

### **1. Introduction**

Frosts Landscape Construction is dedicated to protecting the environment by demonstrating high standards of environmental responsibility in all our operations and minimising the environmental impacts associated with our business activities, products and services. As a Landscaping company our carbon emissions are relatively low compared to many Construction Industry companies; however, we recognize that they're our biggest environmental impact, and we want to play our part in contributing to the UK Government's targets of cutting greenhouse gases by 37% by 2020 and 80% by 2050, against 1990 levels.

### **2. Targets**

We understand the importance of trying to decarbonise our business in line with government guidance and deadlines and as one of the main Landscaping Companies in the UK we have set ambitious goals for our operations to become carbon neutral by 2026, well ahead of the Governments current target. To achieve this we will measure our carbon emissions annually from 2020 and then set strategic targets to reduce our footprint each year, compared to the same original baseline. Our current Targets are to:

- Measure our carbon emissions annually starting in 2020
- Understand what is measured in Scopes 1, 2 and 3 and then set a realistic but challenging strategy for reducing our carbon emissions in each scope
- Reduce our total operational carbon emissions (273.23 mTCO<sup>2</sup>) by 80% over the next 4 years
- Reduce carbon emissions from our business travel by 80% over the next 4 years
- To improve on the government carbon neutral deadline of 2050 and become a carbon neutral company by 2026 including the offset the remainder of our carbon emissions using a creditable and recognized carbon offset scheme
- To ensure legislative compliance and demonstration of best practice

### **3. Strategy**

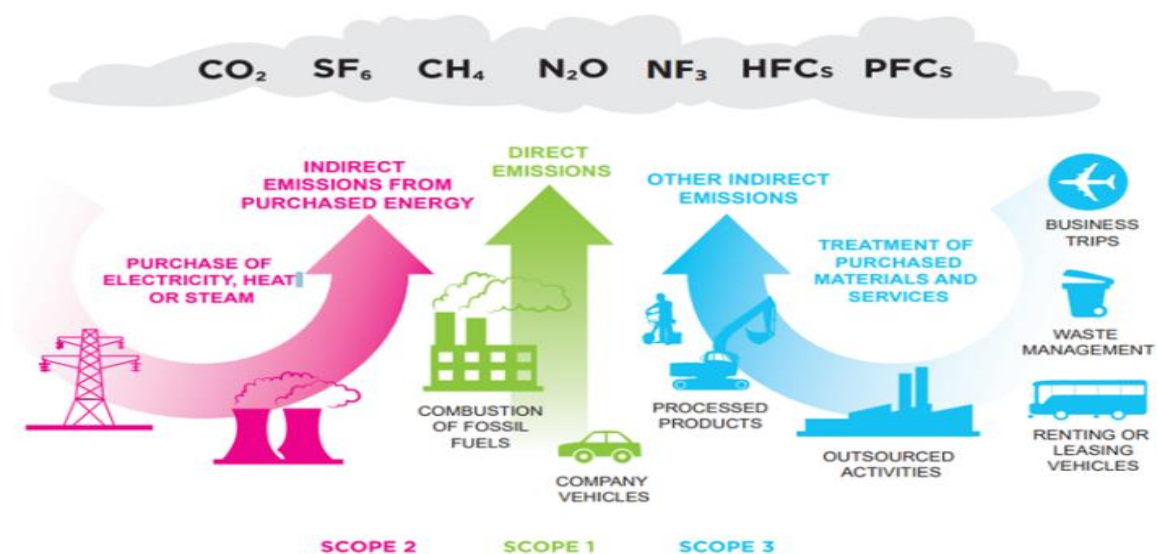
Our carbon management high level strategy involves:

- Publishing of our current carbon emissions on our website
- Implementing, communicating and maintaining this policy across the company and to make it available to all interested parties
- To set new targets annually and regularly review our objectives and targets
- To analyse our performance against these objectives
- Liaise with our landlord and Energy Provider and initiate a program so that a greater percentage of the electrical energy used in our main office is from verified renewable sources. Target 100% by 2024. Target Achieved 30/04/22 Frosts Office Energy Supplier changed to SSE 100% renewable electricity MPAN:1012392932229, Tender 2250252, REGOs registered
- Improve operational efficiencies and invest in innovative technologies and approaches to reduce our resource consumption and the waste we generate
- Stop unnecessary business travel by encouraging our people to adopt new technologies to collaborate with colleagues and clients remotely (Zoom/Teams)

