Bruce McLean

CCL (North) Ltd

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Recycling of Vapes

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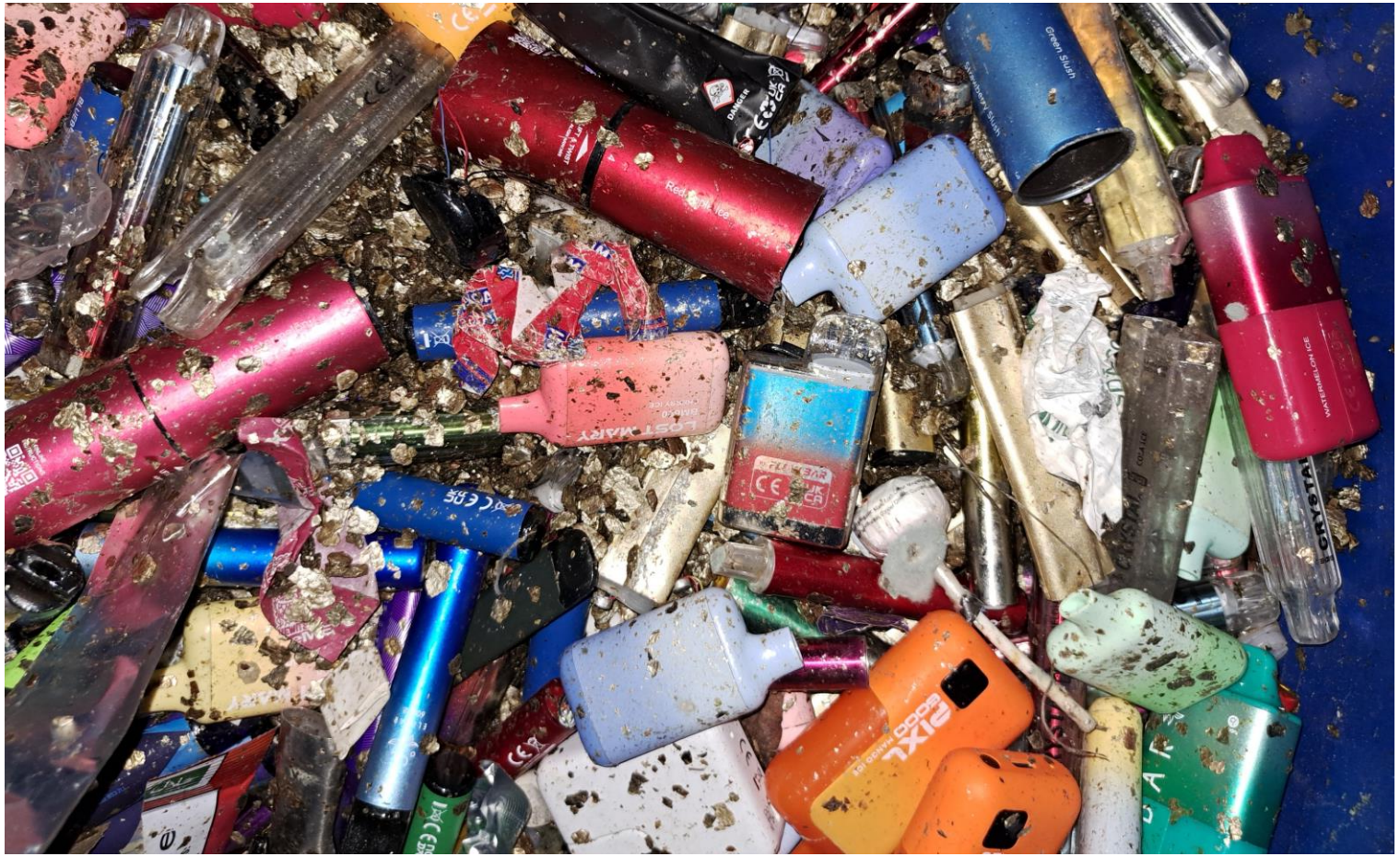
Recycling of Vapes



The reality is slightly different...

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Recycling responsibly

Vapes contain recyclable materials including

- **Metals**
- **Plastics**
- **Batteries**

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Recycling responsibly

Although they come in many shapes and sizes, their internal component parts are very similar.

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Material Recovery

Almost every part of a vape can be recycled through a simple process

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Safely handled

At CCL, all disposable vapes are safely dismantled by hand.

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Simple, careful process

Batteries can be safely removed by hand.

Manually dismantling a disposable vape takes approximately 30 seconds.

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Reducing risk

Once removed, the battery contacts are insulated to prevent shorting during storage and transportation to specialist processors.

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Batteries

The batteries used in vapes are generally Lithium–ion.
They are used because even a small battery can hold energy for a long time.

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Other products with Batteries

Other products contain similar types of batteries. It is important that these are collected and treated properly too.

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Are Vapes / Batteries Safe?

Under normal operating conditions, batteries will not spontaneously combust.

