Ninth Meeting of the National Statistician's Data Ethics Advisory Committee

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Minute, Agenda and Papers

Tuesday 04 July 2017

10:45 – 14:00

Board Room, UK Statistics Authority
London

UK STATISTICS AUTHORITY

NATIONAL STATISTICIAN'S DATA ETHICS ADVISORY COMMITTEE

Agenda

Tuesday 4 July
Board Room, Drummond Gate London
10:45am – 2:00pm

Chair: **Mr Ian Cope**

Apologies: **Martin Severs**

(10:45am to 12:00pm)

1 10:45am	Minute and matters arising from the previous meeting	Mr Ian Cope
2 10:50am	Chair's report	Oral report Mr Ian Cope
3 11:10am	Reviewing MRP projects by precedent	NSDEC(17)13 Mr Ian Cope
4 11:20am	CTP: Estimating Income from administrative data	NSDEC(17)14 Ms Meghan Elkin
5 11:35am	Ethnicity by name	NSDEC(17)15 Mr Owen Abbott
6 11:50am	Web scraping policy	NSDEC(17)16 Mr Matt Greenaway

Lunch (12:00pm to 12:30pm)

(12:30pm to 2:00pm)

7 12:30pm	NSDEC Self-assessment	Oral report Dr Simon Whitworth
8 12:40pm	Algorithmic Policing	Oral presentation Marion Oswald Sheena Urwin
9 1:10pm	MRP: Design skills for innovation and productivity	NSDEC(17)17 Mr Peter Stokes
10 1:25pm	MRP: Heritage Economic Impact 2017	NSDEC(17)18 Mr Peter Stokes
11 1:40pm	MRP: Impact evaluation of the Apprentice Rate increase	NSDEC(17)19 Mr Peter Stokes
12 1:55 pm	Any other business	

Next meeting: Tuesday 10 October 2017
Location: One Drummond Gate, London

National Statistician's Data Ethics Advisory Committee

Minute

Tuesday, 4 July 2017
Board Room, Drummond Gate, London

Present
Members
Mr Ian Cope (Chair)
Mr Robert Bumpstead
Ms Vanessa Cuthill
Mr Keith Dugmore
Mr Colin Godbold
Ms Annie Hitchman
Ms Isabel Nisbet
Ms Marion Oswald
Mr Osama Rahman

UK Statistics Authority
Dr Simon Whitworth

Office for National Statistics
Mr Peter Stokes (for items 3 and 11)
Ms Megan Elkin (for item 4)
Mr Owen Abbott (for items 5 and 6)
Mr Matthew Greenaway (for item 6)

Durham Constabulary
Ms Sheena Urwin (for item 8)

Apologies:
Professor Martin Severs
Mr Neil McIvor

1. Minutes and matters arising from the previous meeting

1.1 The Chair welcomed members to the ninth meeting of the National Statistician's Data Ethics Advisory Committee (NSDEC).

1.2 Members were informed that the minute of the eighth meeting had been agreed by correspondence. The minute, agenda and papers from the last meeting are now published on the UK Statistics Authority website.

1.3 The Chair updated the meeting with progress on actions from previous meetings. Most actions were complete or in progress and would soon be complete.

2. Chair's report

2.1 The Chair provided members with an update on projects previously considered by NSDEC. The meeting heard that:

i. All of the revisions to the Ministry of Defence (MoD) proposal to examine the veterans of the Armed Forces and their households have been implemented. ONS has now got the MoD data and the linkage is taking place.

ii. All of the revisions to the proposal to assess the representativeness of the Labour Force Survey using admin data have been implemented. Both DWP and HMRC have agreed for the project to proceed. Linkage has successfully been completed and the analysis is being undertaken.

iii. The researchers involved in the proposal to use ONS data to understand Small and Medium-sized Enterprises in UK have confirmed that the research will focus on firms and not individuals.

iv. Researchers from the independent research and policy consultancy Belmana who are researching the performance of businesses that have received support from Innovate UK have implemented all revisions.

2.2 Following the July 2016 NSDEC meeting, a new ONS safeguarding policy and procedure has been developed. It was reported that the policy was successfully piloted, between January and May 2017. Plans are now being developed to roll out the policy to the all interviewers by the end of 2017 and the final policy will be published on the ONS website.

2.3 The meeting heard that the NSDEC application form has been redesigned to make it easier for applicants to fill in the form, limit repetition and ensure that NSDEC have all required information to consider the ethical aspects of research proposals.

2.4 It was reported that Dr Brent Mittelstadt, a Postdoctoral Research Fellow at the Oxford Internet Institute with expertise in the ethics of algorithms, machine learning, artificial intelligence and data analytics ('Big Data'), had been appointed to NSDEC and will attend the October meeting.

2.5 The meeting heard that the Secretariat had met with the Cabinet Office Communications team to provide advice on their development of an ethical framework on the access, use and sharing of data in their communication campaigns. The secretariat has also met with the Department for International Development as they are establishing an internal ethics committee for DfiD staff for evaluation and research projects.

2.6 The Chair reported that the Digital Economy Bill received Royal Assent on 27 April 2017 and is now an Act of Parliament. It was reported that there would be a public consultation on the statement of principles/codes of practice over the summer and that the government would respond to the responses to the consultation in early autumn. An additional process of parliamentary scrutiny, under the affirmative resolution procedure, will take place on the principles/codes of practice before full commencement at the end of the year.

2.7 NSDEC members were informed that the British Academy and Royal Society had recently published a report on Data Management and use: Governance in the 21st Century. This recommends a set of high level principles are required to shape all forms of data governance to ensure trustworthiness and trust in the management of data. The report also recommends that a new body is set up to steward the landscape as a whole and that NSDEC is mentioned as one of the existing governance groups that the new body should draw upon when developing its principles.

2.8 It was reported that Professor Dame Wendy Hall (Southampton University) and Jerome Pesenti (CEO of Benevolent Tech) are to lead a review on how to capitalise on the UK's status as a world leader in the science underpinning Artificial Intelligence (AI) technology. The review is supported by Department for Business, Energy & Industrial Strategy and Department for Digital, Culture, Media & Sport, and will consider how Government and industry could work together to better support this technology and further grow the sector, from early research to commercialisation.

3. Reviewing Microdata Release Projects (MRP) by precedent [NSDEC(17)13]

3.1 The Chair informed the meeting that consideration of some proposals via precedent may be necessary in order to ensure timely access to ONS data for Approved Researchers from the commercial sector. A proposed process to do this was presented to NSDEC. This involved projects being agreed by precedent by the Chair based on the advice of the Secretariat and the Head of ONS Researcher Support and Data Access team.

3.2 Members had the following comments on the proposal:

i. It should be clear who the researcher is and who the sponsor is. A full assessment of their suitability should be conducted. This step should be added to the flow chart.
ii. When operationalising the precedent process consideration could be given to the categories of sensitive data in the Data Protection Act.
iii. The evidence on which the decision to approve a project by precedence is based upon needs to be clear. It was reported that the MRP application form would be altered to be more consistent with the NSDEC application form.
iv. A record of the commercial organisations that have previously accessed data should be maintained and this previous use should be taken into consideration when taking decisions by precedent.
v. There should be a reference to the ethical principles in the flow chart.

3.3 NSDEC agreed to approve the proposed process of approving MRP projects from the commercial sector by precedent. All projects approved by precedent would be reported to future NSDEC meetings.

Action: The Secretariat to work with the ONS Researcher Support and Data Access team to approve projects by precedent and report these projects at the next NSDEC meeting.

4. CTP: Estimating Income from administrative [NSDEC(17)14]

4.1 Ms Meghan Elkin presented a proposal from the ONS Census Transformation Programme to use administrative data from Department of Work and Pensions (DWP) and HM Revenue and Customs (HMRC) to develop a methodology to produce estimates at Middle and Lower Super Output Area level. It was made clear to NSDEC that the estimates will be published as banded distributions at these geographic levels.

4.2 Members were informed that this project would add real value for users because it will enable multivariate analysis at these geographic levels. Ms Elkin provided assurance to the committee that the statistical disclosure control will be applied to reduce the chances of re-identification when multivariate analysis is conducted.

4.3 NSDEC approved this project subject to minor revisions.

Action: Ms Elkin to make it clear in the application that estimates will be published as banded distributions at lower geographical levels.

5. Revised: Estimating ethnicity from names [NSDEC(17)15]

5.1 Mr Owen Abbott from ONS's Big Data Team introduced a re-submitted project proposal which looks to measure the quality of, and further develop, a tool, to estimate ethnicity from names. The project will be run in collaboration with University College London (UCL).

5.2 It was stated that significant improvements had been made in this application. However, members thought that use of this tool should be restricted to aggregate data and that the release of this aggregate data should be subject to ONS's normal statistical disclosure rules.

5.3 Members wanted to be provided with external assurance that people cannot hack the tool remotely. If this assurance cannot be provided then the tool should only be used by ONS and the disclosure controlled aggregate data distributed to users by ONS. ONS should also speak to other population groups to provide them with the opportunity to feedback on the tool and as a further chance to raise any concerns they might have.

5.4 NSDEC recommended major revisions to the proposal and requested that it be resubmitted to a future meeting once these revisions had been implemented. A task and finish group should be set up to investigate the feasibility of implementing these revisions and to ensure that this works happens quickly.

Action: Mr Abbott to set up a task and finish group to do the following:

i. **make sure the use of the tool is restricted to aggregate data which is subject to ONS's statistical disclosure rules;**
ii. **provide NSDEC with external assurance that people cannot hack the tool remotely;**
iii. **speak to other population groups to provide them with the opportunity to feedback on the tool and as a further chance to raise any concerns they might have; and**
iv. **resubmit a proposal when this work has been completed.**

6. Web scraping policy [NSDEC(17)16]

6.1 Mr Matthew Greenaway presented a policy on web-scraping guidance for ONS staff. A first draft of this policy was seen at the meeting of NSDEC on 24 January 2017. It was reported that following the last visit to NSDEC a task and finish group on web-scraping was established to further develop the ONS draft guidance on web scrapping and oversee the production of comprehensive guidance that clearly presents good practice in web scraping for use by ONS staff in the production of statistics and research that serve the public good.

6.3 It was clarified that web scraping would cease if the web site owner asked ONS to stop web scraping and that ONS would not be using their powers under the Digital Economy Act to web scrape.

6.4 Members agreed that any project involving web scraping personal data will need to be approved by the committee before commencement.

6.5 NSDEC approved this proposal and complemented the task and finish group on their work taking this forward.

Action: Mr Greenaway to amend the policy to make it clear that web scraping would cease if the web site owner asked ONS to stop web scraping and submit any proposal to web scrape personal data to NSDEC for ethical consideration.

7. NSDEC self-assessment

7.1 Dr Simon Whitworth presented this item. The aim of the self assessment was to understand what NSDEC members felt had worked well over the course of the last year and what could be improved upon in the future.

7.2 It was reported that NSDEC members had provided positive feedback about the chairing and membership of the committee. However some members wanted more representation from areas such as computer science and the voluntary sector. Dr Whitworth reported that this feedback was being taken into consideration in the recruitment of new NSDEC members.

7.3 It was felt that the new application form was an improvement on the previous form. However, there was still scope to reduce the amount of paperwork that was being sent to members.

7.4 Dr Whitworth reported that training covering some of the common themes that NSDEC are regularly discussing in meetings would be provided in prior to the next meeting in October.

Action: Dr Whitworth to organise the training for NSDEC members before the next meeting.

8. Algorithmic Policing

8.1 Ms Sheena Urwin, Head of Criminal Justice at Durham Constabulary, and Ms Marion Oswald presented on Algorithmic risk assessment policing in Durham Constabulary custody suites. The presentation focused on the development of a decision support tool to provide consistent and transparent decision support to encourage offenders away from a life of crime and improve their life chances.

8.2 The legal and ethical framework which had been developed to guide the deployment of algorithmic assessment tools in the policing context was also discussed.

9. MRP: Design skills for innovation and productivity [NSDEC(17)17]

9.1 Mr Stokes, Head of ONS Researcher Support and Data Access team, introduced a proposal via the Approved Researcher Scheme by Ortus Economic Research Ltd, a private research consultancy, to use ONS survey data in the Virtual Microdata Laboratory (VML) to enhance the evidence base on design skills and their links to economic outcomes.

9.2 Mr Stokes was asked to provide more information on how design occupations and design industries will be defined.

9.3 The committee approved this project subject to minor revisions.

Action: Mr Stokes to clarify in the application how design occupations and design industries will be defined.

10. MRP: Heritage Economic Impact [NSDEC(17)18]

10.1 Mr Stokes presented a proposal referred by the Microdata Release Panel for access and use of ONS data by Ortus Economic Research Ltd, a private research consultancy, to enhance the evidence base on the impact of the heritage sector to the UK economy.

