

From: Mike Hill, Cabinet Member for Community and Regulatory Services
Simon Jones, Corporate Director Growth, Environment and Transport

To: Growth, Economic Development and Communities Cabinet Committee –

Subject: **Kent Scientific Services Update on current and future work activity, including EU Exit**

Classification: **Unrestricted**

Past Pathway of report: N/A

Future Pathway of report: N/A

Summary: This report covers the role and work of Kent Scientific Services over the last five years, with a focus on current and future opportunities for the Service, including preparation for full import checks for goods arriving via or from mainland Europe from summer 2022.

Recommendation(s): The Cabinet Committee is asked to note and discuss the report.

1. Introduction

1.1 This report covers the role and work of Kent Scientific Services over the last five years, with a focus on current and future opportunities for the Service.

2. Background

2.1 Kent Scientific Services is Kent County Council's in-house scientific facility providing analytical chemistry testing, toxicology testing and metrology calibration services. KSS sits within the Public Protection Group of services within the Growth and Communities Division.

2.2 The service has previously been the subject of various 'continuous improvement' reviews regarding the best delivery model. In 2014 it was resolved that KSS was best suited to being provided in-house with the aim of seeking a more commercial footing, without compromising its integrity as a national certified control laboratory.

2.3 There are three primary service areas within KSS: Toxicology; Food, Feed and Consumer products; and Metrology (weights and measures).

2.4 Toxicology services are provided, in the main, to the Senior Coroners in Kent and Medway to support their decision making when establishing cause of death. This work is undertaken by analysing samples taken by pathologists during

post-mortem examinations. Those samples include blood, urine, liver, vitreous humour and anything else the pathologist considers appropriate. KSS toxicologists seek to establish whether the deceased has consumed anything of a toxic nature and anything to a significant level beyond that which might be therapeutic. They also look to establish whether a deceased with known medical conditions had consumed their prescribed medication and are increasingly asked to identify consumption of any substance which might have impacted upon a deceased's prior state of mind.

- 2.5 A small amount of toxicology is also carried out on a commercial basis with testing of samples taken at a police station for those accused of driving after consumption of alcohol. KSS carry out independent analysis on behalf of potential defendants and receive samples from across the country. KSS does not carry out this work for the Police, who have their own laboratories, but do so as an important check and balance to the criminal justice system.
- 2.6 Food, feed and consumer product testing is carried out in support of those services performing enforcement functions aimed at protecting the public. KSS is an Official Control Laboratory designated by the Food Standards Agency. This aspect of KSS's work is delivered to Trading Standards, Environmental Health and Port Health authorities across the U.K. Every upper tier food authority is required to appoint a Public Analyst by law and we provide this function to more than thirty such authorities across the U.K.
- 2.7 Food and feed testing is split into two main work areas; nutritional testing and contaminant testing. With regard to nutritional testing analysis is carried out against either legal standards for certain foods, like meat content in sausages, or against the on-pack nutritional declarations including levels of fat, salt and energy. With regard to contaminant testing, analysis is carried out for the presence of unsafe elements like heavy metals, aflatoxins (mould based toxins which are linked to liver cancer) and, most recently, THC in CBD products. THC is the psychoactive element of cannabis.
- 2.8 Product safety testing is mainly focussed on testing of cosmetics where analysis is carried out for unsafe elements including mercury, lead and hydroquinone. KSS has recognised expertise in this area of testing and carries it out for a wide range of clients including internationally.
- 2.9 The skills and knowledge developed in providing the scientific support for enforcement are also offered to businesses seeking to ensure that the products they are placing on the market are compliant and safe. This business service is provided both through Trading Standards primary authority agreements and also directly to businesses.
- 2.10 Metrology services are provided to two predominant customer groups. Firstly, every upper tier and unitary local authority in the U.K. is a Local Weights and Measures Authority as defined by the Weights and Measures ACT. Each of these authorities has a statutory duty to maintain standards of weight and measure and to confirm the accuracy of these standards on a regular basis. KSS meets this statutory duty for Kent County Council and also for many other Local Weights and Measures Authorities across London and the Southeast. The second group are businesses who have a commercial need to verify the accuracy of the standards they use in their commercial activity. Business

sectors benefitting from these services range from local veterinary practices verifying the accuracy of a horse measure to international pharmaceutical businesses verifying the accuracy of weights used in research and production.

