Management Report
Environmental
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Building
The building is of cavity brick construction, with metal truss frame supporting metal walls and a boarded felt roof, as shown below.

The building was originally built in the 1950’s
The main site at Letchworth is shown below, and consists of a main factory with a high roof, and a 2 story area, which has the production / engineering offices on the ground floor, upstairs hosts technical services, customers services, Finance and HR.

Energy Use
Ellab Monitoring Solutions has the following:

1. Gas supply
2. 3 Phase Electric supply
3. 230V A.C Electric Supply
4. Electric Supply : British Gas
5. Gas Supply : CNG
Gas
There are 3 pieces of equipment that are Gas powered.

Reznor floor heater Model No PVE (Manufactured 2019)
This is the best performance air heater of its type

Powermatic Floor standing heater Manufactured (1990)
This is in need of replacement, and when it does stop working it will be replaced with a Reznor PVE

Ideal Concord boiler (manufactured 2016)
Ideal’s Concord CXA range is a small atmospheric gas boilers for commercial or industrial applications. The CXA incorporates on/off automatic ignition via an intermittent pilot. Its new modern control fascia incorporates warning lights for boiler on; overheat lockout and burner lockout. Inside, new gas valves and controls are factory fitted as standard. The boiler incorporates high/low operation to provide greater system efficiency.

Gas consumption:

Billed 12 Month Gas Consumption = 161.615KWh

Action taken to reduce gas consumption:
Our gas consumption has started to increase, due to our increased working hours and extra weekend working, enabling us to supply product that down has increased demand.
We are currently trying to move the air ducts to give us maximum heat, with reduced use of the boilers, this is an ongoing trial that will take a few weeks / months to see the effect.

Electricity
Equipment used in the factory and offices
Lighting
We mainly use traditional Fluorescent lighting throughout all parts of the building with the exception of some newer parts of the building that have been updated in recent years to LED lighting.

<table>
<thead>
<tr>
<th>Light type</th>
<th>Qty</th>
<th>Power</th>
<th>Total Watts</th>
<th>Ballast running Watts</th>
<th>Grand Total Watts</th>
</tr>
</thead>
<tbody>
<tr>
<td>6ft Lights</td>
<td>166</td>
<td>70</td>
<td>11620</td>
<td>1162</td>
<td>12782</td>
</tr>
<tr>
<td>5ft Lights</td>
<td>35</td>
<td>58</td>
<td>2030</td>
<td>203</td>
<td>2233</td>
</tr>
<tr>
<td>4ft Lights</td>
<td>36</td>
<td>36</td>
<td>1296</td>
<td>129.6</td>
<td>1425.6</td>
</tr>
<tr>
<td>2ft tubes</td>
<td>56</td>
<td>18</td>
<td>1008</td>
<td>100.8</td>
<td>1108.8</td>
</tr>
<tr>
<td>Led Panels</td>
<td>7</td>
<td>36</td>
<td>252</td>
<td>0</td>
<td>252</td>
</tr>
<tr>
<td>Total Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17801.4</td>
</tr>
</tbody>
</table>

All lights on 8Hrs per Day therefore 142.41 KWh are used daily on lighting.

Improvements:
1) Swap to LED lighting, this would give an overall reduction from 142 KWh to 48KWh.
2) Fit PIR detectors to lights not frequently used.

Personal Computers
We have 67 PC’s in use within the company, the Computers we use.

A workstation’s energy consumption varies based on what mode it is in. There are the following modes:

Off/Standby – the lowest power consumption mode; the computer is connected to main electricity but requires a complete boot to.

Wake.Active – the mode in which the computer, while connected to a power source, is producing useful work; for example, running typical application software.

Idle – the state in which the operating system and other software have completed loading, the machine is not asleep, and activity is limited to those basic applications that the system starts by default.

Sleep – a low power state that a computer enters automatically after a period of inactivity or by manual selection. A computer in sleep mode can quickly “wake” in response to inputs from network connections or user interface devices.

Each mode uses a different amount of energy. It is best to take an average power value over a period of time for each operating mode. This accounts for variations in power loading as the computer executes applications and tasks. For idle power, wait 15 minutes, without starting applications, after the operating system has finished loading.

As an average power consumption of a Ellab Monitoring Solutions PC is 120Watts, the average computer is on for 10 Hours giving a total KWh.

67 PC’s running 10Hrs at 120 Watts = 80KWh per day

Improvements
1) As each PC is replaced a more energy efficient PC is bought as a replacement.
2) Set each pc to have best power settings and to be powered from a smart Strip power extension socket.