- To work with our suppliers to understand the opportunities to improve our supply chain footprint
- To select material based on EPD data so that we can assist our clients in realising their targets for low embodied carbon buildings and landscapes
- To share our knowledge of carbon accounting, management, and reporting experience with our Clients and across our networks to accelerate best practice within the Landscaping Industry
- To ensure strategic decision making by the Board of Directors to improve operational practices to help aid decarbonising our business
- Investment of appropriate resources and information to achieve our objectives and targets
- To improve the energy efficiency of our buildings and IT systems
- To ensure the correct level of training and support for our staff to inform and empower them to implement carbon neutral solutions at work and at home
- To work with our clients to achieve aligned carbon neutral goals
- To embrace external initiatives within our industry so that we learn, share best practice and collaborate to champion positive environmental change
- To ensure we always apply a waste hierarchy of Prevent, Re-use, Recycle, Recover and Dispose
- To consider carbon offsetting for our remaining residual carbon emissions

#### 4. Measuring

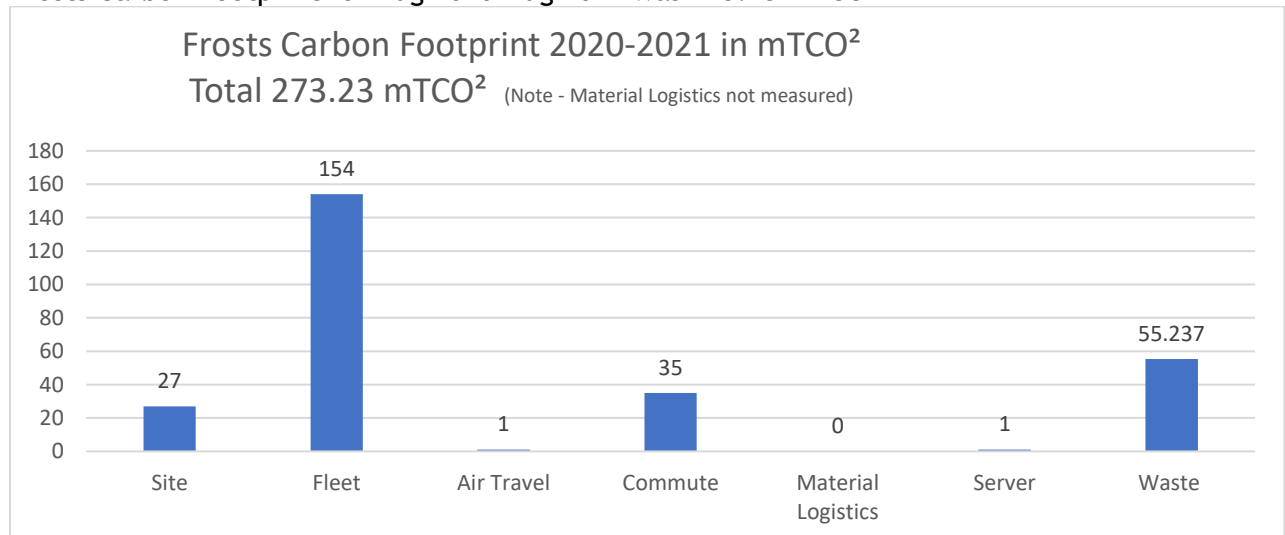
To accurately measure and reduce our Carbon Emissions Frosts shall utilise the models detailed within the Greenhouse Gas Protocol (GHGP). Under the GHGP an organisations carbon emissions are broken down into 3 scopes as detailed in the basic indicative diagram below



