



Department
for Transport

TEMPro & NTEM data release notes and frequently asked questions

Additional guidance

December 2016

Moving Britain Ahead

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1. Release notes

TEMPro is the software program, NTEM is the data set

As of January 2010, it has been clarified across guidance that TEMPPro is the name of the software that presents the NTEM data set.

NTEM 7.0 dataset – summary of changes from version 6.2

Version 7.0 of the NTEM dataset has been updated with:

- 2011 Census
- ONS 2012-based population projections
- Dwellings projections - updated using local authority plans and annual monitoring reports
- Employment projections - updated using UKCES 2012-based employment projections (“Working Futures”) project
- The distribution of employment and workers by region in the base year 2011 (and hence in all years) - updated using workforce jobs and the labour force survey
- A comprehensive update and re-estimation of the National Car Ownership Model
- Re-estimated trip rates based on National Travel Survey

The dataset is described in detail in the NTEM7.0 planning data guidance note Users should note that:

- NTEM datasets are long-term forecasts - they represent the Department’s best estimate of the long-term response to demographic and economic trends. Users should consult Department’s Transport Analysis Guidance to understand and ascertain the appropriate use of NTEM data for their particular application, and to account for the uncertainty which is inherent in demand forecasting. See [TAG Unit M4 - Forecasting and Uncertainty](#).
- NTEM7.0 forecasts are run from 2011 base at 5 year intervals to 2051 – as with previous versions, for intermediate years, the forecasts are interpolated linearly.
- Based on NTS evidence NTEM7.0 includes time-varying trip rates between 2011 and 2016. Trip rates are assumed to be constant from 2016 onwards.
- In NTEM7.0 the bottom level of NTEM geography (NTEM zones) has been changed from 2,496 TEMPPro zones to 7,700 zones based primarily on MSOA. In England and Wales these are based directly on 2011 Census MSOA (7,201 zones). In Scotland there are 499 zones, which are aggregations of Scottish Data Zones (DZ) that approximate average MSOA population size.

- Just like in earlier versions, information about planned dwellings is derived from LA plans and monitoring reports and based on targets/plans for the whole control area (Local Authority). The amount of control area growth is distributed to MSOAs based on past trends (Expected Growth Factors). Past trends may not be reflective of the future plans for a specific zone and appropriate aggregations or adjustments to individual zones may be required in individual applications.
- Non-car figures need to be treated with caution because they assume constant travel costs and the estimates are based on NTS data which is dominated by car trips. **These figures are intended for use in conjunction with a forecasting model capable of mode choice and might represent a good starting point but users need to satisfy themselves that they are fit for purpose in individual applications.**

To access NTEM7.0 dataset users should use the latest version of the TEMPro software (TEMPro 7.0 or 7.1). Downloads of the historic datasets (NTEM6.2) continue to be provided and can be accessed with the use of the same version of the TEMPro software (TEMPro 7.0 or 7.1).

TEMPro users who use NTM growth factors to adjust TEMPro factors, should use the most up-to-date available version of Road Traffic Forecasts. At the time of release of NTEM7.0 it was RTF15 (Scenario 1). Users should note that newer versions of Road Traffic Forecasts may become available after the release of NTEM7.0. NTM road traffic forecasts are aggregate strategic forecasts and should not replace an appropriately specified traffic forecasting model for business case development.

Status of NTEM 7.0 and NTEM 7.1 release

On 28th July 2016 a new version of TEMPro and NTEM dataset (version 7.0) was published and replaced version 6.2.

Since the release, some localised issues have been identified with the NTEM7.0 dataset, which will necessitate a revision of selected inputs (employment and dwellings for a subset of local authorities). Further details and a list of areas known to be materially affected were provided in the communication circulated to TEMPro users on 14th November and are also published on TEMPro [website](#). A programme of work is currently ongoing to implement the necessary revisions.