Server Room
We have 4 servers in use within the company, and as per the PC’s that are used within the company the power consumption is very dependent upon there usage, they take a minimum of 97W and a maximum of 150W, we will take an average of 100W over 24Hrs , we also have 3 switches that take an average of 80W. It is critical that the temperature in the server room is held...
below 20°C for the longevity of the servers, so we have a air conditioning unit fitted to the server room. This gives us a total of Servers 9.6KWh + Switches 5.7KWH + Air Conditioning unit 3.5KW 2.8KWh
Server Room = 18.1KWh per day

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Model</th>
<th>Average daily usage (^{“on power cycle”})</th>
<th>Power KWH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler ( water)</td>
<td>Marco 2.8KW</td>
<td>4</td>
<td>11.2</td>
</tr>
<tr>
<td>Kettle</td>
<td>2550-3000W</td>
<td>0.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Microwave</td>
<td>Sharp 1.2KW</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Microwave</td>
<td>Sharp 1.2KW</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Toaster</td>
<td>Morphy Richards 1580-1880W</td>
<td>0.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Dishwasher</td>
<td>Kenwood 1760-2100W</td>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td>Fridge</td>
<td>Lec</td>
<td>5</td>
<td>3.5</td>
</tr>
<tr>
<td>Fridge</td>
<td>Lec</td>
<td>5</td>
<td>3.5</td>
</tr>
<tr>
<td>Water cooler</td>
<td>BORG &amp; OVERSTROM 95W</td>
<td>5</td>
<td>4.75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>30.15</strong></td>
</tr>
</tbody>
</table>

Printers
We have 17 Printers in the factory all for many different uses, Laser printers and fax machines in particular are energy spendthrifts. A typical multifunction laser printer and fax machine uses 300 watts when printing, 85 watts when on standby, and 10 watts when idle, it is very difficult to arrive at a total but we think the average daily use would be no more than a total printing time of 5 Hrs.

<table>
<thead>
<tr>
<th>17 Printers</th>
<th>Hrs per day / printer</th>
<th>Watts</th>
<th>Total Power KWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing</td>
<td>0.5</td>
<td>300</td>
<td>2.55</td>
</tr>
<tr>
<td>Standby</td>
<td>8</td>
<td>85</td>
<td>11.56</td>
</tr>
<tr>
<td>Idle</td>
<td>15.5</td>
<td>10</td>
<td>2.635</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>16.745</strong></td>
</tr>
</tbody>
</table>

17 Printers being used as above = 16.75KWh per day

Canteen equipment:
Kitchen equipment being used as above = 30.15KWh per day

Improvements:
1) As each piece of equipment is replaced a more energy efficient one is bought as a replacement.
2) Run Dishwasher on shorter cycle
3) Keep opening and shutting of fridge doors to a minimum
4) Water boiler is already on a timer, put other items on timers to reduce standby wastage

Specific areas in Factory

Shop floor
The Factory floor is where all the manufacturing takes place, and it is where all the larger pieces of manufacturing equipment are located.
### Equipment Type

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Model + Power</th>
<th>Average Daily Usage Hrs</th>
<th>Power KWH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soldering iron</td>
<td>17x 80w = 1360watt</td>
<td>5</td>
<td>6800</td>
</tr>
<tr>
<td>Heat guns</td>
<td>x4 2300W</td>
<td>1</td>
<td>2300</td>
</tr>
<tr>
<td>Carpenter Strip &amp; Cut</td>
<td>460W + 920W</td>
<td>1</td>
<td>13800</td>
</tr>
<tr>
<td>Berit Strip</td>
<td>T10A 230W</td>
<td>0.5</td>
<td>115</td>
</tr>
<tr>
<td>OSW-SP-09 Splice machine</td>
<td>550w</td>
<td>0.5</td>
<td>275</td>
</tr>
<tr>
<td>Fisnar SL101N2</td>
<td>50.6W</td>
<td>0.5</td>
<td>25.3</td>
</tr>
<tr>
<td>Mini Magnifier</td>
<td>x1</td>
<td>8</td>
<td>440</td>
</tr>
<tr>
<td>Big Magnifier</td>
<td>x1</td>
<td>8</td>
<td>440</td>
</tr>
<tr>
<td>DEK Screen Printer</td>
<td>1.38KW</td>
<td>4</td>
<td>5520</td>
</tr>
<tr>
<td>Yamaha Ipulse</td>
<td>4KW</td>
<td>4</td>
<td>16000</td>
</tr>
<tr>
<td>BTU Oven</td>
<td>62KW</td>
<td>4</td>
<td>248000</td>
</tr>
<tr>
<td>AOI inspection</td>
<td>1012W</td>
<td>4</td>
<td>4048</td>
</tr>
<tr>
<td>Votch Ovens</td>
<td>x3 @1.8kw = 5.4kw</td>
<td>3</td>
<td>16200</td>
</tr>
<tr>
<td>Thermo Scientific Ovens</td>
<td>OGS 2.4KW</td>
<td>2</td>
<td>4800</td>
</tr>
<tr>
<td>Mercia</td>
<td>322w</td>
<td>3</td>
<td>966</td>
</tr>
<tr>
<td>Power Screwdrivers</td>
<td>Sumake 55w x 3 = 165w</td>
<td>1</td>
<td>165</td>
</tr>
</tbody>
</table>

**Total** 319894.3

Shop Floor equipment being used as above = 319.89KWh per day
### Stores
The production offices do not have any specific equipment that is not covered by the other parts of the report.

