

# ANNUAL REPORT ON THE HOME OFFICE FORENSIC EARLY WARNING SYSTEM (FEWS)

A SYSTEM TO IDENTIFY NEW  
PSYCHOACTIVE SUBSTANCES  
IN THE UK



Home Office

May 2012



# Contents

- Overview ..... 3
- 1. Introduction and background..... 4
- 2. Aims and objectives of FEWS ..... 5
- 3. FEWS programme 2011-12 ..... 5
- 4. Analysis, results and key findings ..... 6
- 5. Actions taken by Government to tackle NPS..... 7
- 6. FEWS evidence to support Government action on NPS..... 9
- 7. Looking forward ..... 9

## OVERVIEW

This report provides a background to the Home Office Forensic Early Warning System (FEWS). FEWS was set up to identify New Psychoactive Substance (NPS) more promptly to enable Her Majesty's Government to take action before a harmful substance takes a foothold in the UK. FEWS is part of the Government's wider action, including the UK-wide Drugs Early Warning System and the introduction of Temporary Class Drug Orders (TCDO) under the Misuse of Drugs Act 1971, to tackle the emergence of NPS.

This report describes activities undertaken, and provides results of the analysis of samples tested under FEWS during the period of January 2011 to March 2012. It reports the identification of new substances (17 NPS) not previously seen in the UK and, where appropriate, action taken by Government in response. The report also highlights key learning points from the results and key messages on the harms and risks associated with the use of NPS.

New substances identified in the UK are reported to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) through submissions to the UK Focal Point. Some of the substances highlighted in this report are reported in the EMCDDA 2011 Annual Report on the implementation of EU Council Decision 2005/387/JHA; the information exchange, risk assessment and control of new psychoactive substances.

The Government has published its New Psychoactive Substances Action Plan as an annex to the Drug Strategy Annual Review. The Action Plan sets out the Government's ambition and makes clear its determination to take effective action against NPS. This report should be read together with the Drug Strategy Annual Review May 2012 and the New Psychoactive Substances Action Plan.

The Government will continue to highlight the risks and harms associated with NPS. The Government's aim is to deliver its commitments under the Drug Strategy **'Reducing demand, restricting supply, building recovery: supporting people to live a drug-free life'** by reducing the demand for NPS, ensuring that statutory services are able to provide treatment effectively and support recovery from NPS, encouraging individuals to take personal responsibility, and promoting the choice not to take unknown potentially harmful psychoactive substances.

The FEWS analysis shows that; just because a substance is termed 'legal' does not make it safe or 'legal' and the contents of a package are probably 'not what it says on the tin'.

## 1. INTRODUCTION AND BACKGROUND

The Home Office funded Forensic Early Warning System (FEWS) was set up in January 2011 in response to the emergence of NPS, often referred to as ‘legal highs’. NPS are often synthetic drugs manufactured in a laboratory or factory (mainly based overseas) to mimic the effects of already controlled drugs and are used mainly as recreational drugs in the UK, Europe and the rest of the world. The increased development and availability of NPS is changing the face of the drug scene and its “marketplace” with greater access via the internet for both their purchase and the sharing of information in forums and blogs.

The main aim of FEWS is to identify NPS quicker and more effectively, to inform the Advisory Council on the Misuse of Drugs’ (ACMD) considerations and the Government’s wider response through UK health and other warning systems. FEWS results are also fed into the UK-wide Drugs Early Warning System<sup>1</sup> to inform Government’s efforts to tackle the threat from NPS.

Some of the drugs advertised for sale as NPS are already controlled or ‘illegal’ under the Misuse of Drugs Act 1971<sup>2</sup> (the 1971 Act). Also, not all NPS are ‘highs’ or stimulants, some will cause paranoia, anxiety, narcosis or psychosis, so the term ‘legal high’ is misleading and hence the term ‘New Psychoactive Substances’ (a new substance which affects the brain) has been adopted. Examples of NPS seen in the UK market are mephedrone, methoxetamine, dimethocaine, MDAI and JWH-018 and substances sold under branded names such as ‘Ivory Wave’ and ‘Ocean Snow’.

Most of the NPS being offered for sale have harms similar to the controlled drugs they have been manufactured to mimic. Further research is needed to establish the full harms associated with these new drugs. Government is concerned about the harms posed by these drugs, and the continuing rise in reports linking the use of NPS to A&E presentations and some deaths.

