious increase between 2021 and 2022, likely a result of operating practices returning to “normal”.

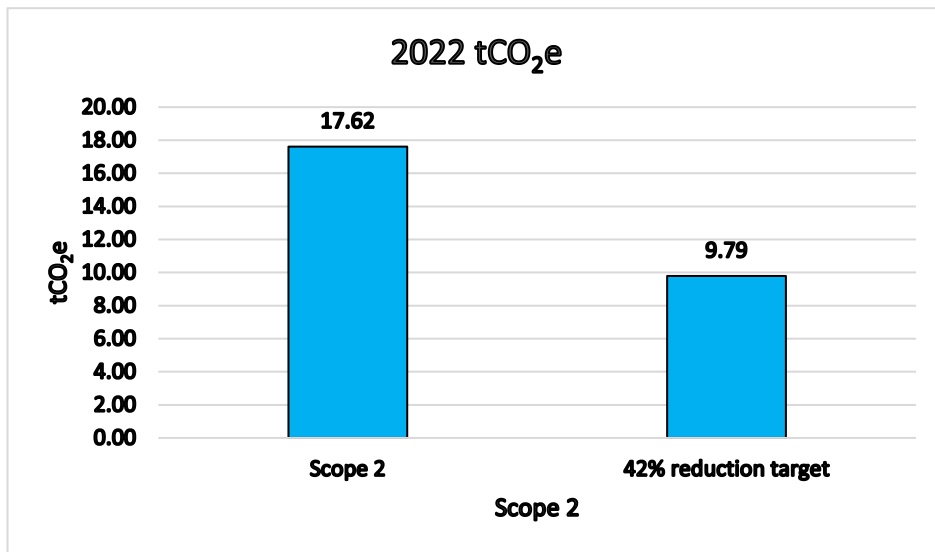
Following a request from a specific site in 2021, HVO Biodiesel was used. This is likely to be the primary replacement fuel for ULSD, however, when this gets implemented is dependent upon availability, viability, and cost. The use of HVO Biodiesel will be elaborated upon in later reports, when more information is sourced. In 2022, HVO Biodiesel was not used therefore the figure remains at 0 (zero).

SCOPE 2

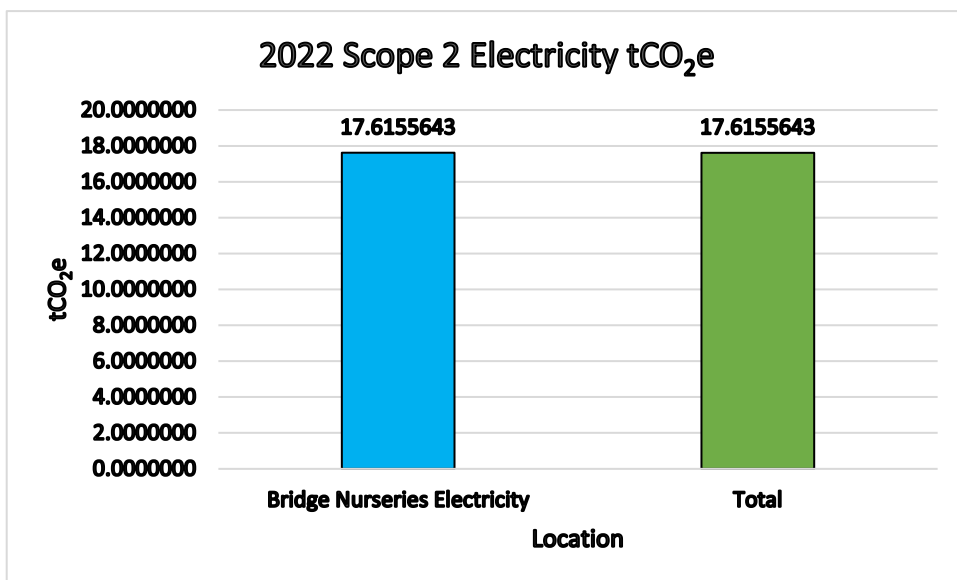
RESULTS

| SCOPE 2 | | | | |
|------------------------------|-------|---------------------------------------|---------------------|--------------------|
| | kWh | kgCO ₂ e conversion factor | kgCO ₂ e | tCO ₂ e |
| Bridge Nurseries Electricity | 91093 | 0.19338 | 17616 | 17.6155643 |
| Total | | | | 17.6155643 |

Table #4: Table showing Scope 2 data for 2022



Graph #5: Bar Chart showing overall Scope 2 data for 2022



Graph #6: Bar Chart showing Scope 2 data at individual locations for 2022

The above table and graphs highlight the overall Scope 2 emissions and emission contributors for Willerby Landscapes in 2022. Please note the below

- Bridge Nurseries is the company head office and is in Kent, England.

The Scope 2 fuels highlighted above are used in the following processes:

- Bridge Nurseries electricity – used for power to the main office building and the barn

ANALYSIS

Overall

Bridge Nurseries is the only site that is owned by WLL; therefore, the reduction will be solely focused on this location. Reduction methods such as solar panels will be taken into consideration in order to reduce the carbon emission figure as will transferring to a sustainable tariff in regards to electricity consumption.

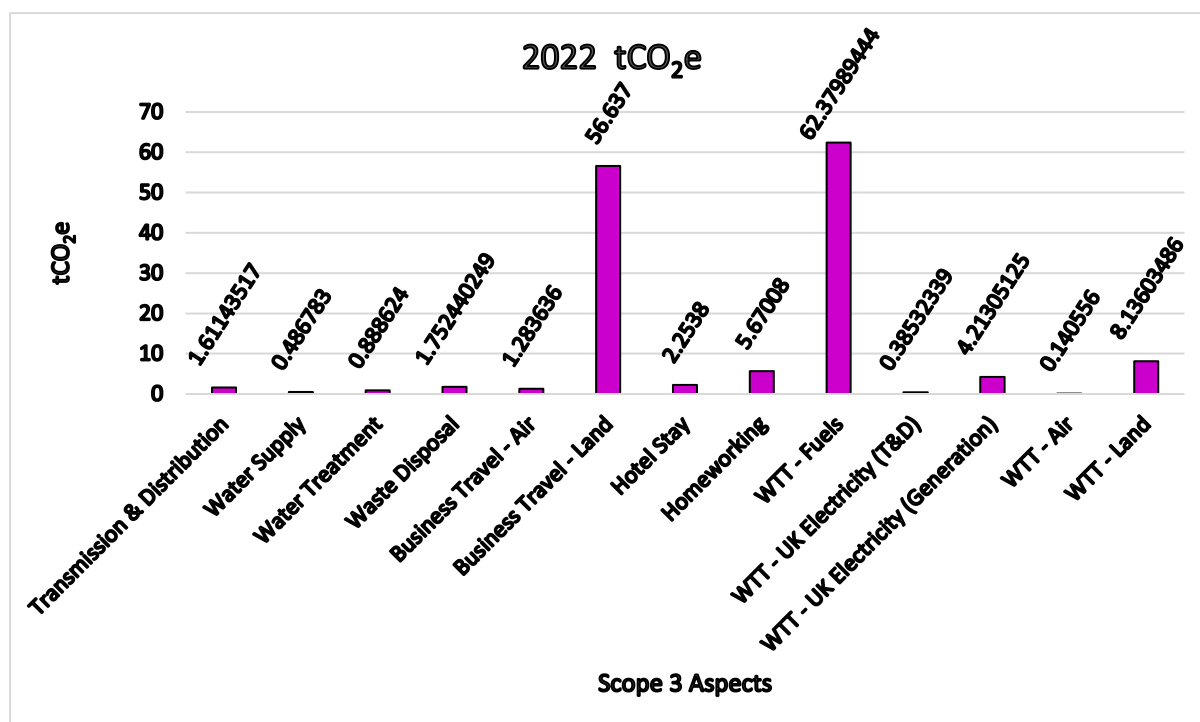
SCOPE 3

As stated earlier in this report, the following Scope 3 aspects are NOT included within this report, primarily because recording processes are either not in place or are not robust enough to calculate the information.

- Sub-contractor emissions,
- Material Use,
- Waste Disposal – waste removed from site,
- Business Travel – Sea,
- Business Travel – Land – information pertaining to certain public transport journeys,
- Freightng Goods,
- Managed Assets – Vehicles,
- UK electricity T&D for EV's,
- WTT – Bioenergy – No biofuels have been used in 2022; therefore no information is available to calculate WTT emissions
- WTT – Sea,
- WTT – Freightng Goods – There is no information for Freightng Goods, therefore WTT emissions cannot be calculated
- WTT – Land – information pertaining to certain public transport journeys,
- Managed Assets – Electricity

The aim is to be able to include all relevant Scope 3 aspects, as defined in the 2022 DEFRA GHG Conversion Factor spreadsheet, as well as sub-contractor emissions, in this report to provide a more accurate picture of the emissions associated with WLL business operations. In doing so, the subsequent yearly reports will be able to demonstrate that WLL are committed to reducing overall associated carbon emissions, however, the main priority is to reduce Scope 1 and Scope 2 emissions by the verified target percentage at minimum; and reduce Scope 3 emissions as and when the opportunities arise.