### Cal Lab
The Calibration lab is UKCAS accredited for Temperature and humidity, and one of the criteria is that the whole working / calibration environment is maintained at a constant 20°C. Much of the equipment will run constantly throughout the day and is quite power hungry to maintain specific temperatures and Humidity’s.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Model</th>
<th>Average daily usage Hrs</th>
<th>Power KWH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Conditioning unit 3.5KW</td>
<td>Mitsubishi</td>
<td>8*</td>
<td>28000</td>
</tr>
<tr>
<td>Air conditioning 6.3KW</td>
<td>Panasonic CSTZ60TKEW</td>
<td>8*</td>
<td>504</td>
</tr>
<tr>
<td>Air conditioning 3.5Kw</td>
<td>Panasonic CSTZ35TKEW</td>
<td>8*</td>
<td>28000</td>
</tr>
<tr>
<td>Dry Blocks</td>
<td>Ametek (450W)</td>
<td>14</td>
<td>6300</td>
</tr>
<tr>
<td>Hydro Gen</td>
<td>HG2-S (690W)</td>
<td>14</td>
<td>9660</td>
</tr>
<tr>
<td>Dewpoint mirror</td>
<td>MMBW 473 (100W)</td>
<td>14</td>
<td>1400</td>
</tr>
<tr>
<td>Liquid bath</td>
<td>LiquaCal SL (700W)</td>
<td>14</td>
<td>1400</td>
</tr>
<tr>
<td>Votch Oven</td>
<td>VT7011 1.8KW</td>
<td>8</td>
<td>14400</td>
</tr>
<tr>
<td><strong>Total Power</strong></td>
<td></td>
<td></td>
<td><strong>89664</strong></td>
</tr>
</tbody>
</table>

Cal Lab equipment being used as above = 89.66KWh per day
*Between all three units across a year this is the amount that the units operate to maintain temperature

**Improvements:**
Little can be done to reduce the power consumption of the units, one of the only things we may be able to achieve is making customers calibrations more uniform, i.e supply Cal’s that are more of the same temperature, that would allow us to load the dry bocks up more and utilise the temperature / humidity being generated for more units at a time.

### Engineering
The Engineering dept only has a few test systems running that are not included in the other parts of this report, the power for all the systems will be a maximum of 0.690 KWh

### Production Offices
The production offices do not have any specific equipment that is not covered by the other parts of the report.

### "Upstairs" offices
The Sales, Customer services offices do not have any specific equipment that is not covered by the other parts of the report.

### Machine Shop
We have a Pillar Drill and a milling machine both draining around 0.270KWH per week.

### Hot Water
We have 2 x 3KWh immersion heaters to provide hot water to the toilets and eating areas 336KWh per week.

Grand Total for Electric consumption 701.044KWh / Day, we are open 243 days per annum
170353KWh is out theoretical electric bill, we were actually billed 169788KWh
We have changed Electric supplier and cannot access all the monthly back dated electricity readings, we have been monitoring from the meters ourselves since September, as the above graph shows.

Actions taken to reduce electricity usage
Our target for the next year is to save 10% off all energy bills.

**Lighting**
We have replaced 117 34 Watt Fluorescent tubes with low Power (11 Watts) LED alternatives. Saving 30KWH / Day.
We have fitted all the toilets with automatic timer switches for the lights.
Remaining lights will need complete replacement, we have quotes, but we are reviewing if staying in building is viable.
Emergency evacuation lights, many have now been replaced with LED versions to reduce electricity consumption, as the others fail they will be replaced with energy efficient versions.

**Hot Water**
We have fitted the 2 electric hot water cylinders with electronic timers to turn them off automatically. Saving 13 hours electric per day.
We have 2 Boilers for tea / Coffee, these have now been fitted with automatic timers to only be on during office hours.
Both dish washers are now A+ and are only run-on Eco settings.

**Air Conditioning**
Our Calibration lab is required to have a stable ambient temperature of 20°C +/-3, so we have air conditioning units running all year round, the main 3 units in the Cal lab were replaced in Jan 2020 with maximum efficiency units. The other air con in the building has a service plan and units in the server room have been deep cleaned to improve their efficiency.

General
We have placed notices on every screen to turn off when not in use. These are now being set to auto eco mode. All staff have had environmental training, thus turn as much stuff off as necessary when not in use. Anything that is left on such as weighing scales, shredders and office equipment have automatic timer placed on them to shut off outside office hours.

Electric toilet heaters have now been fitted with electronic timers to ensure the toilets are only ever heated when required. Intelligent soldering irons that power down quicker when not in use will also reduce power consumption, we have around 20 irons that now do this.

Other future Improvements:
1) The SMT line is now 10 years old, when it is replaced, the new equipment will consume 1/3 of the power the current line does, this is a significant investment of £500K, this is made for technology reasons, but the other benefit is modern energy saving.
2) All equipment when replaced now has energy consumption as one of the criteria for the purchase of the equipment.

Water Consumption
Ellab Monitoring Solutions has a shared water meter with Stevenage Sheet Metal, we pay 100% of the bill to Affinity water, we then have a sub meter that records the usage for SSM and we claim the money back from them.

Water Supply: Affinity
We do not use water from the mains water supply for our manufacturing process, we only use for toilets, and canteen areas.