10.2 It was suggested that more information should be provided on how a conservation officer is defined and that section B7 of the application should be improved to provide more clarity on the outputs.

10.3 NSDEC approved this project subject to minor revisions.

Action: Mr Stokes to clarify in the application how a conservation officer is defined and provide more clarity on the outputs in section B7.

11. MRP: Impact evaluation of the Apprentice rate increase [NSDEC(17)19]

11.1 Mr Stokes presented a proposal referred by the Microdata Release Panel for access and use of ONS data by Frontier economics, a private economic research consultancy, to evaluate the impact of the apprentice pay policy in England.

11.2 It was suggested that greater clarity should be provided on the proposed use of Individual Learners Records in the research.

11.3 NSDEC approved this project subject to minor revisions.

Action: Mr Stokes to clarify in the application how Individual Learners Records will be used.

12. Any other business

12.1 The secretariat will send out the meetings dates for next year.

12.2 The secretariat to include in future NSDEC updates some of the main themes discussed during relevant data ethics conferences and events.

These minutes were agreed by correspondence and signed off by the Chair and are now published along with the agenda and papers from the previous meeting on the UK Statistics Authority Website

National Statistician's Data Ethics Advisory Committee

Minute

Tuesday, 25 April 2017
Board Room, Drummond Gate, London

Present
Members
Mr Ian Cope (Chair)
Mr Robert Bumpstead
Ms Vanessa Cuthill
Mr Keith Dugmore
Mr Colin Godbold
Ms Isabel Nisbet
Ms Marion Oswald
Mr Osama Rahman

UK Statistics Authority
Mr Petros Saravakos
Dr Simon Whitworth

Office for National Statistics
Mr Jon-Wroth Smith, Data as a Service Division (for item 5)
Mr Chris Daffin, Social Survey Division (for item 6)
Mr Tony Chapple, Public Policy Division (for items 8 and 9)

Apologies:
Ms Annie Hitchman
Dr Dean Machin
Professor Martin Severs
Mr Neil McIvor

1. Minutes and matters arising from the previous meeting

1.1 The Chair welcomed members to the eighth meeting of the National Statistician's Data Ethics Advisory Committee (NSDEC).

1.2 Members were informed that the minute of the seventh meeting had been agreed by correspondence. The minute, agenda and papers from the last meeting are now published on the UK Statistics Authority website.

1.3 The Chair updated the meeting with progress on actions from previous meetings. Most actions were complete or in progress and would soon be complete.

2. Chair's report

2.1 The Chair provided members with an update on projects previously considered by NSDEC. The meeting heard that the Frontier Economics proposal to use de-identified survey data now had all minor revisions implemented. The research outcomes of this project have been published as part of the 2017 Tech Nation Report on the 22 of March. The report, concludes that the UK's digital tech industry is growing at twice the rate of the wider economy and is key sector in the UK economy.

2.2 Road Safety Analysis Ltd, who have been commissioned by Highways England, have presented their proposal to use ONS data to quantify the extent and variety of incidents involving suicide on England's strategic road network. The proposal received minor revisions. The Chair informed members that all revisions have been made by the researcher and signed off by the secretariat.

2.3 In the last meeting, members were presented the first Microdata Release Panel (MRP) project from a commercial organisation agreed via correspondence. All minor revisions have been implemented and signed off. Researchers have now shared their experience of working with the Approved Researcher Scheme and NSDEC on an online blog available on the ONS website.

2.4 The second proposal from the Microdata Release Panel from a commercial organisation to be considered via correspondence, which aimed to understand the societal impacts of water problems on health and wellbeing, was approved with minor revisions. The Secretariat is working with the researchers to implement these revisions.

2.5 The Census Transformation Programme (CTP) presented to the January 2017 meeting on their work to date to produce income estimates. The meeting heard that CTP would be presenting an application to the next meeting detailing their existing work and their future plans to produce household income estimates with greater granularity.

2.6 In the January 2016 meeting, Mr. Alistair Calder from the Population Methodology and Statistical Infrastructure Division in ONS presented the complexities in forming an accurate address register. The meeting heard that an application is expected at a future meeting.

2.7 Recommendations relating to the Ethnicity from names project are being addressed. A paper on this will be presented at the July meeting.

2.8 The Chair informed members that the first training course on Data Ethics had been developed and rolled out on 12 April to the ONS Data Science Campus. The feedback from the training was very positive and the secretariat is engaging with other areas in ONS and other government departments for additional training sessions.

2.9 The Chair provided members with an update on the task and finish group on web scraping. Members head that the group has held three meetings and has finalised the guidance document on web scraping which will be presented at a future meeting.

2.10 The meeting heard of a horizon scanning initiative by the secretariat to identify public organisations in the UK, excluding academia, with presence in the field of data and research ethics. The early analysis highlighted the similarities and differences between different ethics committees and their core principles. Members acknowledged the benefits of this initiative and requested that further work be done on this and discussed at a future meeting.

2.11 The Chair updated the committee on progress with the Digital Economy Bill. The meeting heard that the Bill had completed its consideration in the House of Lords on 5 April 2017. The Bill will now go to the Commons for consideration of the Lords amendments.

3. Approving application by precedent

3.1 The Chair informed the meeting that consideration of some proposals via precedent may be necessary in order to ensure timely access to ONS data for Approved Researchers from the commercial sector.

3.2 Members acknowledged the benefits for a precedent process, given the increasing number of projects to be considered by NSDEC. However, it was agreed that clarity needed to be provided about what constitutes a precedent.

3.3 It was agreed that the Secretariat will produce a full proposal for formal consideration by NSDEC at the July meeting.

Action: The Secretariat will produce a full proposal on approving applications by precedent for formal consideration by NSDEC at the July meeting.

4. Updated terms of reference [NSDEC(17)07]

4.1 The Chair introduced an update on the terms of reference which have been amended to reflect recent changes in the role of the NSDEC.

4.2 Members advised that the differentiation between researchers and sponsors stemming from the commercial sector should be clearer. They also agreed that this should be reflected in the application form.

4.3 In light of these comments, members were informed that the NSDEC application form will be reviewed to ensure that all required information is captured efficiently.

5. ADRN: Veterans in Great Britain: Linking administrative data from the Veterans Leavers Database with Census 2011 [NSDEC(17)08]

5.1 Mr Jon Wroth-Smith introduced this proposal which would see researchers securely link the Veteran Leavers Database from the Ministry of Defence (MoD) with the 2011 Census to inform policy making on veterans and their households. The meeting was informed that the project has been approved by the Administrative Data Research Network Approvals Panel and will help to support the delivery of assist the Armed Forces Covenant.

5.3 The meeting was informed that the MoD researchers will not have access to identifiable data and any research outputs will be geographically aggregated at a local authority level to ensure confidentiality. A privacy impact assessment has been conducted to reassure on that the privacy of data subjects is protected.

5.4 It was suggested that changes in the veterans' households, e.g. change of marital status, might result in large parts of the population being included in the research and detract from the benefits of supporting the provision of targeted services to veterans. Members were informed that the research examined only individuals, including dependent children, registered in the same household as the veterans. It was agreed that the application should clarify the populations covered under the Armed Forces Covenant.

5.5 NSDEC identified that the current dissemination plans, as stated in the application, did not provide assurances that research outcomes will be shared with key stakeholders, e.g. local authorities, to enable the full benefits of this research to be realised.

5.6 NSDEC agreed that the proposal could proceed subject to clarifying the following:

i. the scope of the Armed Forces covenant in the application:
ii. the security and privacy arrangements in place to mitigate the risk of re-identification: and
iii. the arrangements to disseminate the research outcomes to interested parties.

5.7 The committee approved this project subject to minor revisions

Action: Mr. Jon Wroth-Smith to define clearly

i. the scope of the Armed Forces Covenant in the application;
ii. security and privacy arrangements in place to mitigate the risk of re-identification; and
iii. the arrangements to disseminate the research outcomes to interested parties.

6. LFS: Project to assess the representativeness of the Labour Force Survey Phase I [NSDEC(17)09]

6.1 Mr. Chris Daffin presented an overview of a proposal from the ONS Social Survey Division to explore the feasibility of using administrative data from the Department of Work and Pensions and HM Revenue and Customs to assess the representativeness of the ONS Labour Force Survey (LFS).

6.2 Members agreed that it needed to be made clearer in the application how the issue of the informed consent is addressed.

6.3 The meeting was informed that the suggested use of data is a one-off survey for feasibility with no intention to use the linked dataset operationally and that is within the current ONS data sharing agreement with DWP and HMRC.

6.4 Members suggested that the use of income data to determine employment might be affected by the universal credit roll out. It was also agreed that references to future phases of the project should be removed from the application. It was suggested that the Data Protection Act does apply to pseudo-anonymised data and therefore the application needs to be amended to reflect this.

6.5 The committee approved this project subject to minor revisions.

Action: Mr. Chris Daffin to amend the application to address the comments of the committee.

7. MRP: The societal impacts of water problems (such as flood and supply interruption) on health and wellbeing [NSDEC(17)10]

7.1 Mr. Tony Chapple, presented this item. This Approved Researcher (AR) proposal had previously been considered by correspondence and was approved with minor revisions Mr. Chapple thanked the committee for expediting this application. This was the second AR application from a commercial organisation following the updating of the AR criteria and guidance.

8. MRP: Study of Small and Medium-sized Enterprises (SMEs) in the UK as part of the European Commission's SME Performance Review 2016/17 [NSDEC(17)11]

8.1 Mr. Chapple provided an overview of this Approved Researcher application. The meeting heard that the European Commission has commissioned London Economics to perform the analysis of small and medium-sized enterprises (SMEs) in the UK.

8.2 Members considered whether there was a risk of re-identification especially for small businesses and sole traders operating in niche areas. The meeting was informed that all research outputs will be subject to ONS's standard statistical disclosure controls to mitigate such risks.

8.3 It was suggested that considerations should be made in cases of people in multiple employment as this could affect the statistical quality of the estimates.

8.4 Members agreed that the inclusion of examples of the outputs was helpful to visualise how the outputs will be presented.

8.5 The committee approved this application.

Action: Mr. Tony Chapple to feedback to the Secretariat how multiple employment will be addressed in the application.

9. MRP: Impact evaluation (Phase I and II) of the Innovate UK Technology and Innovation Centre network (Catapults) [NSDEC(17)12]

9.1 Mr. Chapple introduced a proposal via the Approved Researcher Scheme by Belmana, an independent research and policy consultancy, to use ONS Survey data in the ONS Virtual Microdata Laboratory to assess the effectiveness of an Innovate UK initiative from Innovate to support business.

9.2 Innovate UK, an executive non-departmental public body, has launched a network of sector-specific Technology and Innovation Centres called Catapults. The meeting heard that two of these Catapults, regarding Satellite and Digital Technology, will be examined in this proposal.

9.3 Members requested more clarity on why the specific Catapults were selected and suggested that this is made clear in the application and the published outcomes. Members also asked for clarification about the criteria used to select the businesses that did not receive support from the Catapult programme.

9.4 NSDEC agreed that additional information would be required in the application to describe the relationship between Innovate UK and the Department for Business, Energy and Industrial Strategy as well as the agreement between Belmana and Innovate UK for the proposed use of data.

9.5 The meeting heard that the engagement from Belmana involved contacting business owners to complete their survey. It needed to be made clear in the application how Belmana obtained this information and what other information about individual businesses had been shared with Belmana. Members suggested that the controls in place to protect confidentiality should be clearly stated in the application.

9.6 NSDEC members suggested that it need made clear in the scope of the project whether if the research would assess the impact of the Catapult programme or the performance of business in the examined sectors. It was agreed that this should be also reflected in the dissemination of the research outcomes.

9.7 The committee approved this project subject to minor revisions.

Action: Mr. Chapple to clarify in the application:

i. **the relationship between Innovate UK, the Department for Business Energy and Industrial Strategy;**
ii. **the agreement between Belmana and Innovate UK as well as the confidentiality safeguards in place;**
iii. **if there are any specific criteria for selecting the control group and the examined Catapults;**
iv. **if the research would assess only the Catapult programmes or the performance of businesses in the examined sectors; and**
v. **that no conclusions are published outside the scope of research.**

10. **Any other business**

10.1 There was no other business.

Chair's report

Mr Ian Cope

1.	2.	3.	4.	5.	6.	7.	8.	9.	10	11.	12

UK Statistics Authority

National Statistician's Data Ethics Advisory Committee

NSDEC(17)13

Applications: policies and process for reviewing projects via precedent

This paper will be published in due course

1.	2.	3.	4.	5.	6.	7.	8.	9.	10	11.	12

UK Statistics Authority

National Statistician's Data Ethics Advisory Committee

NSDEC(17)14

CTP: Income outputs from administrative data

Purpose

1. The paper presents a proposal from the ONS Census Transformation Programme to use administrative data from Department of Work and Pensions (DWP) and HM Revenue and Customs (HMRC) to develop a methodology to produce estimates at lower levels of geography, for example Middle or Lower Super Output Area level[1], than previously possible.