OVERALL RESULTS



Graph #7: Bar Chart showing individual emissions figures for Scope 3 aspects

| SCOPE 3 ASPECTS | 2022 | | | |
|-----------------------------------|----------|-------------------|---------------------|--------------------|
| | In Scope | | | |
| | Quantity | Conversion Factor | kgCO ₂ e | tCO ₂ e |
| Transmission & Distribution | 91093 | 0.01769 | 1611.4352 | 1.611435 |
| Water Supply | 3267 | 0.149 | 486.783 | 0.486783 |
| Water Treatment | 3267 | 0.272 | 888.624 | 0.888624 |
| Waste Disposal | N/A | N/A | N/A | 1.75244 |
| Business Travel - Air | N/A | N/A | N/A | 1.283636 |
| Business Travel - Land | N/A | N/A | N/A | 56.637 |
| Hotel Stay | N/A | N/A | N/A | 2.2538 |
| Homeworking | N/A | N/A | N/A | 5.67008 |
| WTT - Fuels | N/A | N/A | N/A | 62.37989 |
| WTT - UK Electricity (T&D) | 91093 | 0.00423 | 385.32339 | 0.385323 |
| WTT - UK Electricity (Generation) | 91093 | 0.04625 | 4213.0513 | 4.213051 |
| WTT - Air | N/A | N/A | N/A | 0.140556 |
| WTT - Land | N/A | N/A | N/A | 8.136035 |

Table #5: Table showing individual Scope 3 aspects

The above table details the Scope 3 aspects that have been calculated for the year 2022. In some cases, the Quantity, Conversion Factor and kgCO₂e figure are varied depending on individual categories within certain Scope 3 aspects and therefore have not been included in the above table; for example in “Business Travel – Air”, the different Haul classifications along with the difference Class classifications have resulted in different conversion factors. A more detailed breakdown of these aspects can be found under each Scope 3 Aspect heading below.

A total figure has not been provided due to the amount of unavailable information.

Analysis

From the above, “Business Travel – Land” and “WTT – Fuels” are the largest contributing factors for Scope 3. This is not unexpected as travelling to work through public transport is the main travel method, and “WTT – Fuel” figures are directly linked to fuel used for Scope 1 aspects, which proved to be the largest contributing factor for WLL carbon emissions.

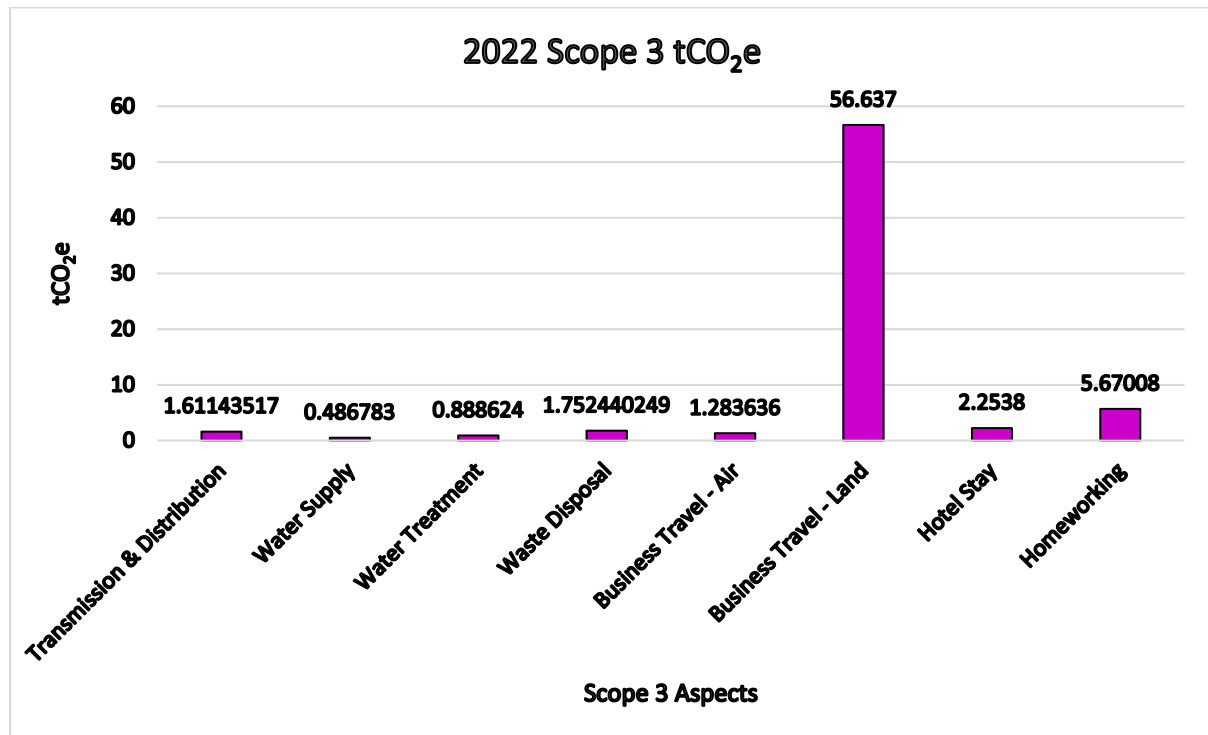
Most Scope 3 aspects won’t be able to be reduced, as the aspects are directly related Scope 1 and/or Scope 2 aspects, or WLL have no direct influence on the source of the emissions (Air Travel for example).

Inclusion of other Scope 3 aspects will enhance the information more and provide a more accurate representation of produced emissions.

INDIVIDUAL ASPECTS

Scope 3 aspects that are included in this report are detailed below, these do not include Well-to-Tank information, as this is included in a separate section of this report.

Please note definitions are sourced directly from the 2022 DEFRA GHG Conversion Factors spreadsheet.



Graph #8: Bar Chart showing individual emissions figures for Scope 3 aspects, excluding WTT information

| | tCO ₂ e |
|-----------------------------|--------------------|
| Transmission & Distribution | 1.611435 |
| Water Supply | 0.486783 |
| Water Treatment | 0.888624 |
| Waste Disposal | 1.75244 |
| Business Travel - Air | 1.283636 |
| Business Travel - Land | 56.637 |
| Hotel Stay | 2.2538 |
| Homeworking | 5.67008 |

Table #6: Table showing individual Scope 3 aspects, excluding WTT information

Of the Scope 3 aspects that are not considered WTT aspects, “Business Travel – Land” contributes the most to carbon emissions, even without all the information available. The other aspects listed above contribute similar figures to each other, with “Homeworking” the largest contributing factor.

Transmission & Distribution

Transmission and Distribution is defined as “emissions associated with grid losses (the energy loss that occurs in getting the electricity from the power plant to the organisations that purchase it)”.

Methodology

The emissions information was sourced from electricity utility bills, totalled together and then multiplied by the conversion factor; the result was then divided by 1000.

Results

| SCOPE 3 ASPECT | Quantity | Conversion Factor | kgCO₂e | tCO₂e |
|--|-----------------|--------------------------|--------------------------|-------------------------|
| Transmission & Distribution | 91093 | 0.01769 | 1611.4352 | 1.611435 |

Table #7: Table showing T&D emissions information

Analysis

Transmission & Distribution figures are entirely dependent upon the kWh total of Scope 2 figures and cannot be influenced or directly reduced by any means; therefore, there is no analysis for this Scope 3 aspect.

Water Supply

Water Supply is defined as “water delivered through the mains supply network”.

Methodology

The emissions information was sourced from water utility bills, totalled together and then multiplied by the conversion factor (the conversion factor chosen was “cubic metres”); the result was then divided by 1000.

Results

| SCOPE 3 ASPECT | Quantity | Conversion Factor | kgCO₂e | tCO₂e |
|-----------------------|-----------------|--------------------------|--------------------------|-------------------------|
| Water Supply | 3267 | 0.149 | 486.783 | 0.486783 |

Table #8: Table showing Water Supply emissions information

Analysis

Water is used for both welfare purposes and for operating procedures throughout the company at Bridge Nurseries (please note that water used by WLL on sites not owned by WLL is not included within this report). Irrigation watering is in effect at Bridge Nurseries allowing for regular watering of soft landscaping elements (such as trees and shrubs); the irrigation timings can be altered by the appropriate personnel depending on climatic conditions and the condition of the individual soft landscaping element, thereby reducing or increasing the water usage. This will have an impact of the tCO₂e emitted by using water but is unlikely to be impacted by any reduction method in the future and isn't considered a priority reduction target.

Water Treatment

Water Treatment is defined as “water returned into the sewage system through mains drains”.

Methodology

The emissions information was sourced from water utility bills, totalled together and then multiplied by the conversion factor (the conversion factor chosen was “cubic metres”); the result was then divided by 1000.

Results

| SCOPE 3 ASPECT | Quantity | Conversion Factor | kgCO₂e | tCO₂e |
|------------------------|-----------------|--------------------------|--------------------------|-------------------------|
| Water Treatment | 3267 | 0.272 | 888.624 | 0.888624 |

Table #9: Table showing Water Treatment emissions information

Analysis

Water Treatment figures are entirely dependent upon the cubic metres total used in the “Water Supply” aspect and cannot be influenced or directly reduced by any means; therefore, there is no analysis for this Scope 3 aspect.