Water outlets
8 Flushing Toilets
5 Urinals
7 hand basins
2 canteen area sinks
2 Dishwasher

An example of an Efficient water outlet is shown in the table below

<table>
<thead>
<tr>
<th>Fitting</th>
<th>Efficient</th>
<th>Highly efficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basin Tap</td>
<td>≤6 litres per minute</td>
<td>≤4 litres per minute</td>
</tr>
<tr>
<td>Kitchen Tap</td>
<td>≤8 litres per minute</td>
<td>≤6 litres per minute</td>
</tr>
<tr>
<td>Toilet</td>
<td>≤4.5 litres per flush</td>
<td>≤3.5 litres per flush</td>
</tr>
<tr>
<td>Urinal</td>
<td>3 litres per bowl per hour during occupation with user presence activated flush and 0 litres per hour outside of occupation</td>
<td>0 Litres Waterless</td>
</tr>
</tbody>
</table>

Waste Water
Surface water drainage.
Rain water that falls onto the roof then flows directly or indirectly into the public storm drainage systems.
Our waste water from toilets / sinks is flushed directly into the sewage drainage
Management Report

Clean water November 2018 to November 2019
Nov-March 413 M³
Nov 444 M³
From Affinity billing: Total Annual Usage = 857 M³
Stevenage sheet metal = 458 M³
Total Usage Ellab Monitoring Solutions = 399 M³

Immediate Improvements
All toilet water cisterns have been fitted with water savers
Dishwasher will be run on Eco cycle
Urinal toilet cisterns to be reduced in flush qty

Secondary water consumption of humidity chambers
We have a Mercia Scientific humidity chamber that is supplied by bottled distilled water, this consumes 100L p.a, this is a process that we use to calibrate our products, we make sure we control the water in air tight drums and only supply the machine when required, we can not reduce the consumption of the water use during this process.

Waste
Ellab Monitoring Solutions is an electronics manufacturing factory that has the following kinds of waste.

Electronics:
- Electronics made by Ellab Monitoring Solutions Ltd
- Computer monitors
- PCB's
- lighting
- Batteries

General waste:
- Staff waste from Canteen area
- General waste from non-recyclables

Metal:
- General Scrap metal
- Spray cans

Card & paper
- Packing card from deliveries, paper from internal and external sources.

Electronics Waste
WEEE Waste
Ellab Monitoring Solutions’ registration number WEE/CG2698TX
Recycling of WEEE is a specialist part of the waste and recycling industry. It is a rapidly growing sub-sector due largely to the implementation of the original WEEE Directive in the UK by the WEEE Regulations 2006, With that came the associated requirements for the recovery, reuse, recycling and treatment of WEEE. The Waste Electric and Electronic Equipment (WEEE) Regulations 2013 (‘the Regulations’) became law in the UK on the 1st of January 2014 and replaced the 2006 Regulations. The new Regulations transpose the main provisions of Directive 2012/19/EU on WEEE which recasts the previous Directive 2002/96/EC. These regulations also provide for a wider range of products to be covered by the Directive with effect from 1st January 2019.
All waste falling under WEEE regulations is taken away by our recycling partner Waste Care.

Batteries:
All lithium batteries: Are collected and collected by recycling company ref SOP: LG046
Non Lithium batteries: These are taken by Waste Care (including alkaline, NI-MH, industrial battery packs)

fluorescent lighting: We will no longer be buying this type of lighting, every old fluorescent tube that fails will be replaced with a LED alternative

General waste
As of May 2020 All food waste is placed in a recycling bin and is placed in a Hot box or wormery composter, and the compost is then used at various locations by members of staff (gardens and allotments)
All other waste is taken away by our waste management company Biffa

Working with Biffa

Biffa environmental performance
Biffa services deliver carbon reductions for waste producers. Decarbonisation means growing Biffa services, whilst reducing the carbon footprint and maximising carbon savings wherever they can, for themselves and their customers.
They are focusing their efforts on the areas where they can make a big impact, such as diverting even more general waste away from landfill into recycling and recovery, improving collection route densities and phasing out fossil-fuelled collection vehicles.
Their aim is to cut their emissions by a further 50% by 2030, as they progress towards net carbon neutrality, in line with UK government targets.

Impact on carbon footprint

With a 65% reduction in CO2 since 2002, including a 15% reduction in the last 3 years, Biffa have achieved a lot.

By reducing dependence on landfill further, they will be able to deliver on their commitment to reduce the carbon footprint by 50% by 2030.

That will mean an over 80% reduction since 2002!

Accreditation

Biffa have achieved Carbon Saver Gold Accreditation for a record 12 years, certifying that Biffa’s carbon emissions data has been independently reviewed and their carbon intensity per tonne of waste has decreased every year

Reducing use of fossil fuels
Biffa have started trialling new technologies, including electric collection vehicles, and their ambition is to cease buying fossil-fuelled trucks by 2030 which will be five years before the UK Government’s target. Their final goal is to have no fossil fuelled vehicles by 2040.
Biffa’s estate of closed and restored landfill sites offers great potential for solar development and they plan to install at least 100MW of renewable energy capacity through solar farms on this landbank by 2030, with an initial phase of 50MW by 2025.

Rail transport
In the last few years, Biffa have developed their rail transport capabilities and around 27% of their specialist waste types, destined for landfill, are now transported by rail.
This has resulted in a 75% reduction in transport emissions, in comparison to road haulage, and benefited local communities by reducing traffic. In addition to that, their employees are travelling less to save emissions through our ‘Smarter Working’ programme.

To conclude, Biffa’s nationwide business waste collection platform is the largest and most efficient in the country. Not only does this mean that they can offer the best flexibility for their customers, enabling them to maximise recycling, but its leading ‘route density’ means it has the lowest environmental footprint.