The increased availability of NPS and the concerns around their emergence is not limited to the UK drugs market. The EMCDDA reported that, in 2010, 41 NPS were officially identified for the first time across the EU: ‘The number of new compounds reported in 2010 was higher than ever; the list of newly notified substances was rather diverse and included a plant-based substance, synthetic derivatives of well-established drugs, as well as substances that can be described as ‘designer medicines’<sup>3</sup>. In 2011, the number of NPS identified for the first time in the EU and reported by the EMCDDA increased to 49.

The key to the effective action, including legislation, needed to tackle newly emerging drugs is prompt identification of substances before they take a foothold. FEWS brings together expertise from forensic laboratories and chemical standard suppliers<sup>4</sup>, UK-wide law enforcement agencies and experts in the field to develop a co-ordinated UK-wide approach to laboratory testing and analysis of law enforcement seizures and test purchasing to identify NPS more quickly. FEWS is also developing skills of officials at UK borders to enhance the detection of suspicious substances.

The Home Office acknowledges the contribution of the FEWS project team based at the Home Office Centre for Applied Science and Technology to the success of the programme.

---

1 An alignment of drugs early warning systems across health and law enforcement bodies at the local, national and international levels to ensure the ACMD has access to joined-up, evidenced and timely UK wide information to support the delivery of advice on drug harms and drug control.

2 The Misuse of Drugs Act 1971 (‘the 1971 Act’) controls drugs that are ‘dangerous or otherwise harmful’ primarily under a three-tier system of classification (A, B and C) which provides a framework within which criminal penalties are set with reference to the harm a drug has or is capable of having when misused and the type of illegal activity undertaken in regard to that drug.

3 EMCDDA–Europol 2010 Annual Report on the implementation of Council Decision 2005/387/JHA.

4 Suppliers of chemical reference standards used to identify samples seized by law enforcement agencies for use in prosecutions.

## 2. AIMS AND OBJECTIVES OF FEWS

The aim of FEWS was to create an improved national understanding and response by creating a “Forensic Early Warning System” for NPS through;

- bringing together expertise from operational forensic laboratories, a chemical standard supplier and law enforcement agencies;
- developing a protocol for the analysis of samples, the results of which are reported to the Home Office and the ACMD; and
- developing a synergy with the UK-wide Drugs Early Warning System.

## 3. FEWS PROGRAMME 2011-12

During 2011-12 FEWS has collected samples from the internet and head-shops<sup>5</sup> music festivals and the police to identify which NPS are present in the UK or being offered for sale in the UK market.

The aims of the collection plans are to promptly identify NPS, monitor the existence of NPS and to note any further information on the physical and/or chemical properties of the sample and packaging.

---

5 Shops, market stalls and internet traders selling drug paraphernalia and equipment principally for cannabis and cocaine, and 'legal' alternatives to illegal drugs.

## 4. ANALYSIS, RESULTS AND KEY FINDINGS

Since being established FEWS has:

- obtained about 1300 samples from FEWS collection plans;
- created chemical reference standards to aid the identification of new substances;
- provided support for the ACMD's ongoing monitoring of NPS;
- engaged with the UK Border Force to increase their capability to detect and detain suspicious substances; and
- promptly identified NPS in urgent cases where illness or death had occurred.

A total of 1291 samples from the collection plans have been analysed under FEWS. The results are summarised in Tables 1-3 below, and include controlled and non-controlled NPS<sup>6</sup>.

In some cases more than one substance was identified in each sample, making the total of the number of substances identified different to the number of samples collected. Some samples contained cutting agents such as caffeine, lidocaine and benzocaine and these are not accounted for in the table.

Since 2011 a number of NPS have been identified, 17<sup>7</sup> of which (both controlled and non-controlled) have never been previously encountered in the UK. The substances are divided into the following chemical groups;

**Table 1:** Chemical groups of identified controlled and non-controlled NPS

Chemical group	No. of substances
<b>Synthetic cannabinoids</b>	5
<b>Phenethylamines</b>	2
<b>Cathinones</b>	1
<b>Tryptamines</b>	4
<b>Others</b>	5

Of the NPS identified, two – 2-DPMP and methoxetamine have been assessed by the ACMD as causing significant concern to warrant legislative action. Government has taken action to control 2-DPMP and related compounds and methoxetamine is subject to a temporary class drug order. Further advice from the ACMD on synthetic cannabinoids, including AM-2201, is due shortly.