3. Budget

- 3.1 As part of the drive to operate in as commercial a manner as possible within KCC, KSS has a target for earning external income. For the 21/22 business year that target is £857,600.
- 3.2 In addition, KSS operates with a negative revenue budget. For the 21/22 year the annual revenue budget is -£15,300.
- 3.3 Monitoring suggests that KSS is on target to achieve at least the requirements of both of these targets.
- 3.4 External income for the 17/18 business year was £739,809. The same figure for 20/21 (the last full year available) was £954,331. This represents a 29% increase and was, in fact, slightly lower than the previous year as Trading Standards and Environmental Health enforcement work was diverted away from food and feed sampling to Covid restrictions enforcement. Income this business year to the end of November stands at £736,788, broadly on a par with the whole of 17/18.
- 3.5 The last two business years have seen a reduction in samples submitted by local authorities, particularly Trading Standards services, as their enforcement officers have been focussed on enforcing the various coronavirus restrictions. The Food Standards Agency has a recovery plan in place to try to ensure that those local authority resources are returned to their statutory duties in food and feed, and we are starting to see some impact from this.
- 3.6 The start of the Coronavirus pandemic saw one of KSS's most significant customers, an airport, stop sending any samples for analysis as international passenger flights, upon which fresh food cargo is also carried, stopped. Samples from the client started to resume in December 2021.
- 3.7 In contrast, several commercial laboratories ceased operations due to the pandemic and many of their commercial users became client at KSS. We are working hard to retain their custom post pandemic.

4. National infrastructure

- 4.1 As a designated Official Control Laboratory for food and feed, KSS forms part of the national infrastructure required to ensure that safe and properly described food and animal feed is available to the public in the U.K.
- 4.2 The Elliott Review, carried out following the "horsemeat" situation in 2013 (when foods advertised as containing beef were found to contain undeclared or improperly declared horse meat), highlighted the need for this infrastructure and the need for a "public sector spine" of provision whilst recognising private sector involvement.
- 4.3 As well as providing testing for food and feed on sale in the U.K., this national infrastructure provides testing for food and feed imported into the country to

prevent unsafe food entering the market. KSS provides this service directly to many of the major ports including; London, Felixstowe, Southampton, Liverpool, Gatwick and Dover.

- 4.4 There are two different types of official control laboratory in the U.K., one that provides testing for microbiology and is focussed on food hygiene. The other provides chemical testing focussing on contamination, composition and food standards.
- 4.5 KSS is one of five Official Control Laboratories of the second type mentioned above in England and Wales. Three are public sector and two private sector. In 2010 there were 10 public sector Public Analyst laboratories. At the time of the Elliott Review into the horsemeat contamination situation (2014) this had reduced to 6. Currently there are 3. Whilst this may seem like a negative situation, those carrying out previous service improvement reviews rightly recognised the opportunities this created for KSS. KSS has been very successful in bringing clients from those laboratories that have closed into our client group including authorities who previously owned and operated their own laboratories.
- 4.6 There is a fundamental difference in the way the two types of laboratory are funded. Microbiology testing is centrally funded by government with local authorities calling off testing and no direct cost to themselves. Chemical laboratories are funding only by the work they can attract. The Food Standards Agency, as the national competent authority for testing laboratories, are fully aware of this disparity and are currently carrying out a review with a view to making the current laboratory provision more resilient. In the meantime, the FSA have funded projects designed to develop and improve their surveillance of food and feed issues in the light of reduced sampling and testing by local authorities. KSS is fully participating in these projects.
- 4.7 KSS has operated a formal partnership with the Official Control Laboratory owned and operated by Hampshire County Council, also one of the second type of laboratories, for over 20 years. This partnership allows the two services to secure economies of scale. It also allows for the sharing of resources, improved resilience planning and balanced investment decisions when developing new areas of service provision.

5. People

- 5.1 25 people (23.6 FTE) work in the KSS laboratories.
- 5.2 To function as an Official Control Laboratory of the chemical testing type, results and interpretation are required to be reported by a Public Analyst. This is a statutory role with qualifications set out in law. The holder of the office of Public Analyst is recognised by the courts as an expert without the need to further set out their qualifications and experience. There are currently only 10 Public Analysts actively fulfilling this function in England and Wales. Two of them work at KSS.
- 5.3 Testing and analysis is carried out by scientists with a wide range of experience and qualifications including masters degrees in chemistry and in physics, batchelors degrees, higher diplomas and higher certificates.