In the last four years Biffa have improved their collection density (the number of stops we make in any given area) by 11%. The main goal is to increase collection route efficiency by a further 20% by 2030.

**Cardboard**

As Ellab Monitoring Solutions is a manufacturing company we have lots of deliveries packaged in cardboard, in Feb 2020, we stopped traditional waste carrier removal of card and started using a dedicated cardboard recycling company CS recycling

We installed a baler for the cardboard from QCR recycling

We achieved 100% Segregation at the Source with new Baler

Cardboard and plastic packaging is simple to segregate with an easy to use baler on site. Bottles and jars and other materials still need to be recycled elsewhere. Baling, however,

**Card**

We recycle approx 2500 Kg p.a

ensuring no materials get mixed together

![Baler Image 1](image1)

![Baler Image 2](image2)

everything is kept separate. This is by far the best modern recycling technique that businesses can use. Here are some facts about balers…

1. Balers will handle all cardboard boxes and any plastic packaging waste produced on site.
2. Balers handle whole materials with ease.
3. They come in a range of sizes and are suited to a huge array of businesses.
4. Baling is the only way to guarantee segregation at the source.
5. Once baled, the dense bales can be stored and will be collected on a regular basis by a local recycler thanks to materials recovery facilities. We use CS recycling to pick up our bailed card.
Introduction

CS Recycling work to recycle waste cardboard, paper and plastic products from commercial businesses across South East England. Most of these materials are collected from CS Recycling’s commercial recycling customers and the rest is delivered by other recycling collectors and businesses themselves.

CS Recycling only accept the best quality recycling, meaning the waste products must be free from any contamination of any kind. If there is any contamination, CS Recycling reserves the right to refuse any waste products that enter the facility or to charge a fee.

The main products the recycling is used to manufacture are:

- **Cardboard recycling**
  - Corrugated cardboard boxes

- **Paper recycling**
  - Recycled paper (copier paper)
  - Hygiene products (toilet and kitchen roll)
  - Newspaper and magazines

- **LDPE plastic recycling**
  - Trays and general-purpose containers
  - Snap-on lids
  - Liquefied packaging board
  - Plastic wraps

The main countries the recycling is sent to are:

- China
- England
- France
- Germany
- Greece
- Holland
- India
- Indonesia
- Malaysia
- Pakistan
- Turkey
- Thailand
- Taiwan
- Vietnam

Further information

Information provided within this statement is designed to be self-contained and answer any questions our customers may have. However, if you have any further questions, please email emma@csrecycling.co.uk or call us on 01707 656261.
<table>
<thead>
<tr>
<th>Arrangement</th>
<th>Year/Month</th>
<th>Item Description</th>
<th>Quantity</th>
<th>Unit Value</th>
<th>Stream</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wee/London/WGN</td>
<td>2018-06</td>
<td>Box &amp; Go (Crate)</td>
<td>1.00</td>
<td>£0.00</td>
<td>Service - Container</td>
</tr>
<tr>
<td>Wee/London/WGN</td>
<td>2018-06</td>
<td>Box IT (Cardboard)</td>
<td>0.00</td>
<td>£95.00</td>
<td>Service - Container</td>
</tr>
<tr>
<td>Wee/London/WGN</td>
<td>2018-06</td>
<td>Weee 9B2B Coll Monitoring &amp;ctr (kg)</td>
<td>45.00</td>
<td>£0.00</td>
<td>Waste electrical equipment</td>
</tr>
<tr>
<td>Wee/London/WGN</td>
<td>2018-06</td>
<td>Electrical Eqp, Waste (B&amp;G)</td>
<td>1.00</td>
<td>£36.00</td>
<td>Electronics</td>
</tr>
<tr>
<td>Wee/Administration</td>
<td>2018-05</td>
<td>Weee 9 B2BwMonitor &amp; control(ton)</td>
<td>3.93</td>
<td>£213.80</td>
<td>Waste electrical equipment</td>
</tr>
<tr>
<td>Wee/Administration</td>
<td>2019-06</td>
<td>Weee 9 B2BwMonitor &amp; control(ton)</td>
<td>3.12</td>
<td>£291.40</td>
<td>Waste electrical equipment</td>
</tr>
<tr>
<td>Wee/Administration</td>
<td>2020-04</td>
<td>Weee 9 B2BwMonitor &amp; control(ton)</td>
<td>3.10</td>
<td>£37.19</td>
<td>Waste electrical equipment</td>
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<tr>
<td>Wee/Administration</td>
<td>2019-10</td>
<td>WeeeCare Compliance App Fee 2020</td>
<td>1.00</td>
<td>£0.00</td>
<td>Service - Admin</td>
</tr>
<tr>
<td>Wee/Administration</td>
<td>2019-10</td>
<td>Environment Agency Weee Compliance Fee (&lt; 5tn)</td>
<td>1.00</td>
<td>£30.00</td>
<td>Service - Admin</td>
</tr>
</tbody>
</table>
Paper
We have only been record keeping since Sept 2020, but we buy the following p.a:

