

# 1/2018 : 10 January 2018 – Opinion of the Advocate General in the case C-266/16

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## Revised safe intake for 3-MCPD in vegetable oils and food

**EFSA's experts have used an updated scientific approach to reassess the possible long-term adverse effects of the food processing contaminant 3-MCPD on the kidney and male fertility.**

Consumption levels of 3-MCPD in food are considered safe for most consumers but there is a potential health concern among high consumers in younger age groups. In the worst case scenario, infants receiving formula only may slightly exceed the safe level.

### **Updated 2016 opinion**

The chemical 3-monochloropropane diol (3-MCPD) and related substances called 3-MCPD esters are food processing contaminants found in some processed foods and vegetable oils, mainly palm oil. 3-MCPD and its esters are formed unintentionally in these foods, in particular during oil refining processes.

EFSA's expert panel on contaminants first assessed the [potential risks of 3-MCPD](#) in 2016 together with another food processing contaminant called glycidyl fatty acid esters (GE). EFSA concluded that GE are a concern for public health because they are genotoxic and carcinogenic, i.e. they can damage DNA and cause cancer.

The European Commission is finalising [new EU legislation](#) aimed at reducing GE levels in vegetable oils and food.

The current update is for 3-MCPD and its esters only and EFSA's previous assessment of GE has not changed.

### **Why has EFSA updated its assessment of 3-MCPD?**

Prof Christer Hogstrand, who chaired the scientific group that developed the 2016 opinion and the update, said: "EFSA decided to review its assessment after the UN's Joint FAO/WHO Expert Committee on Food Additives [JECFA] subsequently established a different safe level – tolerable daily intake or

TDI.

“In the meantime EFSA updated the method we used to calculate our previous TDI – what’s called the [benchmark dose \(BMD\) approach](#).

“The panel applied the revised method to its reassessment of 3-MCPD and, as a result, it has increased its previous safe level two and a half fold.”

### **3-MCPD Tolerable Daily Intake (TDI) in µg/kg bw\***

EFSA 2017	2.0
JECFA 2016	4.0
EFSA 2016	0.8

*\*Micrograms per kilogram of body weight*

## **Potential risks for the kidney and male fertility**

Prof Hogstrand added: “We checked again the data concerning effects on development and reproduction, particularly on male fertility as these were highlighted by JECFA.

“We calculated the levels at which possible adverse effects on the kidney and on male fertility could occur. The updated TDI is protective for both types of effects.”

## **Technical differences, same overall conclusions**

EFSA’s new TDI is closer to JECFA’s TDI. EFSA and JECFA used the same toxicological data but different BMD modelling techniques. Despite these technical differences, both bodies came to the same overall conclusions on the possible adverse effects of 3-MCPD and the level of concern for public health.

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## **[Press release: New information on rare River Severn fish population](#)**

Monitoring work during the spring and summer of 2017 which used some of the latest technology, found that around 15,000 shad can make it above Upper Lode weir on the River Severn, near Tewkesbury before being halted by Diglis Weir in Worcester. These monitoring results are significant because they indicate the current levels of twaite shad in the river which once supported millions of this species.

### **Research part of a major project on the River Severn**

The research was conducted by the Severn Rivers Trust, Environment Agency and Canal & River Trust as part of the multi-million pound Unlocking the Severn project, which is supported by the Heritage Lottery Fund and EU Life. The information gathered will be vital for the project which aims to restore the shad's access to 155 miles of the River Severn, north of Worcester, by providing fish passage solutions at a series of weirs that currently the fish cannot swim over or around.

Environment Agency Fisheries Monitoring Specialist, Charles Crundwell said:

We had no idea how many shad we'd find – we thought a few thousand, but in fact results suggest we could have as many as 15,000 in the lower reaches of the river. This shows great promise that by unlocking the river there's scope for a really thriving population.

Plus the work to help the shad will open up the river for all fish species, so helping the shad will help everything else for the benefit of wildlife, residents, tourists and anglers.

### **Using different techniques to monitor the twaite shad**

In order to learn more about the remaining small population of shad,

particularly the conditions they need to prosper, volunteers and staff from the Severn Rivers Trust, Environment Agency and Canal & River Trust spent many hours watching and counting twaite shad swimming over Upper Lode weir during April, May and June.

In addition, a suite of remote monitoring techniques enabled monitoring all day, every day. This included cameras, counter plates triggered when a shad passed upstream and even the use of an acoustic beam giving an image similar to the ultrasound you get of a baby in the womb.

As well as the count of the shad, the monitoring team and its contractors made the first known underwater film of shad on the Severn as they migrated upstream and the first images of the shad's spectacular spawning behaviour, which is like a whirling dancing with rigorous splashing seen just before dark.

Acoustic tracking tags fixed to 25 shad (another first for the UK, under licence from the Home Office) showed how they migrate up the river, what habitats they use, and how barriers delay them. This is all crucial information in understanding how to create the best access routes for the fish.

An suite of underwater camera equipment was installed at the spawning sites to understand this behaviour.

## **The allis shad**

In addition to the twaite shad, the monitoring also recorded the rarer allis shad.

Charles explained:

Historically the allis shad were even more prized as a food fish and would certainly have been an important component of the catch prior to the navigation weirs being built. This is the first photographic proof that a tiny run of these fish still hold on in the Severn, which is really exciting and means that the natural restoration of this species is also likely to occur if we are able to provide fish passage solutions at the weirs further up the river.

More information about the Unlocking the Severn project is available [online](#). You can also follow the project on [twitter](#).