Homeworking

Homeworking is defined as “emissions associated with company staff working from home.”

Methodology

The emissions information was provided by the Operations director. Number of employees was multiplied by number of hours worked which was again multiplied by number of days worked in 2022, which was then multiplied by the relevant conversion factor (the conversion factor heading chosen is “Homeworking (office equipment + heating)” combined rather individual conversion factors for “Office Equipment” and “Heating”).

Please note that the figures do not include sporadic working from home, half days or weekend working.

Results

| SCOPE 3 ASPECT | Quantity | Conversion Factor | kgCO₂e | tCO₂e |
|-----------------------|-----------------|--------------------------|--------------------------|-------------------------|
| Homeworking | 16640 | 0.34075 | 5670.08 | 5.67008 |

Table #10: Table showing Homeworking emissions information

Analysis

Homeworking is used by a select few staff members, primarily for those who are situated further from head office and sites than the norm. Homeworking is not considered a priority reduction target.

Hotel Stay

Hotel Stay is defined as “emissions associated with overnight hotel stays”.

Methodology

The emissions information was sourced from invoices. Hotel location, number of rooms, and length of stay information was determined initially; the figure for number of rooms was multiplied by the length of stay (nights) figure, which in turn was multiplied by the relevant conversion factor which was determined by the location of the hotel; the result was then divided by 1000.

Please note that conversion factors for Finland are unavailable on the 2022 DEFRA GHG Conversion Factors spreadsheet, therefore no tCO₂e figure is available however the visit has been recorded for transparency purposes.

Overall Results



Graph #9: Bar Chart showing Overall emissions information for Hotel Stays

| Hotel Location | Total Number of Rooms | Total Length of stays | Conversion factor | kgCO ₂ e | tCO ₂ e |
|----------------|-----------------------|-----------------------|-------------------|---------------------|--------------------|
| UK | 1 | 181 | 10.4 | 1882.4 | 1.8824 |
| UK (London) | 1 | 30 | 11.5 | 345 | 0.345 |
| Finland | 1 | 8 | | 0 | 0 |
| Germany | 1 | 2 | 13.2 | 26.4 | 0.0264 |
| TOTAL | 4 | 221 | | 2253.8 | 2.2538 |

Table #11: Table showing Overall emissions information for Hotel Stays

Raw Data

| <u>Year</u> | <u>Hotel location</u> | <u>Number of rooms</u> | <u>Length of stay (nights)</u> | <u>kgCO2e Conversion Factor</u> | <u>kgCO₂e</u> | <u>tCO₂e</u> |
|-------------|-----------------------|------------------------|--------------------------------|---------------------------------|--------------------------|-------------------------|
| 2022 | <u>UK</u> | <u>1</u> | <u>1</u> | <u>10.4</u> | <u>10.4</u> | <u>0.0104</u> |
| | <u>UK</u> | <u>1</u> | <u>1</u> | <u>10.4</u> | <u>10.4</u> | <u>0.0104</u> |
| | <u>UK</u> | <u>1</u> | <u>1</u> | <u>10.4</u> | <u>10.4</u> | <u>0.0104</u> |
| | <u>UK</u> | <u>1</u> | <u>1</u> | <u>10.4</u> | <u>10.4</u> | <u>0.0104</u> |
| | <u>UK</u> | <u>2</u> | <u>1</u> | <u>10.4</u> | <u>20.8</u> | <u>0.0208</u> |
| | <u>Germany</u> | <u>1</u> | <u>2</u> | <u>13.2</u> | <u>26.4</u> | <u>0.0264</u> |
| | <u>Finland</u> | <u>1</u> | <u>4</u> | <u>N/A</u> | <u>N/A</u> | <u>N/A</u> |
| | <u>UK (London)</u> | <u>1</u> | <u>5</u> | <u>11.5</u> | <u>57.5</u> | <u>0.0575</u> |
| | <u>UK</u> | <u>1</u> | <u>14</u> | <u>10.4</u> | <u>145.6</u> | <u>0.1456</u> |
| | <u>UK (London)</u> | <u>1</u> | <u>6</u> | <u>11.5</u> | <u>69</u> | <u>0.069</u> |
| | <u>Finland</u> | <u>1</u> | <u>4</u> | <u>N/A</u> | <u>N/A</u> | <u>N/A</u> |
| | <u>UK</u> | <u>1</u> | <u>10</u> | <u>10.4</u> | <u>104</u> | <u>0.104</u> |
| | <u>UK</u> | <u>1</u> | <u>3</u> | <u>10.4</u> | <u>31.2</u> | <u>0.0312</u> |
| | <u>UK</u> | <u>1</u> | <u>3</u> | <u>10.4</u> | <u>31.2</u> | <u>0.0312</u> |
| | <u>UK</u> | <u>1</u> | <u>5</u> | <u>10.4</u> | <u>52</u> | <u>0.052</u> |
| | <u>UK</u> | <u>1</u> | <u>5</u> | <u>10.4</u> | <u>52</u> | <u>0.052</u> |
| | <u>UK</u> | <u>1</u> | <u>2</u> | <u>10.4</u> | <u>20.8</u> | <u>0.0208</u> |
| | <u>UK</u> | <u>1</u> | <u>5</u> | <u>10.4</u> | <u>52</u> | <u>0.052</u> |
| | <u>UK</u> | <u>1</u> | <u>3</u> | <u>10.4</u> | <u>31.2</u> | <u>0.0312</u> |
| | <u>UK</u> | <u>1</u> | <u>1</u> | <u>10.4</u> | <u>10.4</u> | <u>0.0104</u> |
| | <u>UK</u> | <u>1</u> | <u>10</u> | <u>10.4</u> | <u>104</u> | <u>0.104</u> |
| | <u>UK (London)</u> | <u>1</u> | <u>2</u> | <u>11.5</u> | <u>23</u> | <u>0.023</u> |
| | <u>UK</u> | <u>1</u> | <u>1</u> | <u>10.4</u> | <u>10.4</u> | <u>0.0104</u> |
| | <u>UK (London)</u> | <u>1</u> | <u>2</u> | <u>11.5</u> | <u>23</u> | <u>0.023</u> |
| | <u>UK</u> | <u>1</u> | <u>19</u> | <u>10.4</u> | <u>197.6</u> | <u>0.1976</u> |
| | <u>UK</u> | <u>1</u> | <u>9</u> | <u>10.4</u> | <u>93.6</u> | <u>0.0936</u> |
| | <u>UK</u> | <u>1</u> | <u>5</u> | <u>10.4</u> | <u>52</u> | <u>0.052</u> |
| | <u>UK</u> | <u>1</u> | <u>5</u> | <u>10.4</u> | <u>52</u> | <u>0.052</u> |
| | <u>UK</u> | <u>1</u> | <u>4</u> | <u>10.4</u> | <u>41.6</u> | <u>0.0416</u> |
| | <u>UK</u> | <u>1</u> | <u>2</u> | <u>10.4</u> | <u>20.8</u> | <u>0.0208</u> |
| | <u>UK</u> | <u>1</u> | <u>2</u> | <u>10.4</u> | <u>20.8</u> | <u>0.0208</u> |
| | <u>UK</u> | <u>1</u> | <u>1</u> | <u>10.4</u> | <u>10.4</u> | <u>0.0104</u> |
| | <u>UK</u> | <u>1</u> | <u>5</u> | <u>10.4</u> | <u>52</u> | <u>0.052</u> |
| | <u>UK</u> | <u>1</u> | <u>16</u> | <u>10.4</u> | <u>166.4</u> | <u>0.1664</u> |
| <u>UK</u> | <u>1</u> | <u>8</u> | <u>10.4</u> | <u>83.2</u> | <u>0.0832</u> | |
| <u>UK</u> | <u>1</u> | <u>12</u> | <u>10.4</u> | <u>124.8</u> | <u>0.1248</u> | |
| <u>UK</u> | <u>1</u> | <u>11</u> | <u>10.4</u> | <u>114.4</u> | <u>0.1144</u> | |
| <u>UK</u> | <u>2</u> | <u>4</u> | <u>10.4</u> | <u>83.2</u> | <u>0.0832</u> | |

| | | | | | | |
|--------------|------------------------|----------|----------|-------------|---------------|---------------|
| | <u>UK</u> | <u>1</u> | <u>2</u> | <u>10.4</u> | <u>20.8</u> | <u>0.0208</u> |
| | <u>UK</u> | <u>1</u> | <u>4</u> | <u>10.4</u> | <u>41.6</u> | <u>0.0416</u> |
| | <u>UK (London)</u> | <u>1</u> | <u>2</u> | <u>11.5</u> | <u>23</u> | <u>0.023</u> |
| | <u>UK (London)</u> | <u>1</u> | <u>6</u> | <u>11.5</u> | <u>69</u> | <u>0.069</u> |
| | <u>UK (London)</u> | <u>1</u> | <u>4</u> | <u>11.5</u> | <u>46</u> | <u>0.046</u> |
| | <u>UK (London)</u> | <u>1</u> | <u>3</u> | <u>11.5</u> | <u>34.5</u> | <u>0.0345</u> |
| TOTAL | - | - | - | - | 2253.8 | 2.2538 |

Table #12: Table showing Raw emissions information for Hotel Stays

Analysis

A majority of the hotel stays occur in the UK, with some in Europe. This is to be expected as all WLL works occur in the UK, with European visits solely for the purpose of visiting soft landscaping nurseries and hard landscaping factories/quarries.

