# Case Study



## The importance of coin security features

Strengthening coin security with a combination of overt and covert anti-counterfeiting features will protect your currency.

Details at a glance	
Client	Her Majesty's Treasury (UK Ministry of Finance)
Project type	Coin security
Denomination	£1
Product specification	Nickel-brass outer, nickel-plated alloy inner
Year of issue	2017
Volume	1.5 billion coins
Project duration	3 years plus planning



Currency is counterfeited all over the world. Recognising a currency counterfeiting problem, and subsequently making the decision to replace an existing coin or convert from a banknote to a coin, requires careful consideration, research and planning. The design and level of security provided by overt and covert features are integral to the decision-making process and acceptance of the new coin.

"Whilst law-enforcement agencies are successfully cracking down on counterfeiting groups, the only long-term solution is to introduce a new, highly secure coin, reducing costs to business and the taxpayer."

George Osborne, Chancellor of the Exchequer for Her Majesty's Treasury 2010 – 2016 The United Kingdom introduced a new 12-sided £1 coin on 28 March 2017 after identifying the need more than three years prior to the launch; namely a 3% counterfeiting rate of the existing £1 coin which had been in circulation for over 30 years. Working closely with our customer, Her Majesty's Treasury, the new £1 coin demonstrates The Royal Mint's use of innovation in designing a coin with multiple security features. It incorporates banknote-level technology, ensuring that it is the most secure coin in the world.

#### What is coin security?

A combination of overt and covert security features can reassure the general public and cash-handling industry that they have genuine coins, and help in the battle against counterfeiting. Overt features are visible and may include the coin's shape, the colour of the metal or metals, latent imagery and milling around the edge of a coin. These types of features make it more difficult for the counterfeiter to produce a replica that looks similar to the actual coin.

The Royal Mint's High Security Feature is the industry-leading next generation of covert security and offers banknote-level security in a coin for the first time. Previously, the strongest covert security check has been Electro-Magnetic Signature (EMS), with sensors measuring the conductivity and other properties of the coin. This is a reasonably inexpensive and well-established method of coin security but at a relatively low level, as the EMS can change as a coin wears over time as well as being read differently by different equipment. Therefore regular maintenance is required to ensure that coin-sorting and detection machines recognise coins.

## Case Study – Coin security

#### Overt and covert features in the UK's new £1 coin

Multiple security features make the new 12-sided £1 coin far more difficult to counterfeit, offering banknote-level security in a coin for the first time.



A latent image changes from a '£' symbol to the number '1' when seen from different angles.

Micro-lettering on the lower inside rims of both the obverse and the reverse, with matching year dates.

Milled edges – grooves on alternate sides around the edges of the shaped coin.

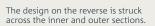


A high security feature is built into the coin to protect it from counterfeiting in the future.

Bimetallic – made of two metals in contrasting colours for easier identification, rather than one single colour.

A distinctive 12-sided shape means it stands out by sight and touch compared to round coins.

Electro-Magnetic Signature (EMS). Mono-ply nickel plate on the inner ensures a more consistent EMS over time than other types of plating.



## The benefits of The Royal Mint's High Security Feature

The Royal Mint developed its High Security Feature to bring a new level of covert security to coins to combat counterfeiting. Alongside other security features, this covert high security feature offers unbeatable coin protection – though it is not a standalone solution. It is a highly-accurate, machine-readable feature with 100% accurate 'yes' or 'no' high-speed detection, and no wear over time.

Producing a coin that incorporates The Royal Mint's High Security Feature may also:

- Safeguard currency value and public confidence
- Improve seigniorage with lower cost coinage materials
- Enhance security with increased efficiency and coin structure
- Minimise counterfeiting opportunities

### The Royal Mint focuses on currency security

With over 1,100 years of minting experience, and as the creator of the world's most secure coin, The Royal Mint has recognised the need to establish a department to focus specifically on currency security.

The new team is headed by its Director of Currency Security, James Whitburn. He works closely with Scott Kuperus, the Currency Security Technical Expert, who has extensive experience regarding the integrity of currency and working with law enforcement agencies. This team ensures that The Royal Mint can provide the best possible solutions to its customers in order to counteract illegal activity, and can advise on how currency security could be improved.





The Royal Mint's experts can guide you through the considerations. We deliver a quality product, to your specification, to an agreed timescale and at a competitive price. To find out more please contact:

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