**Assumptions Log**

The assumptions log has been developed to provide all users of models within ONS with a standard template to record the assumptions made about the model. Assumptions logs permit better understanding and mitigation of the uncertainties present within every model. If assumptions are inadequate or absent then these uncertainties often persist and drastically impact the model outputs. It is important to log all assumptions made about the input data as well the methodology alongside testing their validity and relevance to the model output. Unless there is evidence underpinning assumptions they are of little use.

Some examples of assumptions are as follows:

* Accuracy of data: It is assumed that the laboratory testing procedure is consistent across labs within the UK.
* Biases in data: It is assumed that data does not exclude any groups of population based on their demographic characteristics.
* Data missingness: It is assumed that there is complete information for all the variables included in the analysis.
* Changes in input data: It is assumed that data collection process has not been changed over time.
* Sampling: It is assumed that data is representative for the population.

**Definitions**

Start filling the template by inserting the full name of the model (this should align with the name given on the model output report) and financial year of interest.

**Assumption ID:** Give each assumption a unique ID so that it can be tracked easily and cross referenced.

**Location in code/publication:** Write the name of the output report/methodology paper or the published document in which the assumption has been mentioned. If the assumption is related to a code, identify the location of assumption within the code by mentioning the line number.

**Plain English description of assumption:** Write a clear description of the assumption in plain English. For example, ‘it is assumed that data is representative for the population'.

**Basis for assumption:** Briefly summarise the basis of assumption to justify their suitability given the modelling scenario. For instance, the assumption could be based on historic data, theoretical literature, empirical evidence, quality assurance reports, data testing or robustness checks performed by the team.

**Links to supporting analysis:** Attach a link of the source where the assumption has been taken from or from where it can be verified.

**Documentation dependencies:** List down the name of project documents dealing with this assumption. Assumptions can have an impact on different stages of the modelling cycle. For example, an assumption about input data if valid or in-valid could impact the model code, project timeline, robustness of the outputs produced by the model. Logging these dependencies will ensure that the relevant plans and documents are updated once an assumption is validated.

**Internally reviewed by:** Enter the full name of individual within the modelling team responsible for ensuring that the assumption is validated in the agreed upon manner.

**Date of last review/update:** Enter the date the assumption was last reviewed or validated.

**Externally reviewed by:** Enter the name of organisation and the position of expert who has validated the assumption. It is not necessary to mention the individual's name. For example, Lighthouse Laboratory (Senior Scientist), University of Oxford (Professor of Statistics),

**Date of external review:** Enter the date the assumption was reviewed by the external expert.

**Next review/update due on:** Enter the date the assumption needs to be reviewed or updated.

**Quality Rating:** See the Quality Rating Keyand fill it accordingly.

**Risk Score:** See the Risk Scoreand fill it accordingly.

**Issues Register**

The issue register has been developed to provide all users of models within ONS a standard template to record all issues incurred during the modelling lifecycle. Risks and issues may be well understood by one part of the team and totally unknown by others. It is therefore important to maintain issues register to ensure that all members of team are aware of the issues. The register would help in storing the mistakes and challenges of the team during model development for future teams to review. It aims to make the system of model creation more efficient and more effective and prevent the retreading of old ground.

**Definitions**

Start filling the template by inserting the full name of the model (this should align with the name given on the model output report) and financial year of interest.

**Issue ID:** Give each issue a unique ID so that it can be tracked easily and cross referenced.

**Issue:** Enter the issue. It could be anything raised by the team, anything raised during quality assurance by the team members or external reviewers. Include the location of the issue, for example, line number of code, error in publication, resource constraint.

**Date first identified:** Enter the date the issue was first identified.

**Plain English description of issue:** Brief summary of the underlying cause and nature of issue in plain English explaining what is creating problem.

**Impact of issue:** Brief summary of what is being impacted, for example, timeline, accuracy, cost of project.

**Status of issue:** From the dropdown menu, select ‘Resolved’ if the issue has been resolved or ‘Shelved’ if the issue has yet to be handled.

**Justification of status:** Brief summary of how the proposed solution has helped in overcoming the issue if the status is ‘Resolved’. For ‘Shelved’ issues, explain why it is decided to deal with later.

**Proof of resolution**: Write the name of the output report/methodology paper or the published document which the issue relates to and how the resolution has impacted it. If the issue was related to a code, identify the location of revision made within the code by mentioning the line number.

**Date of last review/update:** Enter the date the issue was reviewed/updated.

**Reviewed by:** Enter the full name of individual within the modelling team who has reviewed the decision made to resolve or shelve the issue.

**Next review/update due on:** Enter the date the issue needs to be reviewed or updated in future.