Hotel stays are an aspect that is likely to vary drastically year by year. Hotel stays are often determined by the location of the site and the requirements surrounding the site and are not considered a priority reduction target.

Business Travel - Air

Business Travel – Air is defined as “emissions for individuals flying for work purposes”.

Methodology

The emission information was sourced from invoices. The destination determined whether the Haul category was considered “Domestic”, “Short Haul”, “Long Haul” or “International”; once determined the Class category was determined which depended on the “Haul category. Once both the previous categories were chosen, the distance was determined using available mapping software (Google Maps), and multiplied by the relevant conversion factor. The conversion factor was chosen under the “With RF” heading which “includes indirect effects of non-CO2 emissions”, rather than “Without RF” which doesn’t take in to account the indirect effects; the result was then divided by 1000.

Results

| Year | Haul | Class | Distance (km) (round trip) | kgCO2e conversion factor | kgCO₂e | tCO₂e |
|--------------|-------------|----------------|---------------------------------------|-------------------------------------|--------------------------|-------------------------|
| 2022 | Short Haul | Business Class | 3400 | 0.22652 | 770.168 | 0.770168 |
| 2022 | Short Haul | Economy Class | 3400 | 0.15102 | 513.468 | 0.513468 |
| TOTAL | | | | | 1283.636 | 1.283636 |

Table #13: Table showing Business Travel – Air emissions information

Analysis

Although infrequent, air travel is necessary for the business in order to visit sites outside of London as well as visiting nurseries and factories/quarries in Europe. Air travel is an aspect that is likely to vary drastically year by year. This isn’t considered a priority reduction target and therefore reduction methods will not be focussed on this aspect.

Waste Disposal

Waste Disposal is defined as “end-of-life disposal of different materials using a variety of different disposal methods.”

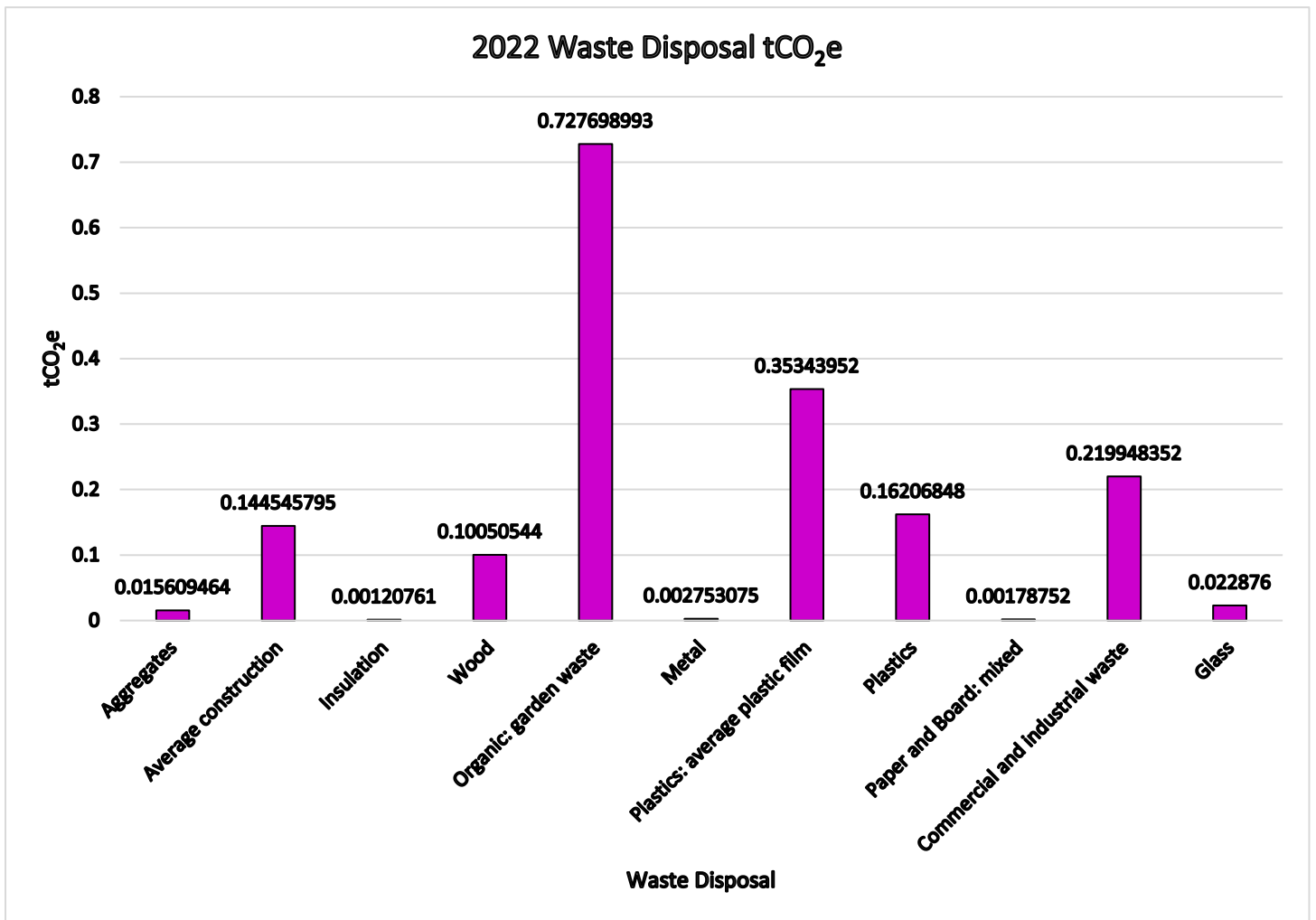
The waste contractor responsible for removing the waste from Bridge Nurseries provides annual Waste Disposal Reports that detail information such as, but not limited to, type of waste removed and how the waste was dealt with. The categories used by the waste contractor do not necessarily align with the categories used by DEFRA in the associated conversion factor spreadsheet; therefore, the author of this document has subjectively re-categorised the waste movements to appropriately reflect, as much as possible, the correct waste disposal method in order to obtain an appropriate conversion factor.

Methodology

Waste quantities were sourced from Waste Disposal Reports downloaded from the waste removal contractor’s portal. Initially waste types were re-categorised from the Waste Disposal Report into the categories provided by the 2022 DEFRA GHG Conversion Factors spreadsheet. Once re-categorised, the total waste tonnage for each category was multiplied by the disposal method conversion factor; the result was then divided by 1000.

Please note that the below figures pertain to waste removed directly from Bridge Nurseries and do not include waste removed from individual sites by waste contractors; therefore, the total figure does not represent the total tCO₂e from all waste removal associated with WLL works, only tCO₂e from waste removed from Bridge Nurseries. Waste removed from sites by WLL and taken to Bridge Nurseries will automatically be included in the below results.