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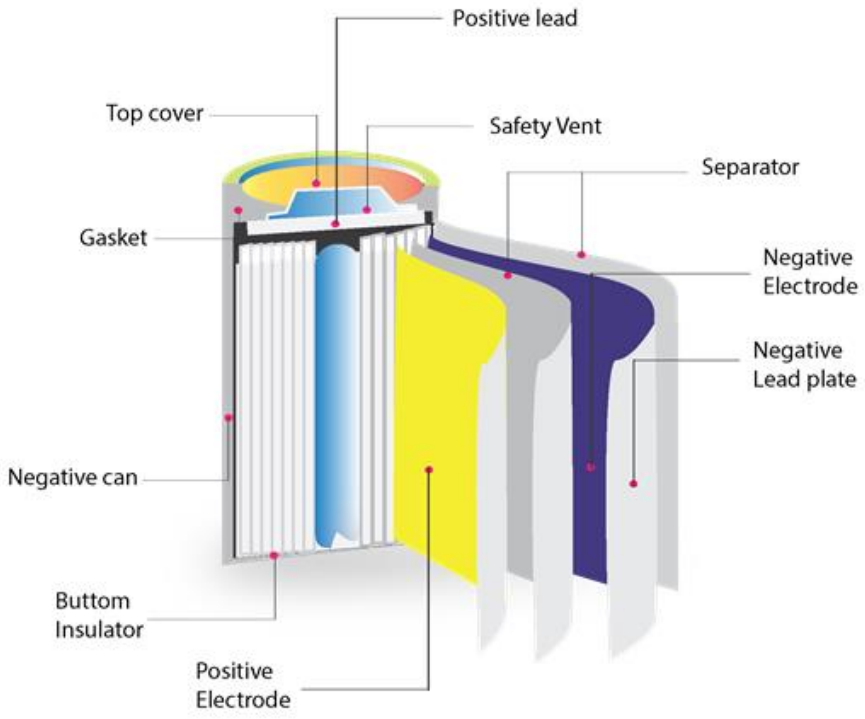
Battery fires

The trouble starts if we cause damage to the inner layers of a battery.
This allows the chemicals inside, to mix together and react violently.
A fire is inevitable and can occur immediately or may take hours or even days.



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Typical causes of Battery fires

Any product containing a battery travelling through a waste stream will cause a fire if it gets damaged.

Crushing in a Refuse Vehicle = A fire.
Running over with a forklift or telehandler = A fire.
Tipping heavy items onto batteries in a waste pile = A fire.
Shredding a product containing a battery = A fire.
Causing a short-circuit = A fire.

(This is true for most battery types).

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Why is Lithium-ion more dangerous?

As mentioned earlier, Li-ion batteries store more energy for longer.
This can mean that when vapes, or other products, are discarded, the batteries still hold a considerable charge.
If a charged battery is damaged or shorted, it will catch fire.
The more energy the battery contains, the more violent the fire.
Lithium battery fires are extremely difficult to extinguish because the chemicals, as they are burning, generate their own oxygen.

Is it expensive to recycle Vapes?

Traditionally, our industry adopts a ‘per tonne’ pricing structure. So, yes, £10,000 per tonne sounds expensive.

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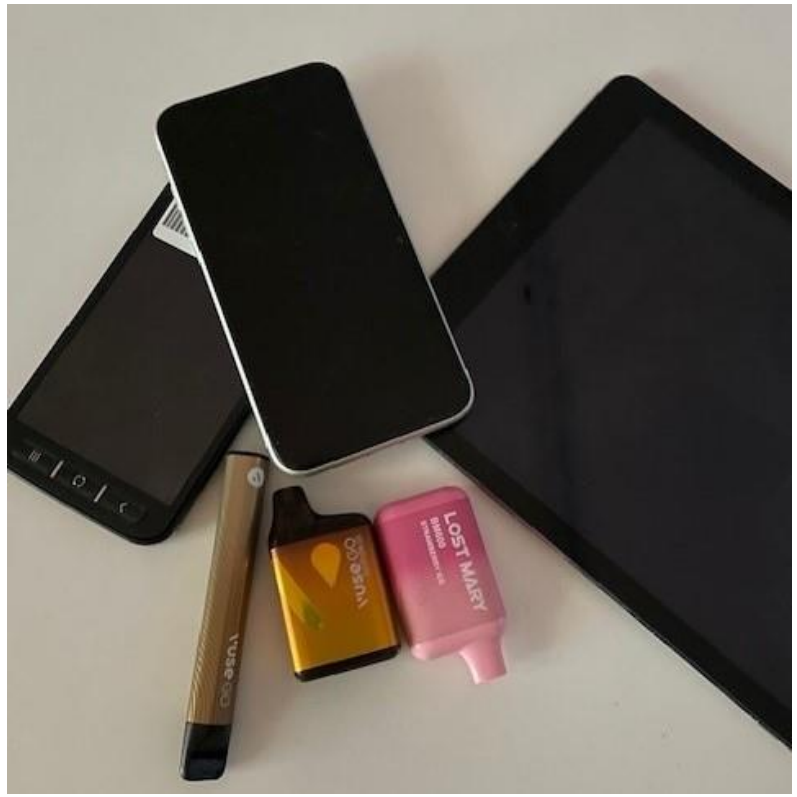
Is it expensive to recycle Vapes?

However, if we break that down to a unit cost...
There is around 28,500 vapes in 1 tonne, so the cost per vape is about 35p.
To properly dismantle and recycle a mobile phone costs around £4 per unit.



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In summary

Are Vapes Dangerous? No. (unless they are damaged)

Are Vapes difficult to recycle? No.

Are Vapes expensive to recycle? No.

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Thank you

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