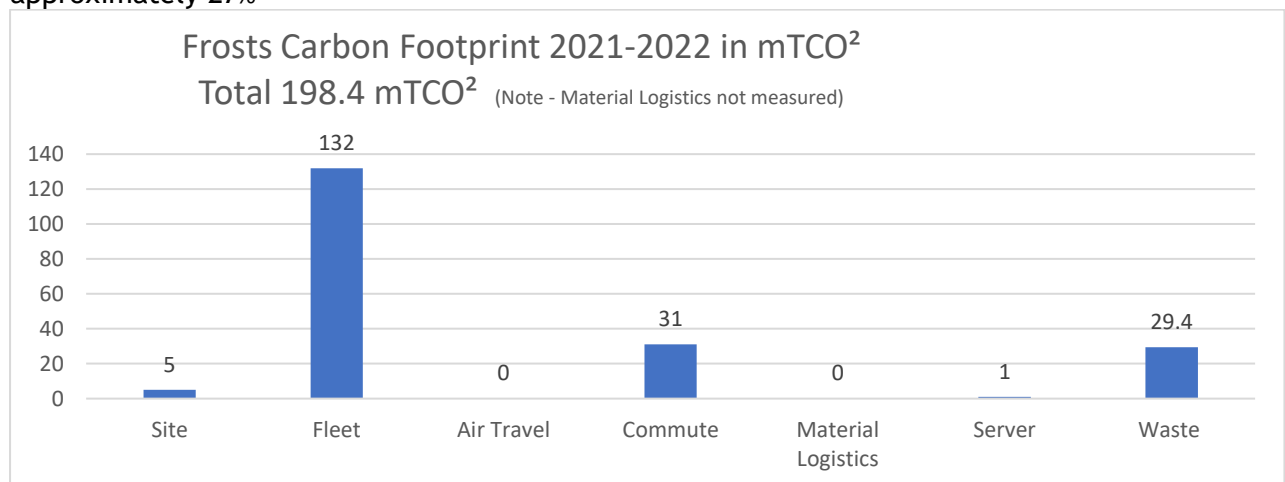
Measuring greenhouse gas emissions is far from straightforward. The Greenhouse Gas Protocol (GHGP) was developed by the World Business Council for Sustainable Development and the World Resources Institute to formalise the process. Under the GHGP all organisations carbon footprints must measure Scope 1 & 2 emissions in full however there is more flexibility in Scope 3 emissions with companies being permitted to choose which Scope 3 emissions to measure as not all sources of carbon emissions from Scope 3 can be influenced by a company with many of these emissions out of its direct control. Initially Frosts shall measure all of Scope 1 and 2 emissions and also measure waste generated by our operations, fuel and energy related activities and business trips from Scope 3 as these are all under Frosts direct control. It is anticipated that further targets for Scope 3 will be introduced as Frosts become more adept at controlling and reducing our current carbon emissions from our own operations and also understand ways to reduce this impact with our key suppliers.

### 5. Carbon Footprint

Frosts Carbon Footprint for Aug 2020-Aug 2021 was 273.23 mTCO<sup>2</sup>



Frosts Carbon Footprint for Aug 2021-Aug 2022 was 198.4 mTCO<sup>2</sup> this is a reduction of approximately 27%





## Frosts - Net Zero Carbon Policy Reviewed Jan 2023

### 6. Measuring Assumptions & Omissions

The following assumptions were used when calculating Frosts Carbon Footprint:

- Vehicle MPG figures and CO<sub>2</sub> (g/km) were taken from information on the Internet
- Material Logistics (Upstream/Downstream) were not measured
- An internet base Carbon Calculator was used

### 7. Offsetting our Emissions

While we aim to significantly reduce our carbon emissions, the remaining emissions we produce will still contribute to climate change therefore we will consider offsetting them to achieve carbon neutrality by:

- purchasing credits from verified carbon offsetting projects
- potentially looking to register the trees and whip we plant in our landscaping operations against our carbon footprint as an offset
- becoming more involved in potential UK “Wilding” projects.

### 8. Supply Chain - Carbon Emissions

Each year we will ask our key suppliers to provide us with information which allows us to assess their environmental performance. We will set a target for 50% of our key suppliers to have net zero carbon emissions targets by 2030.

### 9. Frosts Carbon Reduction Plan 2019 to 2026 (Updated Nov 22)

Action	Implementation Date	Comments
Move company premises from Wain Close with an Energy Performance Certificate rating of D to a more environmentally efficient local site with an Energy Performance Certificate rating of B or better	Completed June 2019 - Move from an old low energy efficient building at Wain Close (MK17 8UZ) in Woburn Sands to Liscombe Business Park (LU7 0JL) EPC Cert obtained rating B	<b>NFAR (No further action required)</b>
Change office heating from gas fired boiler fuel to an energy efficient Air-con & Heat Pump System	Completed in June 2019 as part of the move to Liscombe Business Park. Air-conditioning and Heat Pump System is an energy efficient system. Refrigerant Gas is R410A which is Montreal Protocol compliant	<b>NFAR</b>