Recommendations

2. Members of NSDEC are invited to consider the application at **Annex A** and advise the National Statistician to:
   i. approve the proposal and allow it to proceed;
   ii. approve the proposal subject to minor revisions;
   iii. recommend major revisions to the proposal and request the proposal be resubmitted to a future meeting once implemented; or
   iv. reject the proposal advising it be stopped from proceeding.

Background

3. On 16 December ONS published its first Administrative Data Census research outputs on income at a local authority level. The initial research used administrative data as the population base; however, it is also applicable for use with a census population base.

4. The ONS Census Transformation Programme (CTP) presented the methodology to use employment and benefits data to produce income statistics at the NSDEC meeting on 11 October 2016. The meeting agreed that the Census Transformation Programme should complete an application form detailing their plans to use PAYE, benefits and other data sources to produce granular income statistics and moving forward, any use of data sources relating to income will be subject to full ethical review.

5. This proposal aims to use anonymised and aggregate administrative data (DWP/HMRC Income and Benefits data, Statistical Population Dataset, Small Area Income Estimates), survey data (Family Resource Survey) and Census 2011 data, to produce multivariate, small area income statistics as part of the 2021 Census.

6. Higher quality population income estimates at lower levels of geography between census periods would ensure that policy makers could be more proactive than reactive, in the planning and provision of public services and benefit the public through the improved

Geography	Minimum population	Maximum population	Minimum number of houseolds	Maximum number of households
LSOA	1,000	3,000	400	1,200
MSOA	5,000	15,000	2,000	6,000

1

allocation of resources. Public engagement activies, as part of the Census consultation, highlight the need for multivariate analysis at lower geographies. The project will also ensure that the Census programme provides value for money by comparing alternative approaches.

Petros Saravakos, NSDEC Secretariat, Central Policy Secretariat, UK Statistics Authority, 10 May 2017

List of Annexes

Annex A: Application: Income outputs from administrative data

UK Statistics Authority

National Statistician's Data Ethics Advisory Committee
Application for Ethical Review

Project Title
Please provide a title indicative of the project

Income outputs from administrative data

Start Date:	April 2017	**End Date:**	December 2017 for this stage

Project Sponsor(s)
Please list the project sponsor(s)

ONS

Project Summary
Please provide a brief high level summary of the research giving necessary background

The Census Transformation Programme is aiming to produce multivariate, small area income statistics as part of the 2021 Census (through combining data rather than asking a question on the census form) and within an Administrative Data Census context. This will involve using income administrative data combined with survey and/or census data.

On 16 December ONS published its first Administrative Data Census research outputs on income. This publication is the start of research to assess the feasibility of producing income statistics by linking administrative data and surveys to the census. The initial research used administrative data as the population base; however, it is also applicable for use with a census population base.

In the first publication ONS produced local authority level individual gross annual income distributions for England and Wales from personal level income and benefits data. These do not yet meet the user need for multivariate, small area outputs. There are also large components within the income definition which are missing, for example self assessment.

This application covers the second stage of research and will be published in Autumn

2017. This research continues to use administrative data on income and benefits from DWP and HMRC. This year a strand of research will also use this data with Family Resource Survey figures to help develop our methodological approach. This piece of work is led by the Small Area Income Estimates team in the Public Policy Division, ONS.

ONS aspire to use these developments to produce statistics to a lower geographic level, for example Lower Super Output Area level. These improvements are dependent on methodological development and statistical data quality and access. This year's research will also respond to feedback from users of the importance of having household estimates of income in addition to personal income.

Income is a variable that users repeatedly ask to be included on the census with the need for multivariate, small area income outputs demonstrated in B6. In summary the 2021 Census consultation said that income is used:

- most frequently as a measure of the material living standards of households
- to identify areas of deprivation and affluence, often to inform resource allocation and policy development by central and local government
- target support and services by voluntary organisations
- to estimate consumer purchasing behaviour and inform business planning by private companies.

Feedback from local authority users about our first publication covered:

- That ONS are working towards the most relevant definition - gross income
- There is a requirement for household income information as well as individual income
- There is a requirement for multivariate income outputs to support their work
- There is a requirement for low level geography information. Most users were interested in Lower Super Output Area level information so that they can also construct their own geographies relevant to their area.

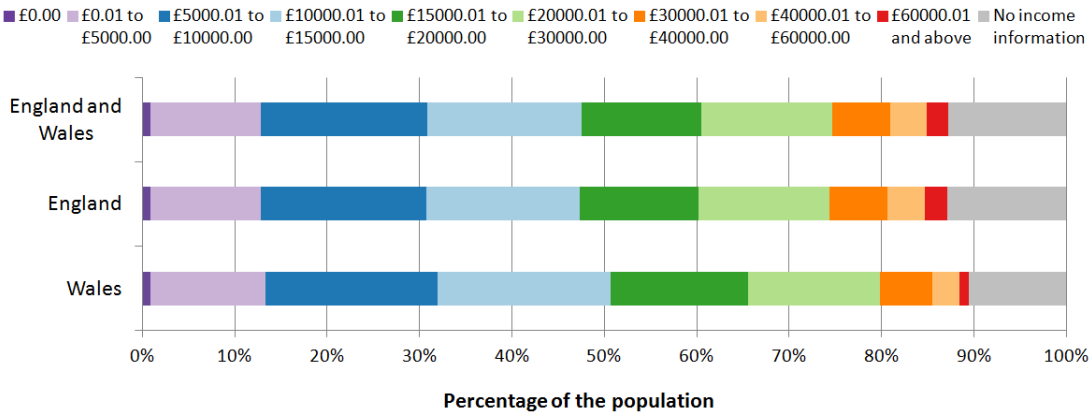
The record level administrative data work is led by the Admin Data Census project within the Census Transformation Programme. They are working with the Small Area Income Estimates team in the Public Policy Division who published the official small area income estimates.

For information – two additional research articles are also being developed which focus on the potential to use the data to provide more detailed analysis. These use the December 2016 publication data. One will look at income of mothers who had a live birth in 2015 and will be published in summer 2017. The other will investigate measuring economic activity by looking at the percentage of students in employment, likely to be published in autumn 2017.

In last year's research outputs publication we used the income bands as in the graph below. Our intention is to use the same bands for this year's publication.

PAYE and benefits income distribution, England and Wales

Tax year ending 2014, males and females, aged 16 and over



Source: Office for National Statistics

Notes:

1. These Research Outputs are NOT official statistics on income.
2. Data Source: Pay As You Earn (PAYE) employment and pension data and tax credits data from HM Revenue and Customs and benefits data from the Department for Work and Pensions. As the Research Outputs are limited to these data sources, a number of components of income are missing, for example, Self Assessment.
3. In this publication PAYE and benefits income refers to individual gross nominal annual estimated income from these sources.
4. The income measure includes most earnings from employment (excluding self-employment), most benefits and tax credits, and most occupational and personal pensions. For further information on what is and is not included in the income measure see section 6.
5. The £0.00 income band also includes anonymised individuals whose PAYE and benefits income was negative.
6. The category "no income information" includes both individuals who did not have an income in the tax year ending 2014 and individuals who did have an income, but not from PAYE or benefits.
7. Income information was included only for individuals present on SPD V1.0 2013. For further information see section 9.

UK Statistics Authority

Section A
Project Details

A1 Legal gateways

Please provide the assessment of the legal gateways of the project as provided by Legal Services

This research uses anonymised information on monetary amounts involved with the benefits and revenue payments. This has no statute bar.

An ISO (SRSA s47) in 2012 permits the sharing of personal identifiers from the Customer Information System for use in population statistics. This data allows the income amounts to be linked to demographic information.

A2 Ethical approval

Has the project being reviewed or is it expected to be reviewed by another ethics committee? ○ **Yes** ◉ **No**

If Yes please provide the name of the committee, the outcome and the date approved

A3 Proposed site of research select all that apply

- ☑ ONS
- ☐ VML
- ☐ HMRC Data Lab
- ☐ Other

please specify

- ☐ ADRC - England
- ☐ ADRC - Scotland
- ☐ ADRC - Northern Ireland
- ☐ ADRC - Wales

A4 Data subjects to be studied

Does the study include all subsections of the population (i.e. all ages, sex, ethnic groups etc?) ○ Yes ◉ No

If no please detail which subsections with justification(s) below:

Subsections of the population (including vulnerable groups) the project focuses on:

The first research outputs covered those aged 16 and above. The development of household estimates will cover the full population.

Justification for focusing on these subsections or groups:

A5 Please provide details of the research protocol or methodology (e.g. data linkage, web scraping etc) (max 500 words)

The Administrative Data Census project are using the detail provided by recorded level data to develop a methodology to produce estimates to lower levels of geography than previously possible.

Stage 1: Direct Administrative Data Estimates
In this part of the project, direct administrative data estimates will be produced using record level income and benefits data, supplied by Department for Work and Pensions (DWP) and HM Revenue and Customs (HMRC). These data will be held within the Secure Research Environment. They will be linked to individuals using the administrative data population base developed by the Admin Data Census project (known as the statistical population dataset or SPD).

The record level income and benefits administrative datasets are linked via a unique identifier. This unique identifier was created by DWP specifically for ONS purposes. The individual annual incomes from each dataset will be summed to derive an overall annual income amount for each individual and each household.

The outcome of this part of the project is to produce individual income estimates and household income estimates for 2015/16. These estimates will be produced directly from administrative data. We will use the same methodological approach to linking and process as in used in the initial research published in December 2016 and presented to NSDEC in October 2016.

Stage 2: Research combining administrative and survey data
This project will also explore the feasibility of adding to (or replacing) existing administrative data sources within the Small Area Income estimates model. We will be testing using area level Admin Data Census estimates of income from the Direct Admin Data Estimates with the small area income model.

The Small Area Income estimates use record level Family Resource Survey data containing information about household income, which are aggregated to area level. This is then combined with 2011 Census and administrative data (published area level benefits data, council tax bands, tax credits data and energy consumption data). This part of the research will use the new administrative data at an area level within the model rather than linking this income data at a record level.

The aim of this part of the project is to learn about combining survey and administrative data. We expect the outcome to show that this data is significant within the small area income model.

A6

Data use

Please specify the data used **by the research team** including any timeframes *e.g. LFS data 2014-15*

Type of data	Data Level (*Please specify the name of the data set*) Aggregate Data	Identifiable Data	De-identified personal data	Anonymised/ pseudo anonymised
Administrative data *(please specify, e.g. Patient Register 2011, School Census 2012 etc, in the relevant options adjacent)*	The Small Area Income Estimates model uses published benefits data, council tax bands, tax credits and energy consumption data. All data sources are for 2015/16.			DWP/HMRC Income and Benefits Data for 2015/16[2] Statistical Population Dataset[3]
Big Data *(please specify e.g. Twitter data, smart meters and mobile phones, in the relevant options adjacent)*				
Survey Data *(please specify e.g.LFS, BRES, etc in the relevant options adjacent)*	Family Resource Survey			
Census Data *(please specify year, e.g. Census 2011 in the relevant options adjacent)*	2011 Census			
Other *(please specify e.g. Ordinance Survey Address register in the relevant options adjacent)*				

1. The National Benefits Database includes Jobseeker's Allowance, Income Support, Incapacity Benefit, Severe Disablement Allowance, Employment and Support Allowance, Carer's Allowance, Widow's benefits or bereavement benefits, Disability Living Allowance, Pension Credit, State Pension and Attendance Allowance. Additional information on the datasets used in the Income Research Outputs release in 2016 was published in November 2016: Income and benefits data

2. To calculate income the following DWP/HMRC Income and Benefits datasets will be used: Pay As You Earn data, Tax credits data, Single Housing Benefit Extract, National Benefits Database, Universal credit, Personal independence payments, child benefits

3. The Statistical Population Dataset (SPD) includes several pseudo-anonymised data sets including (NHS Patient Register, HMRC Customer Information System, Higher Education Statistics Agency, School Census, Patient Demographic Service). More information can be found at https://www.ons.gov.uk/census/censustransformationprogramme/administrativedatacensusproject/methodology/methodologyofstatisticalpopulationdatasetv20

Section B
Assessment against NSDEC ethical principles

B1 The use of data has clear benefits for users and serves the public good.

Please outline the proposed benefits of the project (max 500 words)

This project's aim is to benefit users by providing income statistics at a lower geographical level than currently possible. It should also lead to the ability to produce multivariate analysis at these levels and against variables which haven't been possible before. This project is working closely with other producers of income statistics and over time should help improve coherence across the GSS.