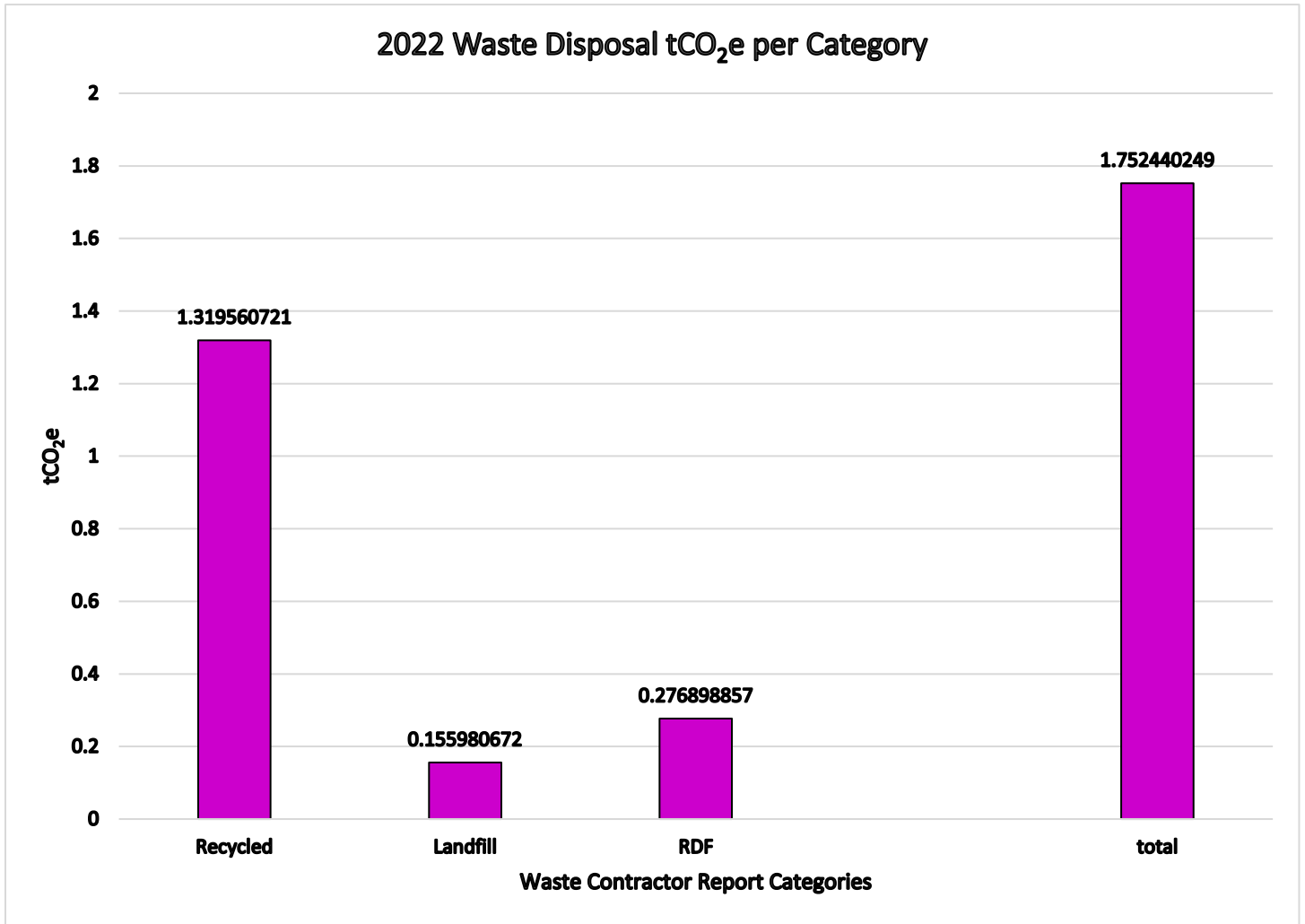
Results



Graph #10: Bar Chart showing waste disposal emissions information

| | 2022 | | | | | |
|---------------------------------|--------------------|-------------------|---------------------|--------------------|-----------------------|---------------|
| | Tonnes | Conversion Factor | kgCO ₂ e | tCO ₂ e | How is it disposed of | GHG Reference |
| Aggregates | 15.852 | 0.9847 | 15.6094644 | 0.015609464 | recycled | Open Loop |
| Average construction | 146.747 | 0.985 | 144.545795 | 0.144545795 | recycled | Closed Loop |
| Asbestos | 0 | | 0 | 0 | | |
| Asphalt | 0 | | 0 | 0 | | |
| Bricks | 0 | | 0 | 0 | | |
| Concrete | 0 | | 0 | 0 | | |
| Insulation | 1.226 | 0.985 | 1.20761 | 0.00120761 | RDF | Closed Loop |
| Soils | 0 | | 0 | 0 | | |
| Mineral oil | 0 | | 0 | 0 | | |
| Plasterboard | 0 | | 0 | 0 | | |
| Tyres | 0 | | 0 | 0 | | |
| Wood | 4.723 | 21.28 | 100.50544 | 0.10050544 | recycled | Closed Loop |
| Organic: garden waste | 81.663 | 8.911 | 727.698993 | 0.727698993 | recycled | Composting |
| WEE | 0 | | 0 | 0 | | |
| Metal | 2.795 | 0.985 | 2.753075 | 0.002753075 | recycled | Closed Loop |
| Plastics: average plastic film | 7.473944999 | 21.28 | 159.0455496 | 0.15904555 | recycled | Closed Loop |
| | 9.135055001 | 21.28 | 194.3939704 | 0.19439397 | RDF | Combustion |
| Plastics | 6.8544 | 21.28 | 145.861632 | 0.145861632 | recycled | Closed Loop |
| | 0.7616 | 21.28 | 16.206848 | 0.016206848 | RDF | Combustion |
| Paper and Board: mixed | 0.084 | 21.28 | 1.78752 | 0.00178752 | recycled | Closed Loop |
| Commercial and industrial waste | 3.006 | 21.28 | 63.96768 | 0.06396768 | RDF | Combustion |
| | 0.334 | 467.008 | 155.980672 | 0.155980672 | landfill | Landfill |
| Glass | 1.022239264 | 21.28 | 21.75325153 | 0.021753252 | recycled | Open Loop |
| | 0.052760736 | 21.28 | 1.122748466 | 0.001122748 | RDF | |
| | | | | | | |
| TOTAL | | | | 1.752440249 | | |

Table #14: Table showing Waste disposal emissions information

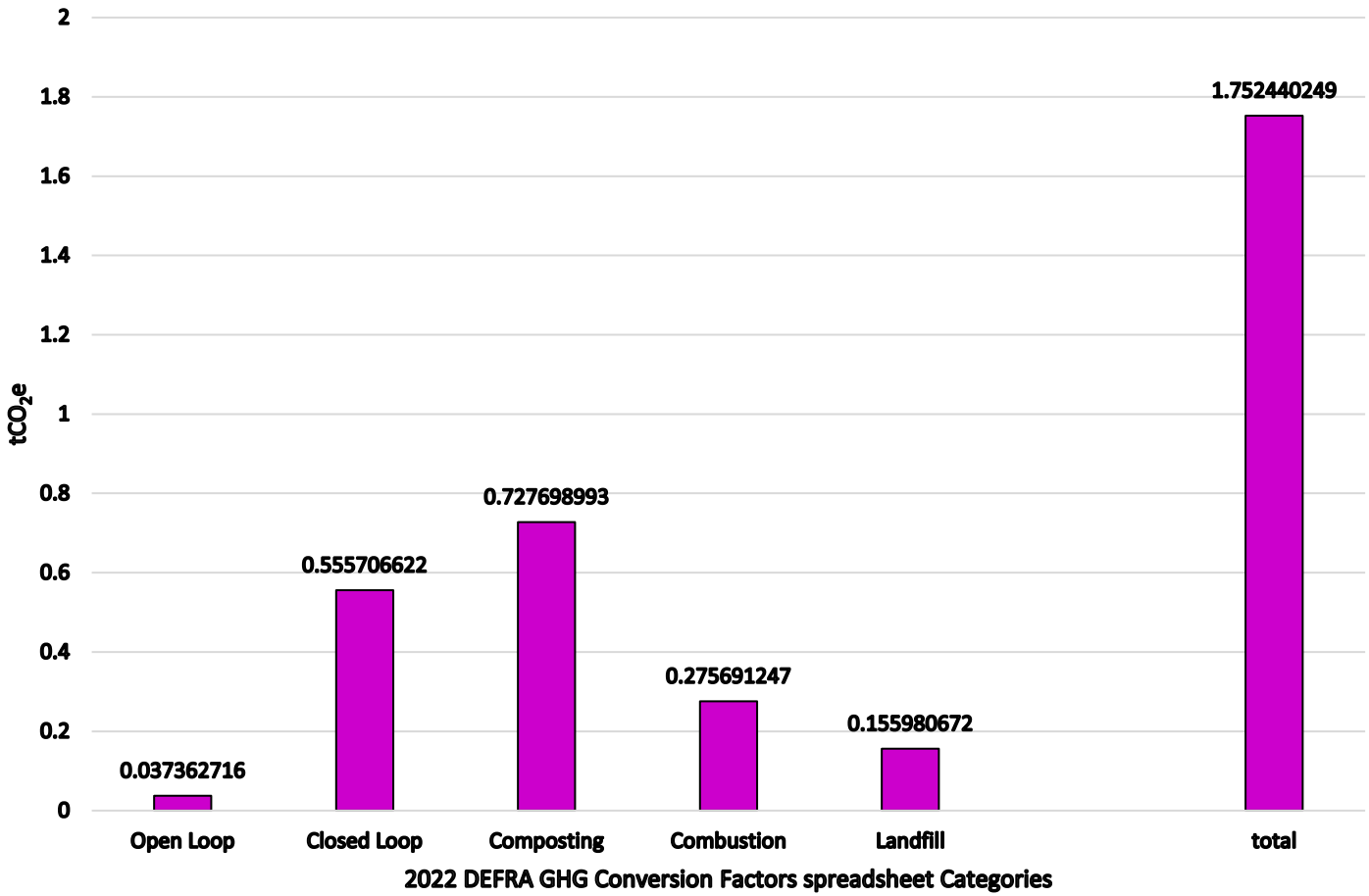


Graph #11: Bar Chart showing waste disposal emissions figures per waste contractor report categories

| | tCO ₂ e |
|--------------|--------------------|
| Recycled | 1.319561 |
| Landfill | 0.155981 |
| RDF | 0.276899 |
| | |
| Total | 1.75244 |

Table #15: Table showing Waste disposal emissions figures per waste contractor report categories

2022 Waste Disposal tCO₂e per Category



Graph #12: Bar Chart showing waste disposal emissions figures per DEFRA waste categories

| | tCO ₂ e |
|--------------------|--------------------|
| Open Loop | 0.037363 |
| Closed Loop | 0.555707 |
| Composting | 0.727699 |
| Combustion | 0.275691 |
| Landfill | 0.155981 |
| | |
| Total | 1.75244 |

Table #15: Table showing Waste disposal emissions figures per DEFRA waste categories

Analysis

WLL will follow the waste hierarchy as often as possible however once the waste is removed, the disposal method is at the discretion of the waste contractor. In reviewing the above, the highest contributing waste product is “Organic: garden waste” which has been re-categorised from Green Waste, emitting approximately 42% of all calculated waste emissions for 2022. Green waste is produced from regular maintenance works which form a large part of the business.