## Frosts - Net Zero Carbon Policy Reviewed Jan 2023

Action	Implementation Date	Comments
Set up a green waste recycling scheme at our head office yard to recycle all green waste produced by our Grounds Maintenance Landscaping operations	Completed in June 2019. Continue with a 100% recycling of green waste	<b>NFAR</b>
Start to replace Frosts owned 2 stroke Grounds Maintenance Machines with Battery Operated Machines	<ul style="list-style-type: none"> <li>• Started July 2019 and then ongoing.</li> <li>• Stihl Battery operated Strimmers, Blowers and Mowers purchased and trialed ok</li> <li>• Continue replacing engine driven machines with battery machines.</li> </ul>	Estimated completion 2026
Start to replace Frosts 2 stroke and diesel small Construction Machines with Battery Operated Machines and 110V machines	<ul style="list-style-type: none"> <li>• Started July 2019 and then ongoing.</li> <li>• Stone Cut off Saws replaced with Stihl Battery operated machines.</li> <li>• Ongoing replacements in hand:</li> <li>• Whacker Plates to Battery Operated</li> <li>• All Cement Mixers to 110V</li> </ul>	<ul style="list-style-type: none"> <li>• Estimated completion 2026</li> </ul>
Install two electrical vehicle charging points at our head office	Completed Jul 2019 and in use with higher level management Hybrid vehicles (KO67KPP & KX65ZVR)	<b>NFAR</b>
Install thermally efficient film to all office windows to reduce heat loss & thermal loading reducing heating and air conditioning bills	<p>Completed Nov 2019.</p> <p>Thermally efficient glass film installed to all office windows:</p> <ul style="list-style-type: none"> <li>• Solar Energy Rejected 39%</li> <li>• Solar Energy absorbed 48%</li> <li>• UV protection to 99%</li> <li>• Glare protection to 77%</li> </ul>	<b>NFAR</b>



## Frosts - Net Zero Carbon Policy Reviewed Jan 2023

Action	Implementation Date	Comments
Encourage office staff "Working from Home" where possible to reduce staff travel to work	<ul style="list-style-type: none"> <li>Started Jul 2020 and ongoing</li> <li>Continue with Frosts flexible working policy that allows staff to work from home when required</li> <li>Monitor and measure the amount of days that office staff work from home.</li> </ul>	Establish a datum point and then set further realistic targets that do not impact on office/company operational efficiency
Reduce unnecessary travel for meetings with Clients, Designers, Architects and Suppliers	<ul style="list-style-type: none"> <li>Started Jul 2020 - Frost recognize that many meetings can be held effectively using MS Teams or Zoom rather than being held face to face.</li> <li>Reduce travel to management meetings by 50% Completed Jul 2022</li> </ul>	Continue to reduce unnecessary travel to meetings by a further 25% by 2026 – On Target
Reduce Company Van Emissions	<ul style="list-style-type: none"> <li>Rationalise Frosts Van fleet from 17 to 12 Completed Jul 2020</li> <li>Replace all Frosts vans with Euro 6 compliant (Add Blue) engine vans that have the lowest emissions and are ULEZ Compliant. Completed Jul 2020</li> <li>Ensure at least 3 vans have 6 seat capacity rather than 3 seats to reduce overall van travel by approximately 30%. Completed Jul 2020</li> </ul>	Replace at least 50-75% of Frosts Van Fleet with electrically driven vans in 2024 – On Target
With immediate effect cease to hire any diesel-powered site welfare cabins	<ul style="list-style-type: none"> <li>Started Aug 21 and ongoing</li> <li>Hire Garic Combi Cabin Eco Series Plus Solar/battery operated welfare cabin or similar alternative</li> </ul>	<b>NFAR</b>
Continue with our existing waste strategy to reduce waste - (Avoid, Reduce, Reuse, Recycle, Recover, Treat, Disposal)	<ul style="list-style-type: none"> <li>Aug 2021 and ongoing</li> <li>Continue with the recycling of green waste, site won soils, pallets, paper.</li> </ul>	Try to identify potential plant pot recycling scheme to be used by Frosts - Dec 22 and ongoing
Change Frosts Office Energy to a recognized Green Supplier (Renewable Energy Guarantees or Origin REGOs)	<ul style="list-style-type: none"> <li>Completed Apr 2022</li> <li>100% CO<sup>2</sup> saving achieved</li> <li>Frosts Office Energy Supplier changed to SSE 100% renewable electricity MPAN:1012392932229, Tender 2250252, REGOs registered, expires 30/04/24</li> </ul>	Renew REGOs registered Office electricity supply in Apr 2024 and ongoing. Must be 100% renewable electricity