Income is a variable that users repeatedly ask to be included on the census. The 2007 Census Test showed that the inclusion of income questions reduced overall response rates by a statistically significant 2.7 percentage points. These results were consistent with findings from the 1997 Census Test. There were also concerns raised about the quality of income data collected using the census test questionnaire and whether respondents understood, and were content to answer, income questions. As a result, an income question has never been included in UK censuses.

There are a number of income outputs published across the Government Statistical Service (GSS), which are all valuable, but have limited scope for multivariate analysis, particularly at lower levels of geography, such as income by ethnicity or income by social class, for small areas. The Census Transformation Programme is conducting research to see if it is feasible to fill this gap in official statistics by using administrative data. This would provide benefit to users by meeting the needs as captured in several public engagement initiatives. (see section B6) .

Higher quality population income estimates between census periods would ensure that policy makers could be more proactive than reactive, in the planning and provision of public services and benefit the public through the improved allocation of resources.

The research of using administrative and survey data can lead to higher level of quality of statistics in a more timely fashion.

To explore the costs of producing income estimates benefits the public by ensuring that the Census programme provides value for money by comparing alternative approaches. This is in line with the Code of Practice for Official Statistics – "*administrative sources should be fully exploited for statistical purposes, subject to adherence to appropriate safeguards"*.

B2 The data subject's identity (whether person or organisation) is protected, information is kept confidential and secure, and the issue of consent is considered appropriately.

Please outline how the confidentiality and inform consent is safeguarded in this projects(max 500 words)

As mentioned previously the project involves the use of de-identified personal data as well as aggregate data. The de-identification of income and benefits data is undertaken by DWP to ensure that researchers will not have access to identifiable personal data. Only such datasets will be linked in a secure environment limiting the risk to re-identification of data subjects. All persons accessing the safe setting have undergone training in the use of the setting and statistical disclosure. The access to these datasets will be limited to the divisions developing these outputs. The Data as a Service area in ONS monitors the holding of such datasets in the secure environment. This monitoring ensures datasets are reviewed and deleted when they are no longer required.

Individuals whose incomes are towards the top of the income distribution are more likely to be identifiable in record level administrative data on income. To reduce this risk, in the record level data, income has been substituted with an income band for values of £150,000 and above, with a top level cap at £500,000. The aggregated data will then be published using the same income bands as the December 2016 publication which has an upper band of an income greater than £60,000 (shown on the graph in the project summary).

There is legal provision for ONS to link the income and benefits data to ONS surveys for characteristics of the population. This record level linkage will take place using anonymised data as described in section B4 of this application.

The aspect of consent is covered by section 33 of the Data Protection Act 1998, allows data to be used for statistical purposes, even if this was not the original purpose for which it was collected provided that

i. data are not processed to support measures or decisions with respect to particular individuals; and
ii. data are not processed in such a way that substantial damage or substantial distress is, or is likely to be, caused to any data subject

All research outcomes will be subject to statistical disclosure controls to mitigate the potential for disclosures of small populations.

B3 The risks and limits of new technologies are considered and there is sufficient human oversight so that methods employed are consistent with recognised standards of integrity and quality.

Please describe how the any risks from new technologies are been mitigated as well as any quality assurance activities in the project (max 500 words)

No new technologies are being developed as part of this project. We will be using established linkage methodology and commonly used datasets. The project has adequate human oversight to ensure the quality of the research outcomes.

B4 Data used and methods employed are consistent with legal requirements such as the Data Protection Act, the Human Rights Act, the Statistics and Registration Service Act and the common law duty of confidence

Please describe the legal frameworks pertinent to this project (max 500 words)

The project falls within the use of data for the production of statistics and is compliant to the Data Protection Act 1998 and the Statistics and Registration Service Act (SRSA) 2007.

An ISO (SRSA s47) in 2012 permits the sharing of personal identifiers from the Customer Information System for use in population statistics. This data allows the income amounts to be linked to demographic information.

All data have been acquired using established legal gateways cleared by ONS Legal Services (section A1).

B5 Collaboration and Sponsors

Please describe the project sponsors and the **legal gateways** to acquire, process use and share their data

List of Collaborators/Sponsors	**Details and relevant documentation relating to collaboration (you may attach copies of relevant documentation)**
HM Revenue Customs	
Department for Work and Pensions	

B6 The views of the public are considered in light of the data used and the perceived benefits of the research

Please list any public engagement activities (max 250 words)

In the 2021 Census consultation a small number of respondents said they would prefer having an income question on the census questionnaire, but others were broadly supportive of using administrative data.

Responses to the 2021 Census Topic Consultation highlighted this information gap within official statistics. A number of respondents use univariate commercial data to identify small areas of disadvantage, which may be hidden when looking at data for larger areas. Some organisations use other sources of data at Output Area or Lower Layer Super Output Area level. The 2021 Census Income Topic Report said:

"The London Borough of Camden said: 'Inequality and disadvantage are often found clustered in small areas (hence the local nature of the Indices of Deprivation at LSOA level), which are otherwise hidden, averaged out among larger areas. It could definitely help pinpoint some of the people most in need of assistance.'"

A need for multivariate (cross-tabulations) of income data with other topics was shown and there was some evidence of using commercial data combined with official data to achieve this. The 2021 Census Income Topic Report said:

"The Equality and Human Rights Commission (EHRC) said: 'Income information is needed for comparison between different groups of people who share protected characteristics as identified within the Equality Act 2010 and by NS-SEC classes.'"

A need for this type of information to be provided by official statistics is highlighted through the need for comparable data. The 2021 Census Income Topic Report said:

"Users also explained about the lack of coherence between different measures. Tower Hamlets Council said: '...No single data source is able to supply what we need, so in practice we have to rely on a wide variety of different measures as proxy/ partial measures... we would like ONS to revisit the issue of including an income question on the census and to explore the potential of administrative data…"

Voluntary organisations also described how they use income data to identify groups that may require additional services and support. The 2021 Census Income Topic Report quoted:

Shelter: "We use earnings data with census data on basic demographics and household composition and housing to understand the relationship between house prices and incomes, and make assessments about housing affordability."

Commercial organisations explained how they would use income data to target specific markets. The 2021 Census Income Topic Report quoted:

First UK Bus: "Income is a key driver for propensity for bus travel. We use postcode level data, aggregated to OAs in order to assess the potential bus trips that may be generated from the 400m catchment area of a new bus route. It would be very useful indeed to have income as a census statistic."

B7 The access, use and sharing of data is transparent, and is communicated clearly and accessibly to the public

How will the findings of the research be disseminated? (max 500 words)

This project will result in two publications which will be released on the ONS website in Autumn 2017.

1. Administrative Data Research Outputs on Income – this will include methodology and analysis of the direct admin data estimates. The estimates will be published as distributions as in last year's release.
2. Small Area Income Estimates – this paper will include an evaluation of the use of the income administrative data. The estimates will be published using the same approach as previous publications.

During production research and developments will be shared with the ONS income working group. This includes members from income teams within ONS, DWP and HMRC.

As with the 2016 publication, handling plans will be developed with DWP and HMRC to ensure the all three departments were aligned. Methods, drafts of the report, and outputs are expected to be shared with the income working group in advance of publication to receive feedback and allow ONS to improve their publication.

B8 Please outline any intended future use for products (such as linked data sets or tools) produced as a result of the research and how they will be accessed. (max 250 words)

The access to all datasets and research outputs will be limited to the divisions developing these outputs. The Data as a Service area in ONS monitors the holding of such datasets in the secure environment. This monitoring ensures datasets are reviewed and deleted when they are no longer required.

Section C
Responsible owner and applicant details

C1 Responsible Owner

Full Name: [redacted]	**Position:** [redacted]
Address: [redacted]	**Email:** [redacted]
	Telephone: [redacted]
	Organisation: [redacted]

Declaration to be signed by the responsible owner

I have met with and advised the applicant on the ethical aspects of this project design (applicable only if the responsible owner is not the Applicant).

I understand that it is a requirement for all researchers accessing the data to have undergone relevant training and to have either relevant security clearances or approved researcher status in order to access the data.

I am satisfied that the research complies with current professional, departmental and other relevant guidelines.

I will ensure that changes in approved research protocols are reported promptly and are not initiated without approval by the National Statistician's Data Ethics Advisory Committee.

I will provide notification when the study is complete if it or fails to start or is abandoned.

I will ensure that all adverse or unforeseen problems arising from the research are reported in a timely fashion to the National Statistician's Data Ethics Advisory Committee.

I will consider all advice received from the National Statistician's Data Ethics Advisory Committee and should I be unable to implement any of the recommendations made, I will provide reasoning in writing to the Committee.

Signature: [redacted] **Date:** May-17

C2 Applicant Details (if applicant is not the responsible owner)

Full Name: [redacted]	**Position:** [redacted]
Address: [redacted]	**Email:** [redacted]
	Telephone: [redacted]
	Organisation: [redacted]

UK Statistics Authority

National Statistician's Data Ethics Advisory Committee

NSDEC(17)15

Revised: Estimating ethnicity from names

This project is undergoing major revisions and will be published in due course

1.	2.	3.	4.	**5.**	6.	7.	8.	9.	10	11.	12

UK Statistics Authority

National Statistician's Data Ethics Advisory Committee

NSDEC(17)16

Web-scraping guidance

This paper is in draft and will be published in due course

1.	2.	3.	4.	5.	**6.**	7.	8.	9.	10	11.	12

Annual self-assessment

Oral presentation

Dr Simon Whitworth

1.	2.	3.	4.	5.	6.	7.	8.	9.	10	11.	12

Algorithmic Policing

Oral presentation

Marion Oswald

Sheena Urwin

1.	2.	3.	4.	5.	6.	7.	**8.**	9.	10	11.	12

UK Statistics Authority

National Statistician's Data Ethics Advisory Committee

NSDEC(17)17

Microdata Release Panel: Design skills for innovation and productivity

Purpose

1. This paper presents a proposal referred by the Microdata Release Panel for access and use of ONS data by Ortus Economic Research Ltd, a private research consultancy, to enhance the evidence base on design skills and their links to economic outcomes.

Recommendations

2. Members of NSDEC are invited to consider the application at **Annex A** and advise the National Statistician to:
   i. approve the proposal and allow it to proceed;
   ii. approve the proposal subject to minor revisions;
   iii. recommend major revisions to the proposal and request the proposal be resubmitted to a future meeting once implemented; or
   iv. reject the proposal advising it be stopped from proceeding.

Background

3. The Design Council is a registered charity and recognised as a leading authority on the use of strategic design. In 2011, the Design Council merged with Chartered Association of Building Engineers(CABE), the government's adviser on design in the built environment. It aims to improve people's lives through design-led innovation to stimulate business growth, transform public services and enhance places and cities.

4. The proposal will see Ortus Economic Research Ltd use ONS Survey Data (Annual Population Survey, Annual Business Survey, Annual Survey of Hours and Earnings and UK Innovation Survey) in the ONS Virtual Microdata Laboratory (VML).

5. The purpose of this research is to:
   i. update the gross value added estimates in the Design Economy research with the latest data, and to supplement these with additional analysis relating to productivity per hour worked;
   ii. investigate the links between skills, design occupations and design industries, and economic outcomes; and
   iii. investigate skills demand, recruitment and training in design occupations and industries.

6. As a similar analysis has been undertaken by the Design Council in 2015, the research outcomes will help re-evaluate the impact of the UK design sector and design skills to the economy. It will enable the Design Council to deliver its services (including the development of training programmes for design skills) and to update the evidence base for informing government initiatives to support productivity in the UK.

Petros Saravakos, NSDEC Secretariat, Central Policy Secretariat, UK Statistics Authority, 30 May 2017

List of Annexes

Annex A: Application: Design skills for innovation and productivity

1.	2.	3.	4.	5.	6.	7.	8.	**9.**	10	11.	12

UK Statistics Authority

National Statistician's Data Ethics Advisory Committee
Application for Ethical Review

Project Title
Please provide a title indicative of the project

Design skills for innovation and productivity

Start Date: Apr 2017 **End Date:** June 2017

Project Sponsor(s)
Please list the project sponsor(s)

Design Council
Ortus Economic Research Limited

Project Summary
Please provide a brief high level summary of the research giving necessary background

Design Council has commissioned Ortus Economic Research Limited (ORTUS), a research consultancy, to carry out research to enhance the evidence base on design skills, and their links to economic outcomes.

Design Council is a charity registered under Royal Charter with the following objectives:

- The advancement of British industry and public services by the improvement of design in their products and services.
- The protection, enhancement, improvement and revitalisation of the natural and built environment (including architecture).
- The advancement of the education of the public in such subjects and in subjects relating to sustainable development and sustainable living.
- To promote study and research in such subjects provided that the useful results of such study are disseminated to the public at large.