The six substances detected this year for the first time at EU-level and reported by the EMCDDA in its 2011 report were identified by other UK forensic providers and subsequently encountered by FEWS. These were: 5-IAI, methoxyphenamine, ethylphenidate, camfetamine, JWH-022 and etizolam.

**Table 2:** The number of NPS encountered for the first time in the UK via the different collection plans

Sample Collection Source	Controlled	Non-controlled
<b>Internet</b>	4	4
<b>Headshops</b>	0	0
<b>Festivals</b>	0	1
<b>Police non-casework</b>	5	3

<sup>6</sup> Controlled NPS include cathinone derivatives, piperazines and any new substances that have been identified but not been seen in the UK previously but are covered under the 1971 Act.

<sup>7</sup> DMMA and MDAI – reported previously in the 2010 EMCDDA report, Etizolam – reported in the 2011 EMCDDA report, JWH-250, JWH-200, AM-694, 4-MeO-PcP, 5-MeO-DALT, 2-AI, n-ethylbuphedrone, 2-C-C-NBoMe, AM-2201, lpracetin, Ethacetin, 4-HO-MiPT, 2-C-P – which have all been previously identified by other Member States and reported at EU level, and 25D-NBOMe identified for the first time in the UK in 2012 and which will be reported by the EMCDDA in their annual report for 2012.

**Table 3:** The total number of controlled and non controlled drugs, including the total number of NPS<sup>8</sup> reported through each of the collection plans

Collection source	No of samples	Controlled Drugs but not New Psychoactive Substances			New Psychoactive Substances	
		Class A	Class B	Class C	Controlled	Uncontrolled
Internet	107	0	0	0	75	97
Head Shops	60	0	0	0	41	74
Festivals	656	132	486	112	132	15
Police Collection Plan	468	74	13	26	207	44

Notes on samples:

1. Internet samples are made up of samples advertised for sale as NPS.
2. Headshop samples are made up of samples advertised and sold as NPS.
3. Festivals samples are made up of seizures and amnesty bin samples.
4. Police collection plan samples are made up of non-casework police seizure samples.

## Key findings

Products advertised as ‘legal’ alternatives to already established drugs are not always ‘legal’. During the first three months of the programme the analysis of internet test purchases confirmed that 19%<sup>9</sup> of all samples advertised for sale as NPS contained drugs already controlled under the 1971 Act.

The majority of samples analysed were mixtures and not single components. Samples have been identified as containing up to eight different components, in some instances all of which were NPS. Uncontrolled NPS were also found in combination with controlled drugs including cocaine, ketamine and MDMA and cutting agents including benzocaine, lidocaine and caffeine.

Most of the time, samples sold under the same ‘branded name’ such as ‘Ivory Wave’, ‘Ocean Snow’, ‘Gogaine’, or ‘Black Mamba’ were shown to contain varying chemical components.

## 5. ACTIONS TAKEN BY GOVERNMENT TO TACKLE NPS

Government action to tackle the threats posed by NPS is outlined in the New Psychoactive Substances Action Plan annexed to the Drug Strategy Annual Review published together with this report.

The ACMD, as advisors to Government, continues to monitor the latest evidence and trends in emerging new psychoactive substances including those already identified under FEWS. However, specific action taken as a result of FEWS work is as follows;

### Legislation

#### INVOKING A TCDO FOR METHOXETAMINE

Ministers recently referred methoxetamine to the ACMD for consideration and advice under the temporary banning power following identification and monitoring under FEWS. Following the ACMD’s advice, the Government has taken prompt steps to bring methoxetamine under temporary control. Methoxetamine is now subject to twelve month ban under the Misuse of Drugs Act 1971. Information on the temporary ban is available at [www.legislation.gov.uk/ukxi/2012/980/contents/made](http://www.legislation.gov.uk/ukxi/2012/980/contents/made)

<sup>8</sup> The number includes both NPS identified for the first time in the UK by FEWS and those that had been identified for the first time in the UK by other organisations but then encountered during the collection plans by FEWS.

<sup>9</sup> This figure cannot be seen in the table, which categorises individual drugs, as many of the samples contained more than one component.

## INVOKING OPEN GENERAL IMPORTATION LICENCE (OGIL) BANS

The Government has invoked an Open General Importation Licence ban, following the ACMD's advice, on two compounds related to 2-DPMP whilst their full harms were being considered by ACMD. An OGIL ban prohibits importation of the specified substance(s) thus limiting supply into the UK.