## Frosts - Net Zero Carbon Policy Reviewed Jan 2023

Action	Implementation Date	Comments
Utilize Hydrotreated Vegetable Oil (HVO) in all site plant going forward	<ul style="list-style-type: none"> <li>• HVO is a 100% renewable fuel that reduces plant/engine CO<sup>2</sup> emissions by as much as 90%</li> <li>• Effective Jul 2022 where possible Frosts will ensure that all site based machinery that is not electric/hybrid or hydrogen is run on HVO fuel providing Frosts with a 90% CO<sup>2</sup> saving on all construction plant</li> <li>• Continue the use of HVO on site plant going forward</li> </ul>	NFAR
Replace the Commercial Directors Diesel Car with an Electric or Hybrid vehicle	<ul style="list-style-type: none"> <li>• In Hand - Completion due Mar 2023</li> <li>• Ensure all company cars that are already Hybrid or Electric are replaced when necessary with Hybrid or Electric vehicles. Frosts not to permit the return to Petrol or Diesel only vehicles</li> </ul>	Monitor
Net Zero Certification	<ul style="list-style-type: none"> <li>• Obtain a science based Net Zero Certification from a recognised awarding body such as Achilles. Target Jul 2024</li> </ul>	Monitor existing progress and achieve certification by Achilles







**Ken White**

**Managing Director**









**Reviewed 16/01/2023**



**Annex A** - Phasing Out of Existing Frosts small petrol driven machinery for battery operated machinery - Timing is 2026 as old equipment needs replacing, but by 2030 at the very latest

Existing Equipment	Identified replacement
<p>Existing Frosts Stihl 2 stroke Petrol Blowers BR550, BR600, BG86</p> 	<p>Replace with Battery Operated BGA 86 and AR3000l Battery Backpack and BGA200 Blower</p>  <p>Consider Pallenc Alternative</p>
<p>Existing Stihl HS81R and HS81T Petrol Hedge Cutters</p> 	<p>Replace with Battery Operated HSA94R and HAS 94T Hedge cutter with AR3000l Battery Backpack</p>  <p>Consider Pallenc Alternative</p>
<p>Existing Stihl FS410 Petrol Strimmer's and Brushcutters</p> 	<p>Replace with Battery Operated FSA135 Strimmer and Brushcutter with AR3000l Battery Backpack</p>  <p>Connecting cable sold separately</p> <p>Consider Pallenc Alternative</p>



Existing Equipment	Identified replacement
<p>Existing Stihl HL94 or HL100 Petrol Long Arm Hedge Cutters</p> 	<p>Replace with Battery Operated HLA135 Long Arm Hedge Cutters with AR3000L Battery Backpack</p>  <p>Consider Pallenc Alternative</p>
<p>Existing Stihl TS410 Stihl Petrol Stone Saw</p> 	<p>Replace with Battery Operated Stihl Battery Operated TSA230 Stone Saw</p> 
<p>Existing Shatal Euro PC1113 and Belle PCLX 320 Wacker Plates to be phased out</p> 	<p>When required hire in Wacker Neuson AP1850e or AP1840e Battery Operated Wacker Plates</p>  <p>AP1840e, AP1850e</p>
<p>Existing Belle 150 Petrol Cement Mixer (Qty 1 remaining at Frosts)</p> 	<p>Scrap the last remaining item or replace with Belle 150 110Volt Cement Mixer</p> 

### Annex B - Potential Clean Tech Machinery to Hire instead of existing Diesel or Petrol items that Frosts currently hire in



#### COMBI CABIN ECO SERIES+

A HISTORY OF INNOVATION



#### KEY FEATURES:

- Anti-vandal steel constructed units
- Canteen for 8 operatives & single person office
- Completely solar powered no need for a back up generator
- Inclusive of all lighting, heating and hot water
- Eco-flush W.C and urinal
- Drying/Changing Room and shower
- Instant boiling water, fridge freezer and microwave
- Reduce fuel bills by up to £150 per week

#### JCB 19C-1e Mini Excavator



Operating weight	1,902 kg
Max dig depth	2,819 mm
Max dump height	2,818 mm
Battery	4 battery: work for 5 hours on a standard application (equivalent to a full day). 3 charging options: 110V (10 hours, 230V (5 hours), 415V
Swing angle	/