Categories derived from the Waste Contractors annual report, indicate that the majority of waste removed from Bridge Nurseries is being recycled, which is a positive removal method. Furthermore, when reviewing the data derived from the categories illustrated in Graph12, the majority of waste is composted which aligns with the primary waste category removed being Green Waste; additionally, Closed Loop recycling demonstrates that products recycled from Bridge Nurseries can be, and have been, recycled into the same or similar products.

Please note that choice of category is subjective and has been chosen by the author of this report; therefore, whilst the best efforts have been made to ensure that the correct waste is aligned with the correct disposal method, there could be some errors, which may skew the results, however any variance on category isn't likely to drastically alter the total emissions figures.

In future reports, the aim is to have a more comprehensive record of emissions resulting from waste removal, with the inclusion of information of waste removal from sites. Although there is no original figure to reduce from, emissions resulting from waste is considered a reduction priority for Scope 3 aspects.

Business Travel - Land

Business Travel – Land is defined as “travel for business purposes in assets not owned or directly operated by a business. This includes mileage for business purposes in cars owned by employees, public transport, hire cars, and so on.”

Please note that the figures detailed below include for train journeys, some tube journeys and private mileage claims; this section does not include for all tube journeys, taxi journeys, bus journeys and any private mileage not claimed.

Methodology

Mileage was sourced from expenses claims and multiplied by the relevant conversion factors depending on the type of transport; the result was then divided by 1000.

Results

| Transport type | tCO₂e |
|-----------------------|-------------------------|
| Train | 31.4608203 |
| Tube | 0.878559615 |
| Private Mileage | 24.2976 |
| TOTAL | 56.63697992 |

Table #17: Table showing Business Travel – Land emissions information

Analysis

Public transport use is the main contributor to this Scope 3 aspect, which isn't unexpected, with the figure expected to rise once more robust processes are in place allowing for more efficient and accurate recording. Public transport is the ideal method of transport for staff, especially with London sites so this won't be mitigated.

Private mileage is expected to reduce throughout subsequent reports with company cars changing to electric/hybrid vehicles.

Well-to-Tank

Well-to-Tank emissions can be defined as the “extraction, refinement and transportation of primary fuels” for each Scope 3 aspect.

Some Well-to-Tank figures are unavailable because information for the original Scope 3 aspect, that the Well-to-Tank figures are based on, haven’t been calculated.

Although Well-to-Tank figures are considered to be individual aspects, the figures are reported under one heading in this report.

Methodology

Original figures for each Well-to-Tank associated Scope 3 aspect have multiplied by the respective Well-to-Tank conversion factor; the result was then divided by 1000.

Overall Results

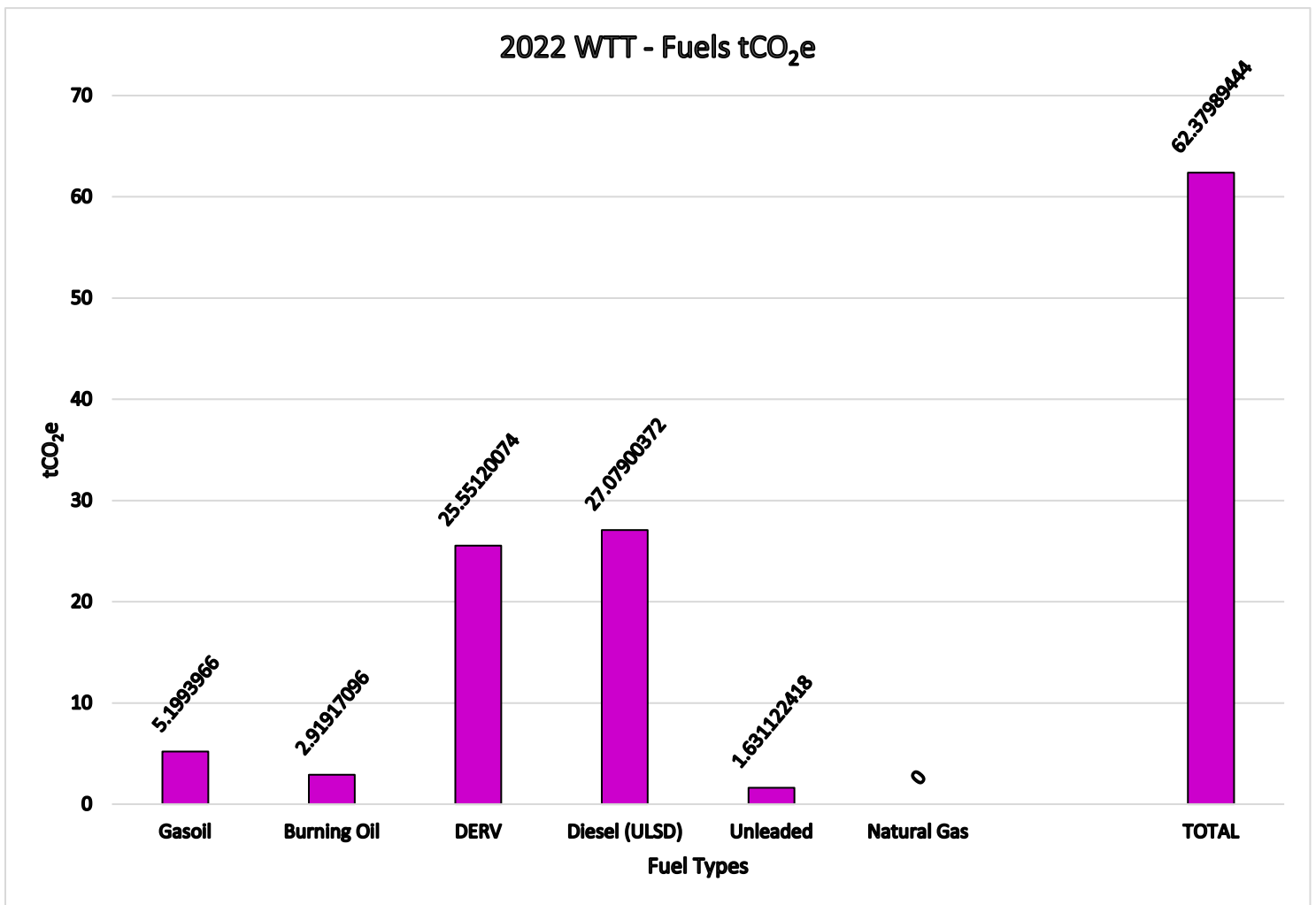


Graph #13: Bar Chart showing overall WTT emissions information

| | tCO ₂ e |
|-----------------------------------|--------------------|
| WTT - Fuels | 62.37989444 |
| WTT - UK Electricity (T&D) | 0.38532339 |
| WTT - UK Electricity (Generation) | 4.21305125 |
| WTT - Air | 0.140556 |
| WTT - Land | 8.13603486 |

Table #18: Table showing Overall WTT emissions information

Well-to-Tank – Fuels



Graph #14: Bar Chart showing emissions figures per WTT – Fuel type

| Fuel Type | Litres | 2022 conversion | | kgCO ₂ e | tCO ₂ e |
|---------------|----------|-----------------|--|---------------------|--------------------|
| | | factor | | | |
| Gasoil | 8220 | 0.63253 | | 5199.397 | 5.199397 |
| Burning Oil | 5528 | 0.52807 | | 2919.171 | 2.919171 |
| DERV | 41896.83 | 0.60986 | | 25551.2 | 25.5512 |
| Diesel (ULSD) | 44402 | 0.60986 | | 27079 | 27.079 |
| Unleaded | 2659.67 | 0.61328 | | 1631.122 | 1.631122 |
| Natural Gas | 0 | 0.03446 | | 0 | 0 |
| TOTAL | | | | | 62.37989 |

Table #19: Table showing emissions figures per WTT – Fuel type

Analysis

Well-to-Tank figures are entirely dependent upon the figures from associated Scope 3 aspects and cannot be influenced or directly reduced by any means; therefore, there is no analysis for this Scope 3 aspect.

OUTSIDE OF SCOPES

Outside of Scopes is defined as “biogenic CO2 factors that should be used to account for the direct carbon dioxide (CO2) impact of burning biomass and biofuels, including when reporting emissions from electricity consumption”.

Methodology

Litres of relevant fuel and kWh of electricity is multiplied by the relevant conversion factor; the result is then divided by 1000.

Results

| Fuel Type | Quantity | Conversion factor | kgCO₂e | tCO₂e |
|------------------------------|-----------------|--------------------------|--------------------------|-------------------------|
| Diesel | 86298.83 | 0.1102 | 9510.131 | 9.510131 |
| Petrol | 2659.67 | 0.08293 | 220.5664 | 0.220566 |
| Electricity Generated | 91093 | 0.115069242 | 10482 | 10.482 |

| | |
|--------------|----------------|
| TOTAL | 20.2127 |
|--------------|----------------|

Table #20: Outside of Scopes emissions information

Analysis

Outside of Scopes figures are entirely dependent upon the figures from associated Scope 1 and Scope 2 aspects and cannot be influenced or directly reduced by any means; therefore, there is no analysis for this aspect.