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# Press release: Top construction firms appointed to build new PHE site in Harlow

Three of the UK's leading construction companies have been chosen to create Public Health England's (PHE) new state-of-the-art public health science campus and headquarters at Harlow, Essex.

They have been selected for the 4 key elements of the £400 million capital spend programme to create the campus. This includes building and refurbishing new and existing laboratories and office areas; construction of a new arrivals area and logistics centre; and site-wide infrastructure including car parking.

The appointments, creating thousands of construction-related jobs, sees the end of an 18-month procurement process, with work expected to start next month.

The successful companies bid for 4 lots:

- lot 1 – new build of specialist bioscience laboratory building – Kier Group
- lot 2 – refurbishment of main building, including laboratories and offices – Wates Construction
- lot 3 – arrivals, administration and logistics buildings – Wates Construction
- lot 4 – site-wide infrastructure, external works and energy centre – VolkerFitzpatrick (Royal VolkerWessels)

The appointment of all 3 contractors provides a boost to local employment – particularly in the case of VolkerFitzpatrick, whose head office is located in the neighbouring town of Hoddesdon.

The next steps will see the contractors working with the existing design teams and preparing the site for major construction. This is planned to start in 2019, with phased occupation starting in 2021.

PHE Harlow, as the campus will be known, is expected to employ up to 2,750 people by 2024, with scope for further expansion.

Facilities from Porton in Wiltshire and Colindale in north London, as well as PHE's central London headquarters, will be relocated to the single centre of excellence for public health research, health improvement and protection.

The campus is critical to the future of PHE, ensuring we will be able to use the latest scientific advances to deliver our world-leading science and evidence for issues such as smoking, alcohol, diabetes, dementia, infectious diseases, environmental hazards and climate change nationally and internationally.

Richard Gleave, PHE Deputy Chief Executive, said:

PHE is delighted to have secured 3 of the leading construction companies in the UK to deliver what will be a world-leading national and international resource.

Much of the work to create PHE Harlow is highly specialised so it's especially pleasing to have secured 3 of the best companies in their fields to deliver that work. This is yet another milestone for PHE and we can now look forward to the chosen contractors coming on board and bringing their considerable wealth of experience and skills to our programme.

We are also delighted at the very significant opportunities that the construction of PHE Harlow will offer in the surrounding area.

Nigel Brook, Kier Group Executive Director, Construction and Infrastructure Services, said:

This £160 million project is another significant award for Kier in bioscience, building on our track record as a specialist delivery partner in the sector with projects including biomedical research facilities for the University of Cambridge with Project Capella and the Sainsbury laboratory as well as the state-of-the-art Derriford Research Facility for Plymouth University.

We're looking forward to providing a state-of-the-art facility which will help Public Health England to keep improving the nation's health and wellbeing.

Ian Vickers, Managing Director, Wates Construction Home Counties, commented:

PHE Harlow will play a pivotal role in improving public health, providing state-of-the-art facilities for industry-leading scientists and doctors to address some of the most pressing medical and environmental challenges the world is currently facing.

It is therefore a particular privilege for Wates to be awarded 2 of the 4 lots. It is also a huge responsibility, and over the next year we will be working closely with PHE and other partners as we prepare to start on site in early 2019.

Richard Offord, Managing Director of VolkerFitzpatrick said:

We are delighted to be working with PHE on such a forward-thinking project. The new public health science campus will support the growth of the local area and we are looking forward to starting

work on this exciting opportunity.

## Background

1. PHE submitted an Outline Business Case to government in July 2014. An interim decision was taken in September 2015 to move the majority of PHE functions from Porton to Harlow. In November 2015 the government supported a further proposal to move PHE science facilities at Colindale to Harlow to create a single integrated campus. The government has committed £400 million capital investment for the project.
2. Today's announcement comes less than 3 weeks after PHE was granted outline planning permission by Harlow District Council to create its centre of national and international scientific expertise.
3. It is hoped the public health science campus will be fully operational by 2024, with the first building work expected to start in 2019 and a phased occupation from 2021.
4. The campus will allow PHE to fully embrace the new technologies of whole genome sequencing, public health interventions and 'big data' and transform the delivery of public health science for many years to come. Whole genome sequencing is the mapping of a person's unique DNA and enables more accurate, sophisticated and cost-effective genetic testing.
5. [Kier Group plc](#) is a leading property, residential, construction and services group which operates across a range of sectors including science, defence, education, housing, industrials, power, transport and utilities. Among the schemes it has been involved in, the most relevant are Project Capella, a large biomedical research facility, and the Sainsbury Laboratory both in Cambridge.
6. [Wates Construction](#) has a long track record across both the public and private sectors and has worked on projects across a variety of areas, including education, commercial, heritage, local authority frameworks and mixed-use. These have included the delivery of major projects for both the Pirbright Institute in Surrey and the Quadram Institute in Norwich.
7. [VolkerFitzpatrick](#) is a multi-disciplinary contractor working in the civil engineering, building, rail, waste and energy infrastructure sectors. The head office is at Hoddesdon in Hertfordshire just eight miles from the PHE Harlow site. Founded in 1921, the company has grown to become one of the top contractors in the UK. VolkerFitzpatrick constructed a third berth at the UK's new deep-sea hub port, 25 miles

from central London at Stanford-le-Hope and was appointed by Siemens to design, build and commission two train care depots in Hornsey, north London and Three Bridges near Crawley, West Sussex. VolkerFitzpatrick is part of VolkerWessels UK, a multi-disciplinary construction and civil engineering group.

8. [Public Health England](#) exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health. Twitter: [@PHE\\_uk](#), Facebook: [www.facebook.com/PublicHealthEngland](http://www.facebook.com/PublicHealthEngland).

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