## FULL CONTROL ON 2-DPMP AND RELATED COMPOUNDS

Following further monitoring under FEWS and advice from the ACMD on the harms of 2-DPMP and related substances, Parliament has approved an Order to bring these substances under the full control of the 1971 Act. It is expected that these substances will be brought under the full control of the 1971 Act in June 2012.

## Health Warnings

### FRANK WEBSITE

FEWS has provided facts about new drugs such as methoxetamine and products such as 'Black Mamba' (with its ever-changing ingredients) for 'Talk to FRANK', the Government-funded service for information about drugs and their associated harms, available at [www.talktofrank.com](http://www.talktofrank.com).

## Reference Standards

### DEVELOPMENT OF NEW CHEMICAL REFERENCE STANDARDS

Thirteen new chemical reference standards have been developed so far under FEWS to aid identification of new substances to enable enforcement partners carry out their duties. Three of these were produced by FEWS at the request of ACMD. The three standards were; pipradrol, diphenyl-3-piperidinemethanol desoxypipradrol and diphenyl-4-piperidinemethanol desoxypipradrol. Other standards produced include camfetamine, 6-APB, and etizolam. These standards have been made available to forensic partners working with law enforcement agencies to aid their identification of substances.

### REFERENCE LIBRARY

FEWS has a library of chemical identification data, managed by the FEWS project team, to which NPS are added. This, together with the chemical reference standards, allows the forensic scientist to rapidly identify substances when they occur in casework.

## Enforcement

### SERIOUS ORGANISED CRIME AGENCY (SOCA) ACTION TO DISRUPT INTERNET SITES

SOCA has taken effective action to disrupt the sales of NPS on the internet by using a range of preventative tools, such as the closure of over 120 websites that offered mephedrone or naphyrone for sale after the respective bans in 2010.

### COMPREHENSIVE NPS GUIDANCE FOR POLICE

FEWS has also contributed to and informed a comprehensive guidance on NPS, including guidance on the new temporary banning power, to police forces to support them in their actions against NPS. The guidance covers the powers available to forces, including those under the temporary banning power, and how these should be used to tackle the emergence of NPS.

## 6. FEWS EVIDENCE TO SUPPORT GOVERNMENT ACTION ON NPS

The results from FEWS work has further highlighted, or confirmed, already known risks and harms associated with the use of NPS.

For example:

During the first three months of the programme the analysis of internet test purchases confirmed that 19%<sup>10</sup> of all samples advertised for sale as NPS contained drugs already controlled under the 1971 Act – reinforces the message that:

- Just because a substance is labelled ‘legal’ does not mean that it is legal; neither is it a guarantee that it is safe.
- Substances sold as NPS often contain controlled drugs as well – being in possession of or supplying a controlled drug is an offence.
- The contents of the package are probably not ‘what it says on the tin’.

FEWS analysis has confirmed the presence of up to eight different substances in a number of samples sold as a NPS, including very potent substances in mixtures sold as NPS – reinforces the warning that:

- Regardless of the ‘brand name’, the actual contents can vary greatly – no one can really be sure what each individual package contains.
- Substances sold as a single NPS can contain one, two or even more active drugs.

## 7. LOOKING FORWARD

The introduction and availability of NPS in the UK and across the EU continues to be of major concern to the Government. The Government’s response to the threat from NPS has to be swift and effective in order to protect the public from the harms posed by these drugs. FEWS is a valuable tool which enables the Government to monitor the availability of NPS in the UK. More importantly, it gives us the advantage of identifying substances more promptly to inform the Government’s independent experts, the ACMD, and their advice to Government on new substances, including where necessary advice on subjecting substances to temporary control.

The Home Office has committed funding for FEWS until April 2014. In 2012/13 FEWS will continue to identify and monitor NPS through collection plans, with a particular focus being the identification of both controlled and non-controlled synthetic cannabinoids. The collection plans will include a survey of products bought from the internet and headshops, UK summer festivals, and police samples.

FEWS will develop working relationships with the EMCDDA and the United Nations Office on Drug Crime to share best practice and scientific data on NPS.

The Government has recently introduced a new resolution at the UN Commission on Narcotic Drugs to encourage the international community to work more collaboratively together to tackle the threat from NPS, by improving their monitoring, research, analysis and forensic capability. We will continue to work with our international partners to tackle NPS.

---

<sup>10</sup> This figure cannot be seen in the table, which categorises individual drugs, as many of the samples contained more than one component.



Home Office

ISBN: 978-1-84987-746-6

Published by the Home Office © Crown Copyright 2012