CONCLUSION

In conclusion, Scope 1 elements still present the largest area that reduction methods will need to target, and within that, reduction of or replacement of Diesel fuel with more efficient alternatives is the key factor in achieving the 2030 reduction target.

Although Scope 2 figures do not represent the same level of emissions, this does not mean that Scope 2 will be ignored; rather, achieving the targeted reduction value as soon as possible will prove to be a worthwhile towards the overall goal.

The addition of Scope 3 aspects within this report, although not all aspects have been calculated, demonstrates the bigger picture in terms of the emissions that WLL are directly responsible for as well as associated with; whilst not the priority target, any reduction in Scope 3 emissions will prove to be beneficial and opportunities should be taken when available.

END

Bibliography

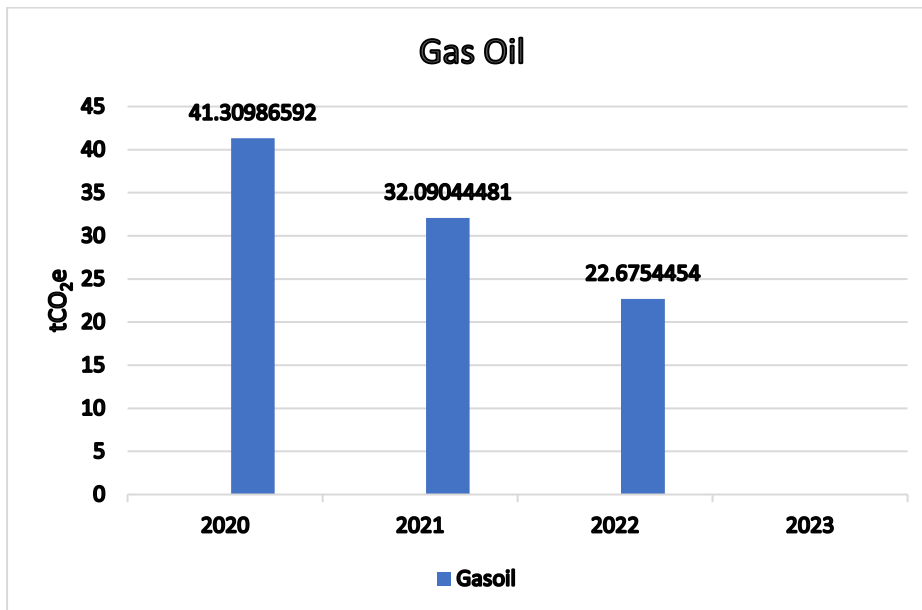
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APPENDIX A – Yearly Comparison Graphs for individual fuels (Scope 1)

| | 2020 | 2021 | 2022 |
|-------------------|--------------------|--------------------|--------------------|
| Fuel type | tCO ₂ e | tCO ₂ e | tCO ₂ e |
| Gasoil | 41.30986592 | 32.09044481 | 22.6754454 |
| Burning Oil | 13.37261296 | 8.38754228 | 14.04183864 |
| DERV | 167.5949453 | 87.15006463 | 107.1653876 |
| Diesel (ULSD) | 48.56806828 | 110.5550817 | 113.5732117 |
| Unleaded | 5.201838787 | 2.097027055 | 5.74980759 |
| Natural Gas (m3) | 1.52306298 | 0 | 0 |
| HVO Biodiesel | 0 | 0.03212874 | 0 |
| Electricity (kWh) | 16.87187552 | 11.85608254 | 17.61556434 |
| Total | 294.4422698 | 252.1683717 | 280.8212553 |

Table #21: Table comparing emissions from individual fuel and energy sources between 2020, 2021 & 2022

Gas Oil

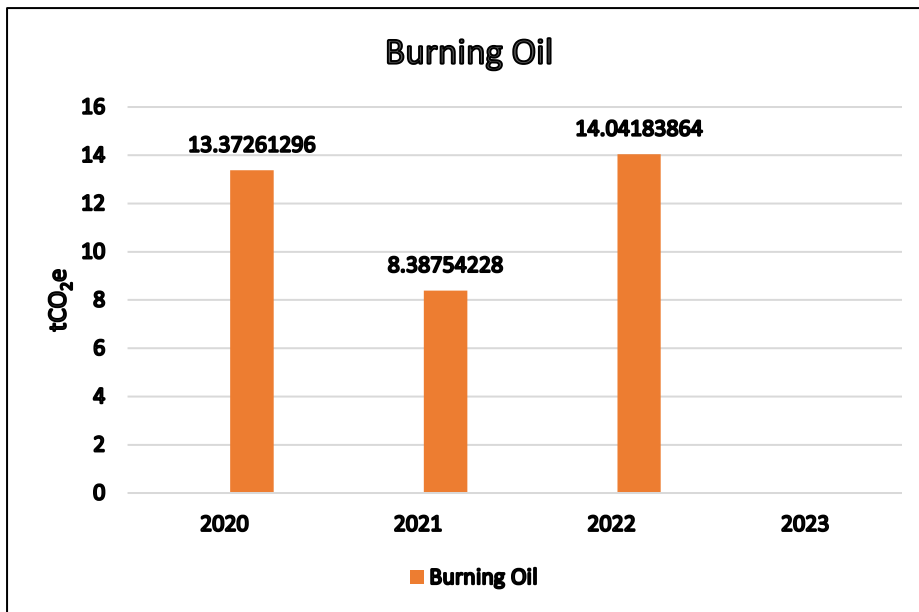


Graph #15: Yearly comparison of Gas Oil between 2020, 2021 & 2022

Approximate 19t reduction in tCO₂e between 2020 and 2022

Approximate 10t reduction in tCO₂e between 2021 and 2022

Burning Oil

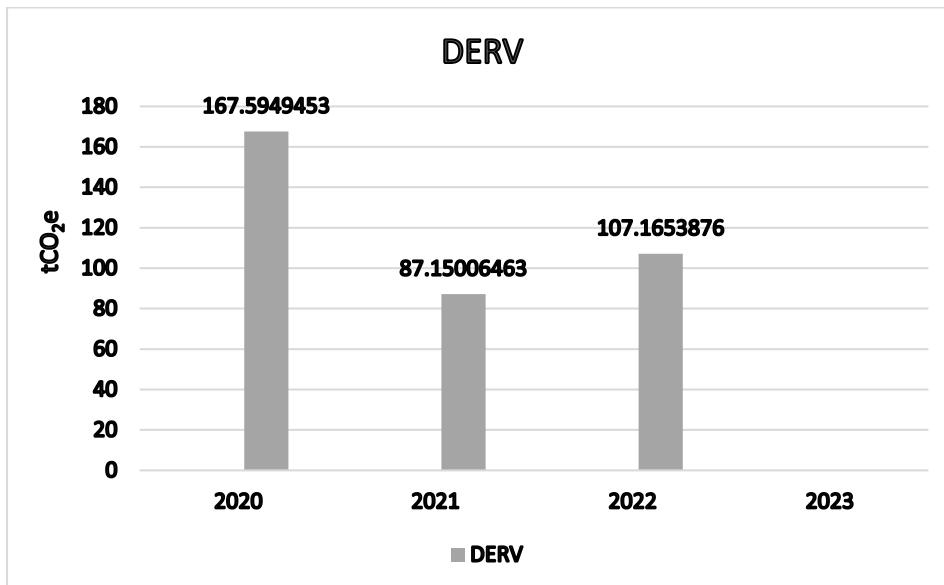


Graph #16: Yearly comparison of Burning Oil between 2020, 2021 & 2022

Approximate 1t increase in tCO₂e between 2020 and 2022

Approximate 6t increase in tCO₂e between 2021 and 2022

DERV

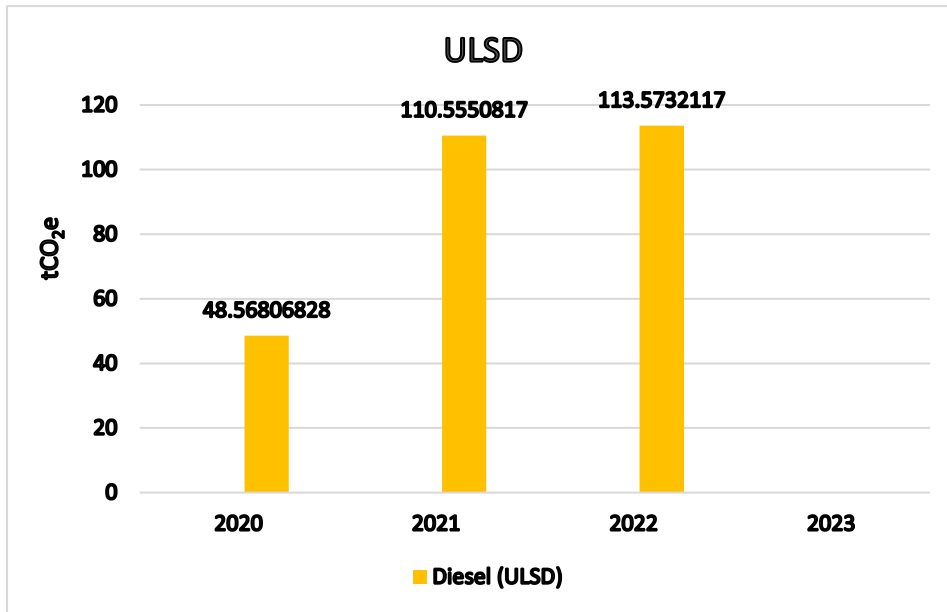


Graph #17: Yearly comparison of DERV between 2020, 2021 & 2022

Approximate 60t reduction in tCO₂e between 2020 and 2022

Approximate 20t increase in tCO₂e between 2021 and 2022

Diesel (ULSD)