A key element of Design Council's activities is a grant programme for the Department for Business, Energy and Industrial Strategy (BEIS), to make the case and grow the market for design in areas of the economy where it is underused. BEIS has confirmed the

continuation of grant funding and given an indication of funding to 2019/20.
The project builds on previous research (The Design Economy[1]) published by Design Council in 2015, and will investigate the skills associated with design occupations, the economic value of design skills, and the demand for/supply of skills within the design economy.

The Design Council define 'design' as the 'creation of a proposition in a medium, using tools as part of a process'.

Whereby:

- The proposition may be objects that are visible (e.g. a building, a dress , a kettle) or invisible (e.g. software code, policy, process)
- A medium may take various forms. For example: physical (e.g. pencil sketch, 3D model); spatial (e.g. a building); digital (e.g. computer game, App, sound); or temporal (e.g. a process or sequence)
- The tools include pencil, knife, keyboard, etc.
- The process may include one or more means of design inspiration and review, working alone or in collaboration with others

Examples of design intensive industries (each of these have a Standard Industry Classification code) and occupations include:

- Product and industrial - (e.g. mechanical engineers, design engineers)
- Graphic - (e.g. graphic designers)
- Clothing - (e.g. fashion designers, dressmakers)
- Advertising - (e.g. creative directors)
- Digital - (e.g. game designers, software designers)
- Craft - (e.g. glassmaker, ceramic designers)
- Architecture and built environment - (e.g. civil engineers, architects, town planners)
- Multidisciplinary - (e.g. Product designers)

The Design Economy report (which this research will update) includes the value contributed not only by designers working in design industries (e.g. digital design), but that of other roles in design industries (e.g. administration, finance, distribution) as well as the large number of designers working in other sectors across the UK economy (e.g. aerospace, finance, retail). Information on design-related occupations will be gathered using SOC codes, e.g. SOC3422 Product, clothing and related designers. That report used data from ONS to reveal for the first time the major contribution design made to the UK economy. It showed that in 2013:

- The design economy generated £71.7bn in gross value added (GVA), equivalent to 7.2% of UK total GVA
- Between 2009-2013 the design economy GVA grew at a faster rate than the UK average
- Workers with a design element to their work were 41% more productive than the average. Each delivers £47,400 in output (GVA per worker) compared with £33,600 across the rest of the economy.

These outcomes were reported on by UK government [2]and used to help evaluate the success of the *Britain is GREAT* marketing campaign.

[1] http://www.designcouncil.org.uk/resources/report/design-economy-report
[2]https://www.gov.uk/government/news/uks-72-billion-design-economy-takes-centre-stage-at-great-global-investment-conference-2015

The aims of the 2017 research project are to:

- Update the GVA estimates in the Design Economy research with the latest data, and to supplement these with additional analysis relating to productivity per hour worked.
- Investigate the links between skills, design occupations and design industries, and economic outcomes: e.g. are there links between occupations with specific design-related skills and sectors with higher levels of innovation activity, with higher productivity, with higher levels of turnover?
- Investigate skills demand, recruitment and training in design occupations and industries.

The analysis builds on the use of the US O*Net occupation database to identify the skills, knowledge and competences associated with design occupations and design industries and present these as a 'design skills taxonomy'. Design occupations and design industries are defined in the previous Design Economy research.

Section A
Project Details

A1 Legal gateways

Please provide the assessment of the legal gateways of the project as provided by Legal Services

The ONS Approved Researcher scheme is the legal gateway being used to access the data. This is in compliance with the Statistics and Registration Services Act 2007.

The ONS Microdata Release Panel (MRP) approved the proposal at its meeting on 31 March 2017 on the grounds that there was a legal gateway to access the data, it was appropriate use of ONS data and a public benefit was demonstrated.

A2 Ethical approval

Has the project being reviewed or is it expected to be reviewed by another ethics committee? ○ **Yes** ◉ **No**

If Yes please provide the name of the committee, the outcome and the date approved

A3 Proposed site of research select all that apply

- ☐ ONS
- ☑ VML
- ☐ HMRC Data Lab
- ☐ Other

please specify

- ☐ ADRC - England
- ☐ ADRC - Scotland
- ☐ ADRC - Northern Ireland
- ☐ ADRC - Wales

A4 Data subjects to be studied

Does the study include all subsections of the population (i.e. all ages, sex, ethnic groups etc?) ○ Yes ◉ No

If no please detail which subsections with justification(s) below:

Subsections of the population (including vulnerable groups) the project focuses on:

The analysis focuses on those individuals (de-identified) that are included in the ONS Annual Population Survey[3], and those establishments included in the ONS UK Innovation Survey[4], which have an association with the Design Economy. These are selected on the basis of occupation and sector using standard occupation classification (SOC) and standard industry classification (SIC) codes (not by demographics or other characteristic).

Justification for focusing on these subsections or groups:

To meet the scope of the research, i.e. to focus on the UK design economy.

A5 Please provide details of the research protocol or methodology (e.g. data linkage, web scraping etc) (max 500 words)

Design occupations and design industries will be defined by using the unique standard industry classification (SIC) and standard occupation classification (SOC) codes from the de-identified Annual Population Survey (APS) dataset. This classification information is available in the most detailed APS dataset available in the ONS Virtual Microdata Laboratory. The occupations and industry classifications will be defined in the same way as in the Design Economy study to allow a sound basis for comparison.

The approach adopted by the Design Council to identify design activity in the UK economy follows that used by the Department of Culture, Media and Sport (DCMS) in the production of the UK's Creative Industries Economic Estimates[5]

Annual Population Survey (APS) and Annual Survey of Hours & Earnings (ASHE) data will be used to update Design Economy estimates of the contribution of design to UK GVA using the latest data. Published Annual Business Survey data is used to estimate the GVA of design industries (and non-design industries). APS data is used to estimate the number of

[3] https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/qmis/annualpopulationsurveyapsqmi

[4] https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/ukinnovationsurvey

[5] https://www.gov.uk/government/statistics/creative-industries-economic-estimates-january-2016

people in design occupations (and non-design occupations) outside design industries; ASHE data is used to estimate their median earnings. By multiplying the number of people by median earnings, we calculate design occupations' share of total earnings in non-design industries, and then apportion the GVA in non-design industries on the basis of this share. This method is based on the former Department for Culture, Media and Sport (DCMS) method for calculating Creative Economy GVA.

ASHE data will also be used to supplement the Design Economy productivity estimates, calculated on a 'per head' basis, with new 'per hour worked' estimates.

Other analysis is based on a 'taxonomy of design skills' developed using the US O*Net[6] occupation information database, which records the skills, knowledge, etc. ('skills', in the broadest sense) associated with different jobs. By mapping UK SOC codes to US SOC codes, and measuring the importance of specific 'skills' to design occupations (as defined in the Design Economy research), this taxonomy identifies the specific 'skills' associated with design ('design skills'). The taxonomy then categorises occupations in terms of 'design intensity', based on the importance of 'design skills' to each occupation.

APS data will be used to

- examine the distribution of 'design intensive' occupations across sectors. Based on the DCMS method for identifying Creative Industries, and taking account of the proportion of 'design intensive' occupations in each sector, this allows us to categorise design industries and other sectors by 'design intensity'.
- derive employment estimates by occupation, categorised by design intensity, for the period 2006-2016 (where SOC2010 codes are not available, SOC2000 codes will be converted using ONS conversion tables).

Subsequent analysis will focus on the period 2011-2016, and will compare 'design intensive' occupations and sectors with 'non design intensive' occupations and sectors in order to explore skills-related issues which are specific (or not specific) to design. Employment numbers by occupation and sector (treated separately), categorised by 'design intensity', will be cross-tabulated with a range of descriptive variables relating to skills.

- APS data will be used to investigate the demographics of the 'design intensive' workforce compared with the 'non design intensive' workforce.
- APS data will also be used to investigate training and qualifications among the 'design intensive' workforce compared with the 'non design intensive' workforce.
- UK Innovation Survey data will be used to investigate the links between innovation and design by comparing innovation activity among 'design intensive' industries and 'non design intensive' industries.

These findings will help employers, worker representative organisations, policy makers and others understand the characteristics of workers in the design economy overall and different types of design industries and develop policies and strategies in response to them for things like recruitment, gender equality, training and innovation, working/employment patterns, etc. For instance, the 2015 report concluded that the Design Economy workforce was much more likely to be male, better paid, university-educated and younger than the average workforce.

There will be no linking of the data and all data used will be de-identified.

[6] https://www.onetonline.org/

A6

Data use

Please specify the data used **by the research team** including any timeframes *e.g. LFS data 2014-15*

Type of data	Data Level *Please specify the name of the data set* Aggregate Data	Identifiable Data	De-identified personal data	Anonymised/ pseudo anonymised
Administrative data *(please specify, e.g. Patient Register 2011, School Census 2012 etc, in the relevant options adjacent)*				
Big Data *(please specify e.g. Twitter data, smart meters and mobile phones, in the relevant options adjacent)*				
Survey Data *(please specify e.g.LFS, BRES, etc in the relevant options adjacent)*	Annual Business Survey		Annual Population Survey, 2006-2016 (Jan-Dec each year) Annual Survey of Hours and Earnings, 2011-2016 UK Innovation Survey, 2011-2014	
Census Data *(please specify year, e.g. Census 2011 in the relevant options adjacent)*				
Other *(please specify e.g. Ordinance Survey Address register in the relevant options adjacent)*				

Section B
Assessment against NSDEC ethical principles

B1 **The use of data has clear benefits for users and serves the public good.**

Please outline the proposed benefits of the project (max 500 words)

The design economy is a key part of the UK economy and has the potential to be a strong contributor to UK growth in the future.

The Design Economy report shows the breadth and depth of design's contribution to the UK. Design Council is committed to championing the role and importance of design, as they believe it can deliver growth, efficiencies, quality, sustainability, better quality of life and stronger communities.

Previous research in that area has provided insights regarding the gross value added, and the total value of exports by the design economy in the UK, employment rate, demographics and productivity of staff in this sector. For instance, the 2015 report concluded that there was a much greater proportion of male workers in the design economy (78% of designers were male compared with 53% of the UK workforce). The analysis also found that workers with a design component to their roles were 41% more productive than the average. This information is very helpful in providing an evidence base for service planning and decision making on a range of issues such as skills and innovation, productivity, employment strategies, gender equality policies, etc.

This 2017 analysis will strengthen the evidence base which currently exists within the UK. This will allow Design Council to develop and enhance its own service delivery (including in relation to the development of design skills through its training programmes). This research will also investigate training and recruitment in design occupations and industries. Design Council will also use the evidence to inform its recommendations to government and to advocate for the design sector.

The detailed findings will be beneficial to investors, collaborators, customers, educators and policymakers and will help promote greater understanding of the design economy sector and its contribution to the wider UK commercial sector (UK plc).

This research is aligned with the government commitment to boost productivity and rebalance the economy. This research is expected to identify a need for supporting design across the country and across certain sectors.

B2 **The data subject's identity (whether person or organisation) is protected, information is kept confidential and secure, and the issue of consent is considered appropriately.**

Please outline how data security, confidentiality and informed consent is safeguarded in this project(max 500 words)

Access to data will only take place within the secure ONS Virtual Microdata Laboratory (VML) environment and all outputs will be checked by the VML team prior to release to ensure disclosure control and the confidentiality of data subjects is protected. ONS will have sight of the research outcomes and report before they are published. The Ortus researcher is accredited as an ONS Approved Researcher and has carried out a number of projects in the VML.

The data will be accessed in the secure VML and is de-identified to protect the confidentiality of data subjects. The Approved Researcher scheme will be the legal gateway used to access the data and the researchers have signed and will adhere to the Approved Researcher declaration setting out how they will manage the data and protect the confidentiality of data subjects in line with the Statistics and Registration Service Act 2007. The researchers will not be able to take the data outside of the VML and their outputs – both intermediate and final – will be checked and cleared by the ONS VML branch to ensure the confidentiality of data subjects is protected. ONS will request a copy of the final report prior to publication. There is no data linking.

B3 **The risks and limits of new technologies are considered and there is sufficient human oversight so that methods employed are consistent with recognised standards of integrity and quality.**

Please describe how the any risks from new technologies are been mitigated as well as any quality assurance activities in the project (max 500 words)

No new technologies are being used. The research methods employed will be openly available for further scrutiny or replication of results.

B4 **Data used and methods employed are consistent with legal requirements such as the Data Protection Act, the Human Rights Act, the Statistics and Registration Service Act and the common law duty of confidence**

Please describe the legal frameworks pertinent to this project (max 500 words)

Access to the potentially disclosive data will be in a secure environment (VML) and via an approved legal gateway (Approved Researcher scheme). This is in compliance with the Statistics and Registration Service Act 2007. The methods used are compliant with the principles in the Data Protection Act. There is no breach of the common law duty of confidence as the data are processed for statistical purposes only.