#### TB216 Mini Hybrid Excavator



Operating weight	1,905 kg
Max dig depth	2,390 mm
Max dump height	2,705 mm
Battery	400volts / 50 Hz / 32Amp
Rated output diesel/electrical (kW)	10.6 / 11.1
Swing angle	80°/50°

#### Annex B Cont'd - Potential Clean Tech Machinery to Hire instead of existing Diesel or Petrol items that Frosts currently hire in

##### Kobelco SK210H-LC Large Excavator





Operating weight	22,100 - 23,100 kg.
Max dig depth	6.70 m
Max dump height	6.91 m
Battery	12.3% reduction in fuel consumption.
Rated output diesel/electrical (kW)	124

##### Komatsu HB365LC-3 Hybrid Hydraulic Excavator



Operating weight	36,400 – 37,350 kg
Max dig depth	6.355m— 8.180m depending on arm length
Max dump height	6.595m—7.49m depending on arm length
Battery	20% fuel savings. Up to 53 kW extra electric power
Rated output diesel/electrical (kW)	202

##### ITE electric dumper



Payload	1,000 kg
Unladen load	
Battery capacity	80 Ah
Skip width	980 cm
Battery charging	Indicative Charge Time - 20-80%, subject to environmental conditions. 2hr 35min (@230V) Off-board fast charge - 0-100% @ 415V : 1hr 40min Charging cable plug type: 16A 110V (yellow) 16A 230V (blue) 16A 415V (red)

##### Electric compact telehandler 525-60E



Lifting capacity	2,500 kg
Operating height	6 m
Operating weight	5,200 kg
Terrain	Any
Battery life and charging	On-board charging 3kW (240V / 16A) : 25 - 80%: 5hrs 0 - 100%: 8hrs Rapid charging 18kW (415V / 32A): 25 - 80%: 60mins 0 - 100%: 110mins



### Annex B Cont'd - Potential Clean Tech Machinery to Hire instead of existing Diesel or Petrol items that Frosts currently hire in

#### Towerlight VT-Hybrid 9M LED Lighting Tower







Operating weight	1,230
Max Mast Height	8.5 m
Dimensions	L x W deployed: 3,250 x 2,100 mm
Lamp specification	4 x 150w LED floodlights
Lumens	76,500

**Annex C - Current Frosts Machinery where no low emission machinery of similar output/productivity/power is currently available**

Existing Equipment	Comments on replacement
<p>Etesia PHG &amp; PHE 46 Mower</p> 	<p>Frosts have trialed Viking and Stihl battery mowers and none are robust enough to cut long wet grass or shrub. Trail Etesia Duocut 46 PAC, PACTS &amp; PABCTS Battery Operated Mowers when they become available with the new battery technology due in late 2022</p> 
<p>Hayter Harrier 56 Mower with rear roller</p> 	<p>Continue to monitor the market for commercial off the shelf battery mowers with a rear roller that are robust enough to replace these mowers. Note - Hayter Harrier 48VS, 60Volt Battery mower does have a rear roller and potential as a replacement but is currently considered too small for large lawns</p> 
<p>Camon C2000 Tiller/Rotovator</p> 	<p>No commercially available alternative currently available with enough power to replace this item. Monitor the marketplace/suppliers for newly released alternatives with sufficient power</p>




**Annex C Cont'd-** Current Frosts Machinery where no low emission machinery of similar output/productivity/power is currently available

Existing Equipment	Comments on replacement
<p>Camon/Tracmaster BCS740 Rotovator</p> 	<p>No commercially available alternative currently available with enough power to replace this item. Monitor the marketplace/suppliers for newly released alternatives with sufficient power</p>
<p>Stihl Auger B120 &amp; B131</p> 	<p>No commercially available alternative currently available with enough power to replace this item. Monitor the marketplace/suppliers for newly released alternatives with sufficient power</p> <p>Ryobi 40Volt 8-inch auger has some potential in soft ground but does not compare to the Stihl Auger BT121</p> 
<p>Honda WB20XT High Pressure Water Pump</p> 	<p>No commercially available alternative currently available with enough power to replace this item. Monitor the marketplace/suppliers for newly released alternatives with sufficient power</p>



**Annex C Cont'd-** Current Frosts Machinery where no low emission machinery of similar output/productivity/power is currently available

Existing Equipment	Comments on replacement
<p>Camon TC07 Turf Cutter</p> 	<p>No commercially available alternative currently available with enough power to replace this item. Monitor the marketplace/suppliers for newly released alternatives with sufficient power</p>