### Everyday use paper

<table>
<thead>
<tr>
<th>Customer Reference</th>
<th>Entered Date</th>
<th>Product</th>
<th>Reams ordered</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO200505</td>
<td>27/03/2020</td>
<td>02462X</td>
<td>25</td>
<td>Everyday A4 Multifunctional Paper, White</td>
</tr>
<tr>
<td>PO200390</td>
<td>06/03/2020</td>
<td>02462X</td>
<td>5</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO200058</td>
<td>14/01/2020</td>
<td>02462X</td>
<td>25</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO191819</td>
<td>20/11/2019</td>
<td>02462X</td>
<td>20</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO191084</td>
<td>23/10/2019</td>
<td>02462X</td>
<td>15</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO191487</td>
<td>24/09/2019</td>
<td>02462X</td>
<td>15</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO191257</td>
<td>15/06/2019</td>
<td>02462X</td>
<td>15</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO191177</td>
<td>01/06/2019</td>
<td>02462X</td>
<td>25</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO190886</td>
<td>07/06/2019</td>
<td>02462X</td>
<td>10</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO190758</td>
<td>15/05/2019</td>
<td>02462X</td>
<td>25</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO190669</td>
<td>26/04/2019</td>
<td>02462X</td>
<td>5</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO190595</td>
<td>08/04/2019</td>
<td>02462X</td>
<td>5</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td>PO190489</td>
<td>25/03/2019</td>
<td>02462X</td>
<td>10</td>
<td>WhiteBox A4 Paper Pk500</td>
</tr>
<tr>
<td><strong>Total Reams</strong></td>
<td><strong>225</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Workbook/Calibration certificate paper

<table>
<thead>
<tr>
<th>Customer Reference</th>
<th>Entered Date</th>
<th>Product</th>
<th>Reams ordered</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO200540</td>
<td>27/04/2020</td>
<td>391418</td>
<td>10</td>
<td>Navigator A4 Presentation Paper, White</td>
</tr>
<tr>
<td>PO200390</td>
<td>06/03/2020</td>
<td>391418</td>
<td>5</td>
<td>Navigator FSC Pres A4 100gsm Pk500</td>
</tr>
<tr>
<td>PO191092</td>
<td>11/07/2019</td>
<td>391418</td>
<td>15</td>
<td>Navigator FSC Pres A4 100gsm Pk500</td>
</tr>
<tr>
<td>PO191051</td>
<td>04/07/2019</td>
<td>391418</td>
<td>5</td>
<td>Navigator FSC Pres A4 100gsm Pk500</td>
</tr>
<tr>
<td>PO191035</td>
<td>03/07/2019</td>
<td>391418</td>
<td>10</td>
<td>Navigator FSC Pres A4 100gsm Pk500</td>
</tr>
<tr>
<td>PO190800</td>
<td>28/05/2019</td>
<td>391418</td>
<td>40</td>
<td>Navigator FSC Pres A4 100gsm Pk500</td>
</tr>
<tr>
<td>PO190669</td>
<td>26/04/2019</td>
<td>391418</td>
<td>10</td>
<td>Navigator FSC Pres A4 100gsm Pk500</td>
</tr>
<tr>
<td><strong>Total Reams</strong></td>
<td><strong>95</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All paper will now be collected and baled and recycled along with the cardboard.
Paper recycling

![Recycled Paper Kg](chart)

- **Recycled Paper Kg**
- **2020**
- **2021**
General waste
Monthly weight of general waste landfill / recycling shown below

Lithium batteries
Saft (battery manufacturer) collects our used lithium batteries when the storage cupboard is full approx. 1800.
Our annual scrap rate for 3.6V lithium Batteries is 900p.a

Non lithium batteries:
We recycle approx. 40KG’s of general batteries p.a

Actions taken in Reduction of waste and increased recycling

Single use plastics
We use approx 550 4 pint milk plastic cartons per year for tea etc, at the start of 2020 we started using glass bottled milk where each of the bottles are washed and returned for reuse.
We have removed all single use plastic bags from our new items that we sell.
All air fill and other packing rolls from incoming delivery are reused and not thrown away.

Card
95% of all our packing has had poly inserts removed and replaced with card, all ink used on the card is environmentally friendly, along with all packing tape is now fully recyclable (non plastic type). The amount of card we use is directly linked to our turn over, so we hope to see an increase in card, however we will recycle 100% of all waste card in a responsible manner.
Paper
All of our waste paper will be recycled from September 1st 2020, however we are currently trying to reduce the amount we recycle, by reducing the paper we use, all printers are now set to double sided paper printing as default. A review into paperless works orders will be underway shortly.

General waste
Our general waste will be monitored to see if we have any particular items we can start to recycle, and thus reduce land fill. If you look at our general waste and mixed recycling waste, it can been seen what an impact we have had by focusing on what comes in and our new recycling policies.

Product End of life management
It is important to our customers that the supplier of their products understands their recycling responsibility and more importantly, acts on it. Ellab Monitoring Solutions not only takes responsibility for the recycling of Hanwell products in-house, but also extends our recycling facilities to our customers. We are happy to assist you in arranging the disposal of products that we have supplied to you that fit the WEEE criteria. A form is available on our website to enable the customer to return WEEE, and on the rear of all our main packaging the customer is informed on how to return any Hanwell equipment that falls under WEEE waste.