B5 Collaboration and Sponsors

Please describe the project sponsors and the **legal gateways** to acquire, process use and share their data

List of Collaborators/Sponsors	Details and relevant documentation relating to collaboration (you may attach copies of relevant documentation)
Design Council	Approved Researcher Scheme
Ortus Economic Research Limited	

B6 The views of the public are considered in light of the data used and the perceived benefits of the research

Please list any public engagement activities (max 250 words)

Whilst the views of the public have not been sought with regards to the research, there is a clear public benefit for the analysis (as described in B6.1 above). A public consultation on the Approved Researcher scheme in 2015/16 recommended that commercial organisations should be allowed to access ONS research data where there is a clear public benefit.

B7 The access, use and sharing of data is transparent, and is communicated clearly and accessibly to the public

How will the findings of the research be disseminated? (max 500 words)

The research methodology and outcomes will be made public and reported on the Design Council's website[7].

To help promote greater transparency and in compliance with the updated Approved Researcher scheme, the researcher has agreed to his details being included on a public record of Approved Researchers and to publishing the findings of the research (including on the ONS Approved Researcher pages). ONS will work with Ortus and Design Council to consider the inclusion of this analysis as a published case study on the ONS website setting out the research methodology and outcomes, and their impact on public service delivery and decision/policy making.

No data or report drafts will be shared with anyone else and ONS will have sight of the report before it is published.

B8 Please outline any intended future use for products (such as linked data sets or tools) produced as a result of the research and how they will be accessed. (max 250 words)

None

[7]http://www.designcouncil.org.uk/resources/report/design-economy-report?gclid=CP_k1bmRiNQCFU0Q0wodmfwNgA

UK Statistics Authority

Section C
Responsible owner and applicant details

C1 Responsible Owner

Full Name: [redacted]	**Position:** [redacted]
Address: [redacted]	**Email:** [redacted]
	Telephone: [redacted]
	Organisation: [redacted]

Declaration to be signed by the responsible owner

I have met with and advised the applicant on the ethical aspects of this project design (applicable only if the responsible owner is not the Applicant).

I understand that it is a requirement for all researchers accessing the data to have undergone relevant training and to have either relevant security clearances or approved researcher status in order to access the data.

I am satisfied that the research complies with current professional, departmental and other relevant guidelines.

I will ensure that changes in approved research protocols are reported promptly and are not initiated without approval by the National Statistician's Data Ethics Advisory Committee.

I will provide notification when the study is complete if it or fails to start or is abandoned.

I will ensure that all adverse or unforeseen problems arising from the research are reported in a timely fashion to the National Statistician's Data Ethics Advisory Committee.

I will consider all advice received from the National Statistician's Data Ethics Advisory Committee and should I be unable to implement any of the recommendations made, I will provide reasoning in writing to the Committee.

Signature: [redacted] **Date:** May-17

C2 Applicant Details (if applicant is not the responsible owner)

Full Name: [redacted]	**Position:** [redacted]
Address: [redacted]	**Email:** [redacted]
	Telephone: [redacted]
	Organisation: [redacted]

UK Statistics Authority

National Statistician's Data Ethics Advisory Committee

NSDEC(17)18

Microdata Release Panel: Heritage Economic Impact Indicators 2017

Purpose

1. This paper presents a proposal referred by the Microdata Release Panel for access and use of ONS data by Ortus Economic Research Ltd, a private research consultancy, to enhance the evidence base on the impact of the heritage sector to the UK economy.

Recommendations

2. Members of NSDEC are invited to consider the application at **Annex A** and advise the National Statistician to:
   i. approve the proposal and allow it to proceed;
   ii. approve the proposal subject to minor revisions;
   iii. recommend major revisions to the proposal and request the proposal be resubmitted to a future meeting once implemented; or
   iv. reject the proposal advising it be stopped from proceeding.

Background

3. Historic England is an executive non-departmental body, funded mainly by the Department of Culture, Media and Sport, looking after England's historic environment. It aims to help people understand, value and care for historic places.

4. As part of the annual Heritage and Economic publication, they produce and update the Heritage Economic Indicators workbook. The 2016 Heritage Economic Impact Indicators found that:
   - heritage directly created £10 billion in Gross Value Added(GVA) in England;
   - there were 164,100 direct heritage jobs in England; and
   - in total, domestic and international heritage-related visits generated £18.4bn in expenditure in England in 2014.

5. Apart from data on the heritage workforce and economy, the workbook presents a range of other indicators relating to heritage tourism, property and public investment (drawn from various Historic England and public sources). These indicators measure heritage's contribution to England's economy. The workbook provides Historic England, and other heritage stakeholders, with an evidence base to support their policy development and advocacy roles, and supplements the available public evidence relating to the value of the nation's heritage.

6. The proposal will see Ortus Economic Research Ltd use de-identified ONS Survey Data (Annual Population Survey, Annual Business Survey, Annual Survey of Hours and Earnings), aggregate Survey Data from the Business Register & Employment Survey (BRES) and public available data sources in the ONS Virtual Microdata Laboratory (VML).

7. This project will update current estimates on the size of the heritage workforce and the gross value added by the heritage sector in England. This will help Historic England to re-evaluate the impact of the heritage sector in England, and inform public policy.

Petros Saravakos, NSDEC Secretariat, Central Policy Secretariat, UK Statistics Authority, 30 May 2017

List of Annexes

Annex A: Application: Economic Impact Indicators 2017

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UK Statistics Authority

National Statistician's Data Ethics Advisory Committee
Application for Ethical Review

Project Title
Please provide a title indicative of the project

Heritage Economic Impact Indicators 2017

Start Date: May 2017 **End Date:** June 2017

Project Sponsor(s)
Please list the project sponsor(s)

Historic England, Ortus Economic Research Limited

Project Summary
Please provide a brief high level summary of the research giving necessary background

Historic England is the public body that champions and protects England's historic places. It is an executive non-departmental public body funded mainly by the Department for Culture Media and Sport. Historic England has the following objectives:

- Championing historic places
- Identifying and protecting our heritage
- Supporting change
- Understanding historic places
- Providing expertise at a local level

Historic England has commissioned Ortus, a research consultancy, to carry out research to update the current *Heritage Economic Impact Indicators* workbook, part of Historic England's annual *Heritage and the Economy* publication.

The 2016 *Heritage Economic Impact Indicators* found that:

- Heritage directly created £10 billion in GVA in England;
- There were 164,100 direct heritage jobs in England; and

- In total, domestic and international heritage-related visits generated £18.4bn in expenditure in England in 2014.

The 2016 workbook and accompanying report can be found here: https://historicengland.org.uk/research/heritage-counts/heritage-and-the-economy/

As well as data on the heritage workforce and economy, the workbook presents a range of other indicators relating to heritage tourism, property and public investment (drawn from various Historic England and public sources). These indicators measure heritage's contribution to England's economy. The workbook provides Historic England, and other heritage stakeholders, with an evidence base to support their policy development and advocacy roles, and supplements the available public evidence relating to the value of the nation's heritage.

This project is focused on updating current estimates of the size of the heritage workforce, and the contribution heritage makes to England's Gross Value Added (GVA). The analysis will provide an update on the 2016 workbook and is being carried out by the same researcher.

UK Statistics Authority

Section A
Project Details

A1 Legal gateways

Please provide the assessment of the legal gateways of the project as provided by Legal Services

The ONS Approved Researcher scheme is the legal gateway being used to access the data. This is in compliance with the Statistics and Registration Services Act 2007.

The ONS Microdata Release Panel (MRP) approved the proposal at its meeting on 31 March 2017 on the grounds that there was a legal gateway to access the data, it was appropriate use of ONS data and a public benefit was demonstrated.

A2 Ethical approval

Has the project being reviewed or is it expected to be reviewed by another ethics committee? ○ **Yes** ◉ **No**

If Yes please provide the name of the committee, the outcome and the date approved

A3 Proposed site of research select all that apply

- ☐ ONS
- ☑ VML
- ☐ HMRC Data Lab
- ☐ Other

please specify

- ☐ ADRC - England
- ☐ ADRC - Scotland
- ☐ ADRC - Northern Ireland
- ☐ ADRC - Wales

A4 Data subjects to be studied

Does the study include all subsections of the population (i.e. all ages, sex, ethnic groups etc?) ○ Yes ◉ No

If no please detail which subsections with justification(s) below:

Subsections of the population (including vulnerable groups) the project focuses on:

The project focuses on those individuals and businesses (de-identified) that are included in the ONS Annual Population Survey[1] / Annual Survey of Hours & Earnings[2] that are involved in the heritage sector. These are selected on the basis of employment by occupation and sector (not by personal or other characteristic).

Justification for focusing on these subsections or groups:

The project sponsor requires the analysis to focus on the heritage sector in England.

A5 Please provide details of the research protocol or methodology (e.g. data linkage, web scraping etc) (max 500 words)

The heritage sector occupations and industries will be identified using the unique 4-digit Standard Industry Classification (SIC) and Standard Occupation Classification (SOC) codes.

Regional heritage employment estimates are derived using a model which combines data from several sources in order to provide full coverage of the heritage sector, including the Annual Population Survey (APS) and the Business Register & Employment Survey (BRES). Other data includes aggregated Arts Council England data on the workforce in museums and aggregated Historic England data on archaeologists. Ortus has the permission from both data owners to use their data.

For sub-sectors of heritage where the researchers are predominantly interested in the individuals involved rather than their wider organisations (for example, SOC code 2141 covers Conservation professionals. Examples of roles listed include conservation officer, ecologist, heritage manager), they will use the relevant SOC codes from the Annual Population Survey (APS). For sub-sectors that consider the whole organisations relevant

[1] https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/qmis/annualpopulationsurveyapsqmi

[2] https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/annualsurveyofhoursandearningsashe

(e.g. historic sites, museums etc.), they will use the SIC codes from BRES.

As heritage-related activities are not clearly defined in the SIC and SOC classifications, particularly in relation to Built Environment sectors and occupations, the model uses multipliers to apportion employment estimates to heritage. These multipliers are based on previous Historic England research into the heritage craft building workforce, and publicly available Valuation Office Agency data on the proportion of housing stock that dates to pre-1919. Additionally, to avoid double-counting across multiple data sources (e.g. Architects working in the Historical Sites & Buildings sector), APS data is used to cross-tabulate employment by heritage SIC and SOC in order to identify the intersection, which the model also accounts for with multipliers.

Due to the relatively small scale of the heritage sector, employment estimates are averaged over three years to minimise potential issues relating to volatility caused by sampling variability. Regional estimates are summed to provide an estimate for England.

APS and BRES data is supplemented by data on specific heritage occupations/sectors, supplied by Historic England and partner organisations, including: Museums (Arts Council England), Archaeologists (Historic England).

The model then estimates economic output from heritage activities using a method adapted from that used in the DCMS Creative Industries Economic Estimates. The estimate for output from heritage is derived from Regional GVA Estimates (income approach) published by ONS, which provide GVA estimates at regional level which are broadly in line with the National Accounts (Blue Book) methodology. The model apportions these estimates to heritage based on earnings data from the Annual Survey of Hours & Earnings (ASHE):

- ASHE data is used to calculate median earnings for relevant heritage sectors and occupations within the selected region.
- Median earnings are then multiplied by estimated employment in heritage sectors and occupations (as calculated in the model) to derive weighted earnings in heritage.
- This estimate of heritage earnings is then divided by total weighted earnings to calculate the percentage of total earnings for which heritage accounts.
- This percentage is then applied to the ONS regional GVA estimate in order to estimate heritage GVA.

The use of ASHE data is new in the 2017 iteration of the workbook, and is intended to refine and update existing estimates of heritage GVA (which were calculated using earnings data from APS in the 2016 workbook).

Multipliers derived from ONS Input-Output Analytical Tables and Scottish Government Input-Output Tables are used to estimate indirect and induced employment and GVA,

There will be no linking of the data and all data used will be de-identified.

The project will help quantify the contribution that heritage activities make to England's GVA. It will provide an evidence base for public policy decision making on the heritage economy, including government funding for Historic England. It will also provide an evidence base for public service delivery, such as the delivery priorities for Historic England and heritage economy.