- 5.4 Some five years ago KSS recognised the benefits of engaging staff to develop their careers using the modern apprenticeship route. Working with the University of Greenwich five KSS scientists have been developing their knowledge and skills using degree apprenticeship courses funded through the apprentice levy. Two scientists have recently graduated with batchelors degrees in chemistry, two more are working towards that qualification and a further scientist, in our toxicology team, is working towards a batchelors degree in pharmacology. As well as bringing their increasing knowledge to the work of the laboratory, the drive, enthusiasm and up to date thinking and questioning these colleagues bring makes them a real asset to the service. KSS has contributed to KCC awareness raising projects about the benefits of modern apprenticeships including this short video <https://youtu.be/CX9xZ3sQI44>, part of the KCC “Made in Kent” campaign.
- 5.5 Opportunities for young people to gain genuine experience of scientific workplaces are very rare. To help address this, and as part of KSS’s contribution to KCC’s wider objectives to support young people from education into the workplace, KSS runs an annual programme of work experience placements. This programme provides a week-long placement for young people looking to develop careers in science where they directly participate in the work of the laboratory using techniques and instruments not seen in schools and colleges. Although this programme has had to be placed on hold due to the pandemic, the team at KSS are reinstating it as soon as the situation allows.

6. Quality management

- 6.1 Managing the quality of the testing, analysis and interpretation carried out at KSS is of critical importance to our role as an enforcement laboratory and to the confidence of our client base and, ultimately, the courts.
- 6.2 To ensure the quality and consistency of the work carried out, KSS operates a comprehensive quality management system under ISO/IEC 17025, the international quality standard for testing and calibration laboratories.
- 6.3 KSS’s quality management system, and the work carried out under it, are accredited by the United Kingdom Accreditation Service (UKAS) and securing and maintaining this accreditation is an onerous undertaking..
- 6.4 In addition to carrying out the day-to-day work of the laboratory in line with the quality management system, KSS is also required to monitor and prove the accuracy of our testing results. To that end KSS participates in a series of “blind” performance testing rounds including those run by the Laboratory of the Government Chemist and the FAPAS (Food Analysis Performance Assessment Scheme) operated by FERA Science, one of the U.K. National Reference Laboratories.

7. Opportunities

7.1 EU exit

- 7.1.1 The U.K.’s departure from the E.U. has provided KSS with some opportunities to grow the service.

- 7.1.2 Prior to departure there was ready access to testing across the E.U. and, in particular, to laboratories in France and Germany. That access is now much more restricted and there is significant focus on providing testing in U.K. based laboratories.
- 7.1.3 KSS is at the forefront of this drive for U.K. testing and, since departure from the E.U., has carried out a significant amount of testing for Port Health Authorities of goods which would previously have been tested overseas. KSS is also directing our efforts in developing new test methods to those areas of testing which we know are not carried out within the U.K.
- 7.1.4 The creation of a trade border between the U.K. and E.U. means that several ports which historically only provided routes from mainland Europe to the U.K. and not from non-E.U. countries now find themselves required to act as points of import and export with the associated need for border controls and testing. Dover and the Channel Tunnel are amongst these and it is, perhaps, a fortunate accident of geography that KSS is located so close to these major points of entry. The Service is fully engaged with these ports to organise the delivery of scientific testing when required next year as new import controls from the E.U. come into force under new U.K. legislation. The next nearest laboratories are in Portsmouth, Wolverhampton and Cardiff.
- 7.1.5 In addition to testing of goods destined for the U.K. market, many businesses now require testing certificates to export their goods to the E.U. which were not previously required for goods in free movement. KSS is working with businesses and with local authorities to provide the testing necessary to enable these export certificates to be issued. Kent based businesses are amongst those impacted by this requirement.

7.2 New method development

- 7.2.1 As a result of improving knowledge and experience amongst the KSS analytical staff and some capital investment on instruments, KSS now has the ability and some capacity to develop new testing methods for marketing to existing and new clients.
- 7.2.2 At the outset of developing a new method, an assessment is carried out to identify the resourcing implications and the method for validating it to the point where it would be suitable to add to our schedule of tests accredited by UKAS under ISO/IEC 17025. The first part of this assessment process is to establish the commercial benefits of the proposed development. Some developments are relatively straight forward and are, in effect, extensions of methods already carried out. Some are complex and involve starting from first principles.
- 7.2.3 Commercial benefit might be gained from marketing a new method, but it could equally be gained from being able to carry out a method in-house which KSS would otherwise need to sub-contract.
- 7.2.4 Recent examples of successful method development include the development of a method to test for the allergen sesame linked to the introduction of new requirements on food labelling of allergens, informally

known as “Natasha’s law”, and a method to test for cannabidiol (CBD) and the psychoactive elements of cannabis in food following the surge in the market for CBD containing foods and other products, such as e-cigarette vapes.