Other Actions
We are actively informing suppliers to remove any unwanted plastic packaging from components. Batteries, we have many AA lithium batteries that are recycled, but many have a lot of life left in them, we are investigating if staff can take these home exhaust them, then bring them back saving battery at staff homes.
### Service Vehicles:

#### 1) Pool Van

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration Number</td>
<td>OE17 ENW</td>
</tr>
<tr>
<td>Registration Date</td>
<td>22/05/2020</td>
</tr>
<tr>
<td>Make/Model</td>
<td>VW Caddy Maxi C20 High TDI (Diesel 48MPG)</td>
</tr>
<tr>
<td>Mileage</td>
<td>18,350 - 12/02/2019 - 41045 18/08/2020</td>
</tr>
<tr>
<td>Tax</td>
<td>£260.00</td>
</tr>
<tr>
<td>Servicing schedule</td>
<td>Full Service carried out April 2020</td>
</tr>
<tr>
<td>Annual Fuel Usage</td>
<td>£1,994.70</td>
</tr>
<tr>
<td>Annual distance</td>
<td>22,695 miles per annum</td>
</tr>
<tr>
<td>Tyres on vehicle</td>
<td>NEXEN N-BLUE HD</td>
</tr>
<tr>
<td>Tyre Spec</td>
<td>The Nexen tyre is rated C for fuel efficiency, B for wet grip, has a speed rating of V, and a noise level of 68db.</td>
</tr>
</tbody>
</table>

**Volkswagen's end of life policy**

Every Volkswagen contains many valuable raw materials which ingeniously recycled, can be re-used. It's called resource cycle management and to make sure it works, back at the development stage of a new vehicle, we already give thought to its end-of-life recycling.

Remanufacturing comprises the following steps:

1. The returned used items are dismantled into their component parts and thoroughly cleaned.
2. All surfaces are then measured using special equipment – because top performance depends on correct dimensions.
3. A variety of machining operations are performed, such as grinding and polishing.
4. The finished remanufactured parts are then inspected using the same test equipment used for newly manufactured products.
5. MAN then offers the products which pass this inspection with the same warranty as a new product – but with a much lower price.

Approximately 3,900 remanufactured products are currently offered under this initiative – from turbochargers, differentials, coolant pumps and alternators to cylinder heads.

All aluminium cuttings produced from alloy Al 226 with a residual moisture level below two percent can now be melted directly on site, producing new raw material.

The specific environmental benefit is that the Kassel plant can cut the amount of aluminium alloy it purchases each year by 1,050 tonnes.

As aluminium production is highly energy-intensive, this also means a considerable drop in the associated CO₂ emissions. Thanks to the new approach, Volkswagen itself saves some 3,250 MWh of energy per year, representing a reduction of 1,430 tonnes in CO₂ emissions.

On the logistics side, this process also reduces the distance travelled by trucks by 800,000 kilometres per year.

In addition, nitrogen oxide output is cut by 0.5 tonnes per year and Volkswagen also reduces the use of many consumables such as melting salts (-1,300 tonnes p.a.) and calcium hydroxide (-16 tonnes p.a.), as well as the production of waste such as salt slag (-2,670 tonnes p.a.) and filter dust (-130 tonnes p.a.).

Volkswagen plans to build one million electric vehicles a year by 2025; given this target, handling battery recycling internally is a priority for cost and environmental reasons.
In the long term, Volkswagen wants to recycle about 97% of all raw materials in end-of-life EV battery packs. Today, the level is roughly 53%; Volkswagen’s plant in Salzgitter—expected to be the home of Volkswagen’s first centre for electric vehicle battery recycling—expects to raise it further to about 72%.

Next year, Salzgitter plans to have an initial capacity to recycle roughly 1,200 tons of EV batteries per year—equal to the batteries from about 3,000 vehicles.

Using a special shredder, the individual battery parts can be ground up, the liquid electrolyte can be cleaned off, and the components separated into “black powder.” This contains the valuable raw materials cobalt, lithium, manganese, and nickel—which, while requiring further physical separation, are then ready for reuse in new batteries.

### Ellab Monitoring Solutions’ company Cars

#### Derek Richardson

<table>
<thead>
<tr>
<th>Registration Date</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make/Model</td>
<td>BMW 5 Series 530e</td>
</tr>
<tr>
<td>Mileage</td>
<td>36,790</td>
</tr>
<tr>
<td>Tax</td>
<td>£10</td>
</tr>
<tr>
<td>Servicing schedule</td>
<td>Service carried out - 22/08/2019 - full service Mileage: 19,964 Next service due in 3,400 miles</td>
</tr>
<tr>
<td>Annual Fuel Usage (2019)</td>
<td>See Emma</td>
</tr>
<tr>
<td>Annual distance travel (2019)</td>
<td>16,000</td>
</tr>
<tr>
<td>Tyres on vehicle</td>
<td>2 x Michelin 245/45/R18 front and 2 x Bridgestone 245/45/R18 rear.</td>
</tr>
<tr>
<td>Tyre Spec</td>
<td>Fuel Efficiency Grade: C for the fronts. Fuel Efficiency Grade: C for the rears.</td>
</tr>
</tbody>
</table>