A6 Data use

Please specify the data used **by the research team** including any timeframes *e.g. LFS data 2014-15*

Type of data	Data Level *Please specify the name of the data set*			
	Aggregate Data	**Identifiable Data**	**De-identified personal data**	**Anonymised/ pseudo anonymised**
Administrative data *(please specify, e.g. Patient Register 2011, School Census 2012 etc, in the relevant options adjacent)*				
Big Data *(please specify e.g. Twitter data, smart meters and mobile phones, in the relevant options adjacent)*				
Survey Data *(please specify e.g.LFS, BRES, etc in the relevant options adjacent)*	Business Register & Employment Survey (BRES) 2010-15 – all years		Annual Population Survey (P) 2010-16 (Jan-Dec) – all years Annual Survey of Hours and earnings (ASHE) 2010-16 – all years	
Census Data *(please specify year, e.g. Census 2011 in the relevant options adjacent)*				
Other *(please specify e.g. Ordinance Survey Address register in the relevant options adjacent)*	Arts Council England Accredited Museums Database (2015) Historic England data on number of archaeologists (2010-2016)			

Type of data	Data Level *Please specify the name of the data set* Aggregate Data	Identifiable Data	De-identified personal data	Anonymised/ pseudo anonymised
	Valuation Office Agency – Council Tax Stock of Properties 2011-2014 – all years Other publically available data[1]			

[1]English Heritage *Skills Needs Analysis 2013: Repair, Maintenance and Energy Efficiency Retrofit of Traditional (pre-1919) Buildings in England and Scotland* (2013)

ONS 2013 Input-Output Analytical Tables, Multipliers and effects (product)

Scottish Government Type I, output, income, employment and GVA multipliers, 1998-2013

Scottish Government Type II, output, income, employment and GVA multipliers, 1998-2013

Section B

Assessment against NSDEC ethical principles

B1 The use of data has clear benefits for users and serves the public good.

Please outline the proposed benefits of the project (max 500 words)

The purpose of the research project is to quantify the size of the heritage workforce, and the contribution heritage makes to England's GVA.

The research outcomes will provide Historic England and other heritage stakeholders with an evidence base to support their policy development and advocacy roles. This evidence supplements the available public evidence relating to the value of the nation's heritage, and will help promote greater understanding of the heritage's contribution to England's economy. The research findings will enable Historic England to develop a longitudinal picture of impact. It will provide an assessment of both direct and indirect impacts of heritage and identify regional variations. This will provide robust/credible evidence for use by Historic England when advocating the value of heritage to those outside the sector.

The research will also provide an evidence base for: the evaluation of UK Government funding of Historic England; and decisions on Historic England policies and service planning. This will help promote greater government transparency and accountability.

B2 The data subject's identity (whether person or organisation) is protected, information is kept confidential and secure, and the issue of consent is considered appropriately.

Please outline how data security, confidentiality and informed consent is safeguarded in this project(max 500 words)

The data will be accessed in the secure ONS Virtual Microdata Laboratory (VML) and is de-identified to protect the confidentiality of data subjects. The Approved Researcher scheme will be the legal gateway used to access the data and the researchers have successfully completed the Safe User of Research data Environments (SURE) training and have signed and will adhere to the Approved Researcher declaration setting out how they will manage the data and protect the confidentiality of data subjects in line with the Statistics and Registration Service Act 2007.

The researchers will not be able to take the data outside of the VML and their outputs – both intermediate and final – will be checked and cleared by the ONS VML team to ensure the confidentiality of data subjects is protected. ONS will see a copy of the final report prior to publication.

B3 The risks and limits of new technologies are considered and there is sufficient human oversight so that methods employed are consistent with recognised standards of integrity and quality.

Please describe how the any risks from new technologies are been mitigated as well as any quality assurance activities in the project (max 500 words)

No new technologies are being used. The research methods employed will be openly available for further scrutiny or replication of results.

B4 Data used and methods employed are consistent with legal requirements such as the Data Protection Act, the Human Rights Act, the Statistics and Registration Service Act and the common law duty of confidence

Please describe the legal frameworks pertinent to this project (max 500 words)

Access to the potentially disclosive data will be in a secure environment (VML) and via an approved legal gateway (Approved Researcher scheme). This is in compliance with the Statistics and Registration Service Act 2007. The methods used are compliant with the principles in the Data Protection Act.

B5 Collaboration and Sponsors

Please describe the project sponsors and the **legal gateways** to acquire, process use and share their data

List of Collaborators/Sponsors	**Details and relevant documentation relating to collaboration (you may attach copies of relevant documentation)**
Ortus Economic Research Limited	
Arts Council England	Agreement in place between Ortus and Arts Council
Historic England	Agreement in place between Ortus and Historic England

B6 The views of the public are considered in light of the data used and the perceived benefits of the research

Please list any public engagement activities (max 250 words)

Whilst the views of the public have not been sought with regards to the research, there is a clear public benefit for the analysis (as described in section B1) and the outcomes from the research will appear in the workbook. The public is likely to be interested in the research findings given the number of visits made to historic places in England. A public consultation on the Approved Researcher scheme in 2015/16 recommended that commercial organisations should be allowed to access ONS research data where there is a clear public benefit and the ONS Microdata Release Panel (MRP) considered that this research will achieve a public good.

B7 The access, use and sharing of data is transparent, and is communicated clearly and accessibly to the public

How will the findings of the research be disseminated? (max 500 words)

The research methodology and outcomes will be made public on the Historic England website[3].

Overall research and outcomes are available on the publically accessible Historic England website. These include

1. the annual report which is available on the Historic England website; and
2. the data and methodology are made publically available for reuse via the Historic England workbook.

Ortus Research Ltd will produce a case study report on its website and ONS a link to the research once published.

To help promote greater transparency and in compliance with the updated Approved Researcher scheme, the researchers have agreed to their details being included on a public record of Approved Researchers and to publishing the findings of their research (including on the ONS Approved Researcher pages). ONS will work with Ortus to consider the inclusion of this analysis as a published case study on the ONS website setting out the research methodology and outcomes, and their impact on public service delivery and decision/policy making.

B8 Please outline any intended future use for products (such as linked data sets or tools) produced as a result of the research and how they will be accessed. (max 250 words)

The *Heritage Economic Impact Indicators* workbook will be published electronically on the Historic England website as part of the annual *Heritage and the Economy* report in June/July 2017: https://historicengland.org.uk/research/heritage-counts/heritage-and-the-economy/ . ONS will have sight of the report prior to publication and a link to the workbook will be included on the ONS website. ONS will also work with Ortus Ltd to develop a case study to explain the methodology used, present the outcomes and demonstrate the value of the research.

[3] https://content.historicengland.org.uk/content/heritage-counts/pub/2016/heritage-and-the-economy-2016.pdf

UK Statistics Authority

Section C
Responsible owner and applicant details

C1 Responsible Owner

Full Name: [redacted]	**Position:** [redacted]
Address: [redacted]	**Email:** [redacted]
	Telephone: [redacted]
	Organisation: [redacted]

Declaration to be signed by the responsible owner

I have met with and advised the applicant on the ethical aspects of this project design (applicable only if the responsible owner is not the Applicant).

I understand that it is a requirement for all researchers accessing the data to have undergone relevant training and to have either relevant security clearances or approved researcher status in order to access the data.

I am satisfied that the research complies with current professional, departmental and other relevant guidelines.

I will ensure that changes in approved research protocols are reported promptly and are not initiated without approval by the National Statistician's Data Ethics Advisory Committee.

I will provide notification when the study is complete if it or fails to start or is abandoned.

I will ensure that all adverse or unforeseen problems arising from the research are reported in a timely fashion to the National Statistician's Data Ethics Advisory Committee.

I will consider all advice received from the National Statistician's Data Ethics Advisory Committee and should I be unable to implement any of the recommendations made, I will provide reasoning in writing to the Committee.

Signature: [redacted] **Date:** May 2017

C2 Applicant Details (if applicant is not the responsible owner)

Full Name: [redacted]	**Position:** [redacted]
Address: [redacted]	**Email:** [redacted]
	Telephone: [redacted]
	Organisation: [redacted]

UK Statistics Authority
National Statistician's Data Ethics Advisory Committee

NSDEC(17)19

Microdata Release Panel: Impact evaluation of the Apprentice Rate increase

Purpose

1. This paper presents a proposal referred by the Microdata Release Panel for access and use of ONS data by Frontier economics, a private economic research consultancy, to evaluate the impact of the apprentice pay policy in England.

Recommendations

2. Members of NSDEC are invited to consider the application at **Annex A** and advise the National Statistician to:
   i. approve the proposal and allow it to proceed;
   ii. approve the proposal subject to minor revisions;
   iii. recommend major revisions to the proposal and request the proposal be resubmitted to a future meeting once implemented; or
   iv. reject the proposal advising it be stopped from proceeding.

Background

3. The Low Pay Commission (LPC) is an advisory non-departmental public body who are tasked with providing independent advice to the government on matters relating to the National Minimum Wage referred to it by the Secretary of State for Business, Innovation and Skills.

4. In October 2015 the government suggested a pay increase for apprentices that was higher than LPC the recommended, raising apprentice pay to £3.30 per hour. By implementing a rate higher than the LPC's recommendation, the government intends that apprenticeships will deliver a wage that is comparable to other choices for work.

5. The proposal will see Frontier Economics use ONS de-identified survey data (Annual Survey of Hours and Earnings and Labour Force Survey) in the ONS Virtual Microdata Laboratory (VML) to evaluate the impact of the increase to the apprentice rate.

6. The project aims to investigate the variation in the hourly pay of apprentices across all geographical areas, industries and occupations in England and assess the impact of the policy in terms of the number and quality of apprenticeships offered.

7. The research outcomes will be presented as aggregate statistics and will form an evidence base to inform policy-makers with regards to apprenticeships and the Further Education system in the UK.

Petros Saravakos, NSDEC Secretariat, Central Policy Secretariat, UK Statistics Authority, 09 June 2017

List of Annexes

Annex A: Application: *Impact evaluation of the Apprentice Rate increase*

1.	2.	3.	4.	5.	6.	7.	8.	9.	10	11	12

UK Statistics Authority

National Statistician's Data Ethics Advisory Committee
Application for Ethical Review

Project Title
Please provide a title indicative of the project

Impact evaluation of the Apprentice Rate increase

Start Date: May 2017 **End Date:** July 2017

Project Sponsor(s)
Please list the project sponsor(s)

Low Pay Commission (LPC)

Project Summary
Please provide a brief high level summary of the research giving necessary background

The Low Pay Commission (LPC) have commissioned Frontier Economics, a private economic consultancy, to establish the impact of a large increase in the minimum wage for apprentices, the Apprentice Rate (AR), that took place in October 2015. This increase took the AR from £2.73 per hour to £3.30 per hour. Specifically, the project commissioned aims to establish the impact on the number and quality of apprenticeships in England.

The LPC is an advisory non-departmental public body who are tasked with providing independent advice to the government on matters relating to the National Minimum Wage referred to it by the Secretary of State for Business, Innovation and Skills. Frontier Economics is a microeconomics consultancy providing economics advice to public and private sector clients on matters of competition policy, public policy, regulation, business strategy and behavioural economics.

The ratio between median hourly apprentice pay in area A (e.g. London) as of April 2015 and the updated AR (£3.30) is the 'bite' of the updated AR. This analysis will assess where, and how much, apprentice pay had to change in October 2015 as a result of the AR increase. Although the AR is a national rate, which is applied at the same level across

England, there is significant variation in pay across different regions, sectors, and occupations. This means that the AR will potentially constrain more employers in certain regions (e.g. North East), where pay is lower, than employers in other regions (e.g. London), who may have already been paying their apprentices more than £3.30/hour prior to October 2015.

To evaluate the impact of the AR, this project aims to produce aggregate statistics to investigate the variation in the hourly pay of apprentices as of April 2015, across geographical areas, industries, and occupations in England. More specifically, we will investigate the extent to which apprentices in a given area, industry, or occupation were *already* paid at or above £3.30/hour prior to the October 2015 AR increase.

Examples of analysis that might be produced, and for which output clearance would be requested for, would be:

- Median hourly wage of all apprentices employed in London in financial years 2013/14 and 2014/15
- Proportion of apprentices employed in the Retail industry in England in financial years 2013/14 and 2014/15 earning less than £3.30/hour.

The Low Pay Commission (LPC) has a mandate to monitor the implementation of minimum wages in the UK and to provide recommendations to Government on the appropriate levels of the minimum wages. Findings from this project will inform the LPC's recommendations on the future levels of the Apprentice Rate. Recommendations on future levels of the Apprentice Rate may be particularly important in Autumn 2017 and in the near future, given current Government targets to increase the provision of apprenticeships, and more generally to review and improve the Further Education system in the UK. This analysis will provide an evidence base to inform these policy decisions.

UK Statistics Authority

Section A
Project Details

A1 Legal gateways

Please provide the assessment of the legal gateways of the project as provided by Legal Services

The ONS Approved Researcher scheme is the legal gateway being used to access the data. This is in compliance with the Statistics and Registration Services Act 2007.

The ONS Microdata Release Panel (MRP) approved the proposal at its meeting on 31 March 2017 on the grounds that there was a legal gateway to access the data, it was appropriate use of ONS data and a public benefit was demonstrated.