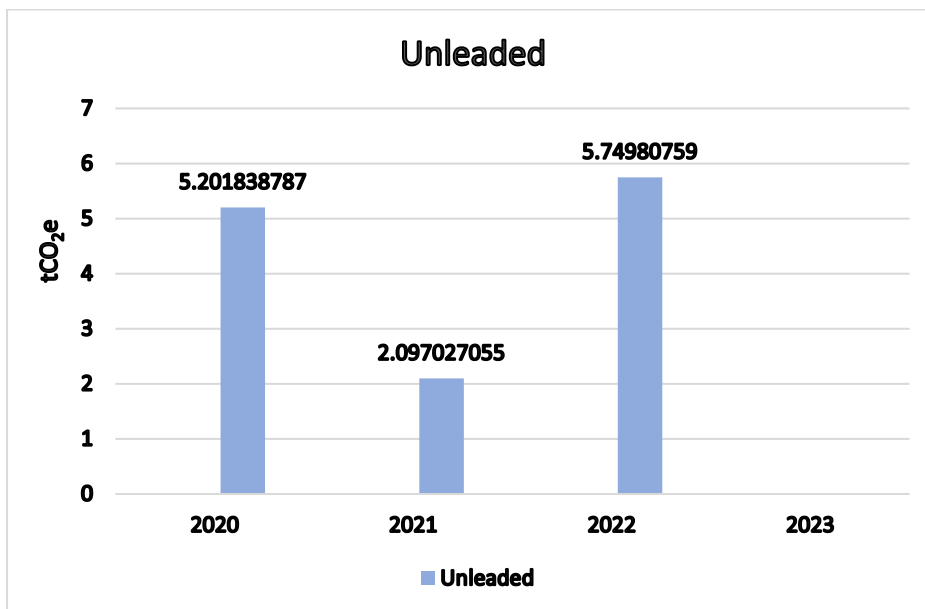


Graph #18: Yearly comparison of ULSD between 2020, 2021 & 2022

Approximate 66t increase in tCO₂e between 2020 and 2022

Approximate 3t increase in tCO₂e between 2021 and 2022

Unleaded

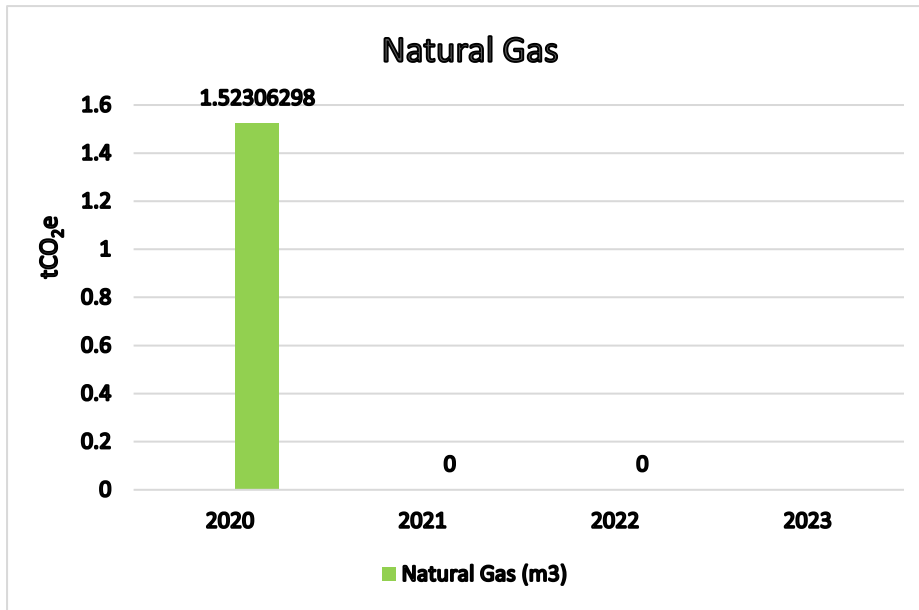


Graph #19: Yearly comparison of Unleaded between 2020, 2021 & 2022

Approximate 0.5t reduction in tCO₂e between 2020 and 2022

Approximate 3.5t increase in tCO₂e between 2021 and 2022

Natural Gas

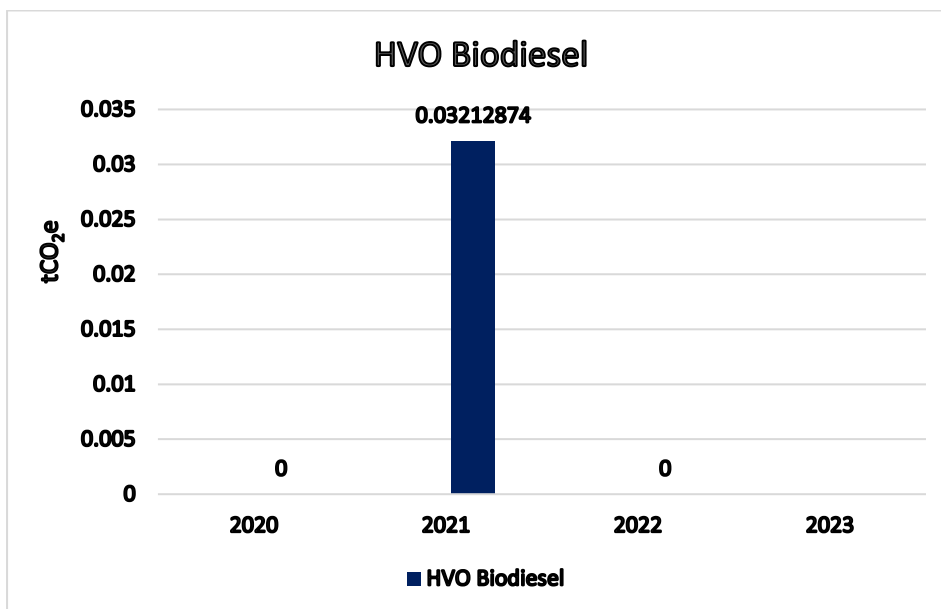


Graph #20: Yearly comparison of Natural Gas between 2020, 2021 & 2022

Total reduction in tCO₂e between 2020 and 2022

No change in tCO₂e between 2021 and 2022

HVO Biodiesel



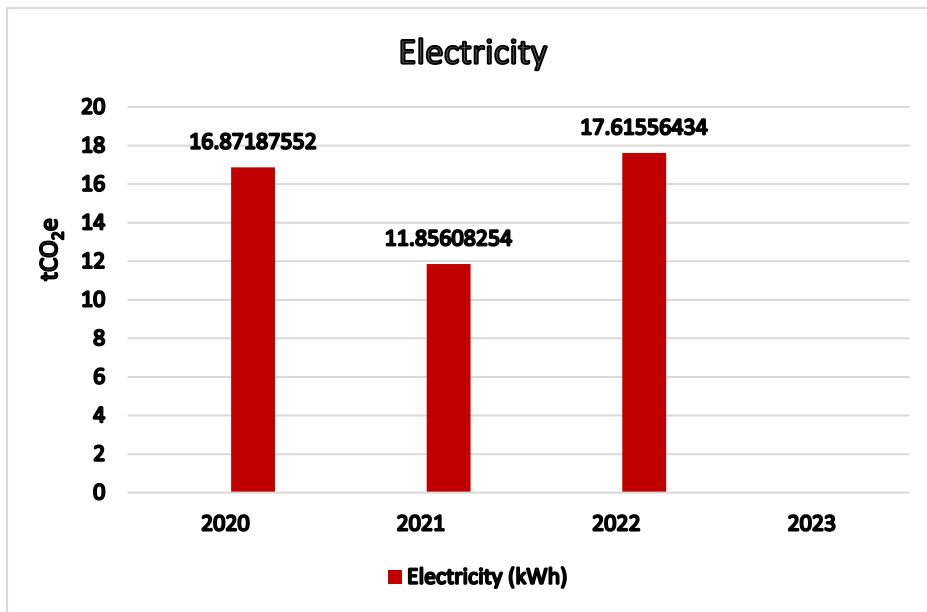
Graph #21: Yearly comparison of HVO Biodiesel between 2020, 2021 & 2022

Total increase in tCO₂e between 2020 and 2021

No change in tCO₂e between 2020 and 2022

Total reduction in tCO₂e between 2021 and 2022

APPENDIX B – Yearly Comparison Graphs for individual fuels (Scope 2)



Graph #21: Yearly comparison of Unleaded between 2020, 2021 & 2022

Approximate 1t increase in tCO₂e between 2020 and 2022

Approximate 6t increase in tCO₂e between 2021 and 2022