#### Richard Manning

<table>
<thead>
<tr>
<th>Registration Date</th>
<th>30/09/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make/Model</td>
<td>Hyundai Kona 1.6 GDi Hybrid Premium SE DCT</td>
</tr>
<tr>
<td>Mileage</td>
<td>3,842 - 20/08/2020</td>
</tr>
<tr>
<td>Tax</td>
<td>£140.00</td>
</tr>
<tr>
<td>Servicing schedule</td>
<td>No service due</td>
</tr>
<tr>
<td>Annual Fuel Usage (2019)</td>
<td>No data</td>
</tr>
<tr>
<td>Annual distance travel (2019)</td>
<td>No data</td>
</tr>
<tr>
<td>Tyres on vehicle</td>
<td>4 x Michelin pilot sport 225/45/ZR/18</td>
</tr>
<tr>
<td>Tyre Spec</td>
<td>Fuel Efficiency Grade: Unknown Hankook have designed the Kinergy Eco 2 tyre with an emphasis on optimised rolling resistance - for improved fuel efficiency Optimised rolling resistance increases mileage and reduces noise.</td>
</tr>
</tbody>
</table>

Ian Robinson – Company Car
Registration Date 10/12/2019
Make/Model BMW X5 xDrive 45e M Sport
Mileage 7,001 - 24/08/2020
Tax £10.00

Servicing schedule Service Due – December 2020 - first service

Annual Fuel Usage (Estimate) £2,000.00
Annual distance travel (Estimate) Less than 12,000 miles per annum (Lease based on 12k/annum)

Tyres on vehicle
Front 2 x Pirelli P Zero Run flats 275/40/R/21
Rear 2 x Pirelli P Zero Run flat 315/35/R/21

Tyre Spec Fuel Efficiency Grade: B
Seasonal Grade: B Summer
The Pirelli P-Zero is a tyre designed for high-end premium cars and SUVs for all weather conditions. It features a tailored tread compound that has been developed to improve rolling resistance and wet performance while delivering improved mileage.

<table>
<thead>
<tr>
<th>Air Transport</th>
<th>Column Labels</th>
<th>2019</th>
<th>2020</th>
<th>Grand Total</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Row Labels</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CN</td>
<td>£186</td>
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<td>£186</td>
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<tr>
<td>CR</td>
<td>£949</td>
<td></td>
<td></td>
<td>£949</td>
</tr>
<tr>
<td>DR</td>
<td>£21,575</td>
<td>£8,782</td>
<td></td>
<td>£30,358</td>
</tr>
<tr>
<td>IR</td>
<td>£2,916</td>
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<tr>
<td>JR</td>
<td>£515</td>
<td></td>
<td></td>
<td>£515</td>
</tr>
<tr>
<td>JT</td>
<td>£263</td>
<td></td>
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<td>£263</td>
</tr>
<tr>
<td>MSB</td>
<td>£558</td>
<td></td>
<td></td>
<td>£558</td>
</tr>
<tr>
<td>SF</td>
<td>£719</td>
<td></td>
<td></td>
<td>£719</td>
</tr>
<tr>
<td>Grand Total</td>
<td>£27,682</td>
<td>£8,782</td>
<td></td>
<td>£36,464</td>
</tr>
</tbody>
</table>
Commuting Transport

5 miles

10 miles
We have the following people commuting: 2 x Person Walking, 3 x Train, 43 x Car.

**Improvements**

All company cars are now hybrid / electric, the vans are up for replacement 2021, and it will be interesting to see if hybrid vans will make the grade as a service tool, a full investigation will take place prior to replacing the vans.

Covid 19 has proved that we do not need to move around as much as we did, we have approx. 20 people in the factory, and 35 working from home / remotely, we have had zero flights since March 2020, and our business travelling has been reduced to zero, while still having record months.

**Conclusion**

We have worked extremely hard to reduce waste and become more efficient in every way. We will continue to look at every aspect of our impact on the environment and how our suppliers and customers can come along with us. This whole process of focussing on the entire supply chain has opened our eyes to what can be achieved by focussing on the issue in hand. We have also investigated products that fell into our COSHH listings, and we have removed as many of these products as possible.

We now have an environmental committee, and they are currently investigating the following:

1. Packing symbols
2. Carbon Neutral
3. Extra energy saving devices
5. Cycle to work scheme
6. Paper consumption
7. Using part discharged batteries.
8. Review of cleaning products
9. Bamboo based toilet rolls, extremely sustainable
10. Green electricity

Our next product range due end 2021, will be released with the environment in mind, the range will physically be smaller, it will have smart sensors that will be quicker to make and calibrate with reduced time thus energy requirement. The secondary target is getting as much recyclable content into the new product as possible.

We will be deciding sometime in 2021, on investing into this building with complete LED lighting, new roof, insulation etc, OR moving to a new environmentally friendly building.

Royal Warrants
Our next objective is obtaining the royal warrants, this is going to further enhance our business by providing us with the tools to focus on such issues as Human rights & labour standard, conflict material, Endangered habitats and deforestation, we will see if we can have a further effect on these things by asking suppliers to guarantee these standards.

We have also been try and help the local community by providing monitoring solutions to local businesses free, this has been hampered considerably by covid-19, but we are continuing to see if we can help.
Addendum:

**F-Gas register:**
Annual leakage for Air conditioning
R410A Total 18KG
R32 Total 1.1KG
Annual leakage of Votch Cyclers
Gas type R23 Total 0.6Kg

Card board annual usage
Paper annual usage

Paper annual usage

Fuel
Petrol
Diesel

Plastics
Metal
FR4

Energy
Electric
Gas
Water