A2 Ethical approval

Has the project being reviewed or is it expected to be reviewed by another ethics committee? ○ **Yes** ◉ **No**

If Yes please provide the name of the committee, the outcome and the date approved

A3 Proposed site of research select all that apply

- ☐ ONS
- ☑ VML
- ☐ HMRC Data Lab
- ☐ Other

please specify

- ☐ ADRC - England
- ☐ ADRC - Scotland
- ☐ ADRC - Northern Ireland
- ☐ ADRC - Wales

A4 Data subjects to be studied

Does the study include all subsections of the population (i.e. all ages, sex, ethnic groups etc?) ○ Yes ◉ No

If no please detail which subsections with justification(s) below:

Subsections of the population (including vulnerable groups) the project focuses on:

This project focuses on apprentices working in England.

Justification for focusing on these subsections or groups:

The aim is to estimate variation in apprentice pay and the impact of the minimum rate for apprentices, the Apprentice Rate, to inform the Low Pay Commission's recommendations on its future level.

A5 Please provide details of the research protocol or methodology (e.g. data linkage, web scraping etc) (max 500 words)

This project aims to use de-identified survey data from the Annual Survey of Hours and Earnings (ASHE) and the Labour Force Survey (LFS) in the Virtual Microdata Laboratory to estimate the variation in the levels of apprentice pay (AR) across geography and/or apprenticeship characteristics (e.g. industry). This will be used to assess the impact of the October 2015 increase in the Apprentice Rate.

While AR is applied equally to all apprentices in the UK, pre-existing levels of pay will vary, determining variation in the 'bite' of the Apprentice Rate. This project will measure the 'bite' and compare 'high-bite' and 'low-bite' areas/groups, producing aggregate statistics on groups of apprentices. This will focus specifically on apprentices' median wage, and the proportion of apprentices paid below the Apprentice Rate. The groups will have to include at least a minimum number of apprentices, likely to be above 100, in order to protect confidentiality of the data and help ensure that measured differences in pay across groups are statistically significant. The precise size of the groups, in terms of the number of apprentices, and their definition, will be defined in the first phase of the project.

We expect that groups will be defined based on the location of apprentices. We would be seeking to generate statistics on around 20 groups, each containing around 150 apprentices. Each group would be defined by a combination of Travel to Work Areas[1]. For

[1] A Travel to Work Area or TTWA is a statistical tool used to indicate an area where the population

example, we may have three groups in the North West of England (Greater Manchester, Merseyside, rest of North West).

However, our initial exploration of the data may suggest that a more promising avenue for our research would be exploiting variation in apprentice pay according to other dimensions. For example, it may be better to define groups in terms of sector and region instead. In that case, groups may be 'Retail in the North', 'Engineering in the North', 'Retail in the South East', 'Engineering in the South East', and so on. In either approach only aggregate statistics will be produced.

These aggregate statistics would feed into future econometric analysis, performed at the level of the groups defined above, outside the VML.

would generally commute to a larger town, city or conurbation for the purposes of employment.

A6

Data use

Please specify the data used **by the research team** including any timeframes *e.g. LFS data 2014-15*

Type of data	Data Level *Please specify the name of the data set*			
	Aggregate Data	**Identifiable Data**	**De-identified personal data**	**Anonymised/ pseudo anonymised**
Administrative data *(please specify, e.g. Patient Register 2011, School Census 2012 etc, in the relevant options adjacent)*				
Big Data *(please specify e.g. Twitter data, smart meters and mobile phones, in the relevant options adjacent)*				
Survey Data *(please specify e.g.LFS, BRES, etc in the relevant options adjacent)*			Annual Survey of Hours and Earnings(ASHE) 2014-2016 Labour Force Survey (LFS) 2014-2016	
Census Data *(please specify year, e.g. Census 2011 in the relevant options adjacent)*				
Other *(please specify e.g. Ordinance Survey Address register in the relevant options adjacent)*				

Section B

Assessment against NSDEC ethical principles

B1 The use of data has clear benefits for users and serves the public good.

Please outline the proposed benefits of the project (max 500 words)

The Low Pay Commission (LPC) has a mandate to monitor the implementation of minimum wages in the UK and to provide recommendations to Government on the appropriate levels of the minimum wages. Findings from this project will form an evidence base to perform analysis used to inform policy-makers with regards to the Apprentice Rate.

Recommendations on future levels of the Apprentice Rate may be particularly important in Autumn 2017 and in the near future, given current Government targets to increase the provision of apprenticeships, and more generally to review and improve the Further Education system in the UK. Such initiatives are adopted towards promoting the public benefit.

There have been limited studies of the impact of this policy on apprentices' pay, and no study so far has investigated the effect of the policy on number and quality of apprenticeships in the examined geographies, industries or occupations. This project will strengthen the existing research recently commissioned by the Low Pay Commission[2]. This will enable developing and sharing the statistical methodology to measure apprentice pay based on existing data sources.

Employers and apprentices will benefit from decision-making being based on sound evidence and analysis.

B2 The data subject's identity (whether person or organisation) is protected, information is kept confidential and secure, and the issue of consent is considered appropriately.

Please outline how data security, confidentiality and informed consent is safeguarded in this project(max 500 words)

Access to ASHE and LFS data will only take place within the secure ONS Virtual Microdata Laboratory (VML) environment and all outputs will be checked by the VML team prior to release to ensure disclosure control and the confidentiality of data subjects is protected. All analysis and use of the data will be within the VML at a secure VML setting at one of the ONS offices. The data will be linked within the VML environment by ONS and the Frontier researchers will only have access to the de-identified data. No data or report drafts will be shared with anyone else. Only aggregate statistics will be exported from the VML, going through standard final clearance procedure. Examples of statistics for which clearance may be requested would be:

- Median hourly wage of all apprentices employed in London in financial years 2013/14

[2] Drew, H., Ritchie, F. and Veliziotis, M. (2015), "The measurement of apprentice pay: Report commissioned by the Low Pay Commission" . Project Report. Low Pay Commission. Available from: http://eprints.uwe.ac.uk/25113).

and 2014/15
- Proportion of apprentices employed in the Retail industry in England in financial years 2013/14 and 2014/15 earning less than £3.30/hour.

ONS will clear all outputs from the research that are based on individual-level ASHE or LFS data, to ensure the confidentiality of data subjects is protected in line with the ONS statistical disclosure controls.

Researchers will have successfully completed the Safe User of Research data Environments (SURE) training and will sign and adhere to the Approved Researcher declaration setting out how they will manage the data and protect the confidentiality of data subjects in line with the Statistics and Registration Service Act 2007. The researchers will not be able to take the data outside of the VML and their outputs – both intermediate and final – will be checked and cleared by the ONS VML clearing team to ensure the confidentiality of data subjects is protected.

Tables to be released from the VML will summarise measures of interest (median pay, proportion of apprentices paid below £3.30/hour) within broad groups (e.g. all apprentices in the London Travel To Work Area; all apprentices working in Retail in the North East of England) to prevent disclosure. Because postcodes and ages are present in the raw data, there is potential for the data to be disclosive. Therefore threshold rules according to statistical disclosure controls will be applied to all table cells in the output.

B3 The risks and limits of new technologies are considered and there is sufficient human oversight so that methods employed are consistent with recognised standards of integrity and quality.

Please describe how the any risks from new technologies are been mitigated as well as any quality assurance activities in the project (max 500 words)

No new technologies are being used. The research methods employed are consistent with established best practice in the estimation of effects of minimum wages, and will be openly available for further scrutiny or replication of results.

B4 Data used and methods employed are consistent with legal requirements such as the Data Protection Act, the Human Rights Act, the Statistics and Registration Service Act and the common law duty of confidence

Please describe the legal frameworks pertinent to this project (max 500 words)

Access to the potentially disclosive data will be in a secure environment (VML) and via a approved legal gateway (Approved Researcher scheme). This is in compliance with the Statistics and Registration Service Act 2007.

B5 Collaboration and Sponsors

Please describe the project sponsors and the **legal gateways** to acquire, process use and share their data

List of Collaborators/Sponsors	Details and relevant documentation relating to collaboration (you may attach copies of relevant documentation)
Low Pay Commission	Approved Researcher Scheme

B6 The views of the public are considered in light of the data used and the perceived benefits of the research

Please list any public engagement activities (max 250 words)

Whilst the views of the public have not been sought with regards to the research, there is a clear public benefit for the analysis (as described in section B1.). A public consultation on the Approved Researcher scheme in 2015/16 recommended that commercial organisations should be allowed to access ONS research data where there is a clear public benefit.

B7 The access, use and sharing of data is transparent, and is communicated clearly and accessibly to the public

How will the findings of the research be disseminated? (max 500 words)

To help promote greater transparency and in compliance with the updated Approved Researcher scheme, the researchers have agreed to their details being included on a public record of Approved Researchers and to publishing the findings of their research (including on the ONS Approved Researcher pages). Results of this research project will be included in a publicly available report published on the Low Pay Commission's and Frontier Economics' websites. Findings will also inform the LPC's recommendations on minimum wages, reported to the public in the LPC's Annual Report. These documents are publicly available on the GOV.UK website The research outputs will also be discussed with researchers and policymakers at the Fifth Annual LPC Research Symposium on September 7th, 2017. The papers for this event will be publicly available. To help promote greater transparency and in compliance with the updated Approved Researcher scheme, the researchers have agreed to their details being included on a public record of Approved Researchers and to publishing the findings of their research (including on the ONS Approved Researcher pages).

B8 Please outline any intended future use for products (such as linked data sets or tools) produced as a result of the research and how they will be accessed. (max 250 words)

Following this project the aggregate group statistics on apprentice pay will be used to perform econometric analysis. As a result the number and quality of apprenticeships in the same groups will use Individualised Learner Record[3], and publicly available data on characteristics of relevant geographical areas.

The econometric analysis will study the differential impact of the AR (Difference-in-Differences approach) to estimate the effect of the October 2015 increase in the AR on the number and quality of apprenticeships in England.

Specifically this stage of the analysis will produce statistical estimates from an econometric regression to exploit the variation in the bite of the AR to evaluate the impact of its increase on number and quality of apprenticeships. The outcome variables of interest will be the change in the number of apprenticeships and in their quality between 2014/15 and 2015/16, measured from the Individualised Learner Record, an administrative dataset including information on all Further Education learners in England, including apprentices.

Frontier will be accessing de-identified individual record level ILR data from the Administrative Data Liaison Service (on behalf of the Information Authority). They will produce aggregated outputs by local authority and sector and use this with cleared aggregated outputs (at local authority and sector level) from the ONS Secure Research Service (formerly the VML).

The Individualised Learner Records (ILR) are needed to make sure Frontier Economics can measure the main outcome variables (number of apprenticeships, completion rates, training hours) as accurately as possible. ASHE does include apprentices, but it is not considered the best source to measure apprentice numbers, and it includes no information on training hours or completion rates.

Essentially, the econometric analysis will compare the change in number and quality of apprenticeships between high-bite and low-bite areas.

The econometric analysis will take place outside the VML using the aggregate ONS cleared VML outputs along with ILRs and publically available data on characteristics of relevant geographical areas will take place within the Low Pay Commission on their secure IT systems.

[3] https://www.gov.uk/government/collections/individualised-learner-record-ilr

UK Statistics Authority

Section C

Responsible owner and applicant details

C1 Responsible Owner

Full Name: [redacted]	**Position:** [redacted]
Address: [redacted]	**Email:** [redacted]
	Telephone: [redacted]
	Organisation: [redacted]

Declaration to be signed by the responsible owner

I have met with and advised the applicant on the ethical aspects of this project design (applicable only if the responsible owner is not the Applicant).

I understand that it is a requirement for all researchers accessing the data to have undergone relevant training and to have either relevant security clearances or approved researcher status in order to access the data.

I am satisfied that the research complies with current professional, departmental and other relevant guidelines.

I will ensure that changes in approved research protocols are reported promptly and are not initiated without approval by the National Statistician's Data Ethics Advisory Committee.

I will provide notification when the study is complete if it or fails to start or is abandoned.

I will ensure that all adverse or unforeseen problems arising from the research are reported in a timely fashion to the National Statistician's Data Ethics Advisory Committee.

I will consider all advice received from the National Statistician's Data Ethics Advisory Committee and should I be unable to implement any of the recommendations made, I will provide reasoning in writing to the Committee.

Signature: [redacted] **Date:** May 2017

C2 Applicant Details (if applicant is not the responsible owner)

Full Name: [redacted]	**Position:** [redacted]
Address: [redacted]	**Email:** [redacted]
	Telephone: [redacted]
	Organisation: [redacted]

Any other business

1.	2.	3.	4.	5.	6.	7.	8.	9.	10	11.	**12**