7.3 Toxicology

- 7.3.1 Over the last three years the methods by which KSS carries out its toxicology work for the Senior Coroners have been thoroughly modernised to use the latest techniques and instrumentation. These methods are highly accurate and sensitive.
- 7.3.2 Current development within the Toxicology Team is focussed on method development for tests which are commonly sub-contracted.
- 7.3.3 In addition to providing in house efficiencies to the Coroners’ service, it also provides security from external market forces, consistency in service provision and a very strong relationship with the senior coroners allowing for effective resolution of any queries.
- 7.3.4 In the longer term there are opportunities to utilise the skills of this team to broaden their income generation ability. Examples of these opportunities include the development of testing for drug driving and for workplace drug testing.
- 7.3.5 Any movement into work within the criminal justice system would, however, require considerable time and resource investment into compliance with the Forensic Regulator’s codes of practice which The Service is not currently required to consider.

7.4 Metrology Calibration

- 7.4.1 Following the retirement of the previous post-holder, a new manager for the Calibration Section was appointed in 2021. That manager is also an Inspector of Weights and Measures, holding the statutory qualification under section 73 of the Weights and Measures Act 1985.
- 7.4.2 The initial tasks for the section under its new leadership are to modernise some aspects of its service provision including replacement of some of its outdated and increasingly unreliable equipment. These tasks are making good progress
- 7.4.3 Planning is also underway for this section to expand their work next business year. This will involve identifying existing clients who do not, currently, receive some of the services which they might benefit from and then identifying new clients who do not receive the services currently provided but who operate in markets which KSS services.
- 7.4.4 New services will also be developed by this team. A recent example is the development of a service for Trading Standards colleagues enforcing safety requirements linked to the sale of e-cigarettes where accurate measurement of the device and its contents is required.

7.5 Other services

- 7.5.1 As part of acting in a more commercial manner, KSS actively seeks opportunities to develop services which, whilst not being part of the traditional or core offering, can utilise skills held within the service to provide a product of value to clients.
- 7.5.2 An example of this in recent years has included the development and launch of the first local authority Alternative Dispute Resolution (ADR) scheme to be accredited by the national governing body to resolve disputes between consumers and businesses as an alternative to going to court. Working closely with Trading Standards, this service is intended to strengthen both business and consumer confidence. Whilst it is offered generally, it's main use is in settling disputes which have occurred between consumers and businesses who are part of various approved trader schemes.
- 7.5.3 Looking forward, there is increasing interest in U.K. testing capacity for products used in the construction industry following the Grenfell Tower fire. KSS is looking at which of the current skillset held at the laboratory could be deployed to this type of testing.

8. Challenges

- 8.1 Arguably the greatest challenge facing KSS is succession planning. The roles undertaken are highly unusual in scientific work in that they involve not just science but the application of that science to law. Suitably qualified people to undertake these roles are not generally available in the marketplace and therefore, training and development in-house is a vital aspect of the service. Capacity to undertake this is a constant challenge as every member of the team has a fee-earning workload which needs to be completed.
- 8.2 Many of the most significant clients of KSS are in the public sector and the vagaries of public sector funding present a challenge to KSS, especially the ability to make long-term decisions about developing the Service.
- 8.3 Current supply chain issues and increasing costs of consumables, including but not limited to laboratory grade gasses like helium and nitrogen, are presenting a short-term challenge to the Service.

9. Legal implications and Data Protection

- 9.1 KSS operates within various legal frameworks and meets some of the statutory duties placed upon KCC and other local authorities in the course of its work. Changes to U.K. law as any divergence from E.U. law occurs will have an impact on service delivery. KSS is well connected with the appropriate government departments and also with professional bodies to understand and respond to any proposed changes.
- 9.2 There are no Data Protection issues.

10. Equalities implications

- 10.1 The existing Equality Impact Assessments underpinning the breadth of the service's work apply to the work and roles described in this paper

11. Conclusions

- 11.1 KSS has a well-trained, committed and effective scientific workforce who understand the commercial requirements relevant to the services provided and the associated need for high quality customer care.
- 11.2 Two of KSS's most significant client groups are Trading Standards Services and Coroners. Aligning The Service within the Public Protection Group of services provides helpful commercial benefits in that ideas can be developed with these KCC services before being rolled out to external clients.
- 11.3 KSS is well placed to take advantage of the opportunities ahead.

Recommendation(s):

The Cabinet Committee is asked to note and discuss the report.

12. Background Documents

12.1 None

13. Contact details

Report Author:

Mark Rolfe, Head of Kent Scientific Services

Tel 03000 410336

Email: mark.rolfe@kent.gov.uk

Public Protection Group Head:
Mike Overbeke

Tel: 03000 412427

Email: Mike.Overbeke@kent.gov.uk

Relevant Director:

Stephanie Holt Castle, Director for Growth and Communities

Tel: 03000 412064

Email: Stephanie.Holt-Castle@kent.gov.uk