NTEM7.0 dataset is a long anticipated update, based on the latest forecasting evidence base. It is the Department's view that until an addendum is released, NTEM7.0 continues to provide the most up-to-date dataset for use in transport business cases and a robust basis for developing forecasts in the vast majority of cases. NTEM users are advised to take care when applying the dataset in the affected area. Promoters of schemes in the affected areas should contact the Department if they have queries or concerns regarding the NTEM7.0 dataset and require further advice in relation to their business cases. Addendum to the NTEM7.0 dataset is expected to be available at the end of February 2017.

An interim update of the dataset for Wales is available and has been published on the website as NTEM 7.1 Interim for Wales. The interim dataset has been produced in conjunction with the Welsh Government and incorporates more up to date and robust evidence about housing growth within Wales (described below). As the Welsh Government intends to use the NTEM 7.1 Interim for Wales dataset for forecasting and appraisal it has been made available on the TEMPro website. The updated

assumptions about housing growth contained within the interim dataset will be carried forward into the addendum to NTEMv7 which we intend to publish in February. The addendum will also incorporate further refinements to the Welsh dataset which were not possible to include in the interim update.

NTEM 7.1 Interim for Wales includes:

- minor corrections of the employment inputs;
- inclusion of updates in assumptions, provided by the Welsh Government, concerning the number of dwellings in 15 Local Authorities within Wales (sources listed below); and
- data on actual dwellings completions within Wales.

| Authority | Document | Date |
|-----------------------|--|-------------|
| Blaenau Gwent | Local Development Plan up to 2021 | Nov 2012 |
| Bridgend | Bridgend Local Development Plan | Sept 2013 |
| Caerphilly | Caerphilly County Borough Local Development Plan up to 2021 | Nov 2010 |
| Cardiff | Cardiff Local Development Plan 2006 – 2026 | Jan 2016 |
| Carmarthenshire | Carmarthenshire Local Development Plan | Dec 2014 |
| Merthyr Tydfil | Merthyr Tydfil Local Development Plan 2006 - 2021 | May 2011 |
| Monmouthshire | Monmouthshire County Council Adopted Local Development Plan 2011-2021 | Feb 2014 |
| Neath Port Talbot | Neath Port Talbot County Borough Council Local Development Plan 2011-2026 | Jan 2016 |
| Newport | Newport Local Development Plan 2011 - 2026 | Jan 2015 |
| Pembrokeshire | Pembrokeshire County Council Local Development Plan - Planning Pembrokeshire's Future (up to 2021) | Feb 2013 |
| Powys | Powys Local Development Plan 2011 - 2026 Written Statement Deposit Draft June 2015 (Document 34) | June 2015* |
| Rhondda Cynon Taff | Rhondda Cynon Taff Local Development Plan up to 2021 | March 2011 |
| Swansea | Swansea Local Development Plan 2010-2025: Deposit Plan | July 2016* |
| Torfaen | Torfaen County Borough Council Local Development Plan (to 2021) | Dec 2013 |
| The Vale of Glamorgan | The Vale of Glamorgan Local Development Plan 2011-2026 | Nov 2013* |

* deposit draft

NTEM 7.1 Interim for Wales has been published alongside NTEM 7.0 for Wales. NTEM7.0 for Wales continues to be available for download alongside the NTEM7.0 datasets for England and Scotland for completeness. Local authorities in Wales should - in the first instance - contact the Welsh Government with any queries about which version of NTEM to use.

TEMPro v7.1 Software Release

We have now released version 7.1 of the TEMPro software. This supersedes the previous version of the software (v6.2) and allows NTEM7.0 and NTEM7.1 Interim datasets to be used. Version 7.1 differs from the recently released (July 2016) version 7.0 in that it additionally allows NTEM7.1 to be processed. There are no other significant differences between TEMPro 7.1 and 7.0.

TEMPro v7.0 and 7.1 software have a number of revisions and new features compared with the previous TEMPro v6.2 software:

- The software has been adjusted to allow the presentation of the NTEM7.X datasets (with 7,700 zones) as well as NTEM6.2 (with 2,496 zones)
- Users can provide custom zone names to replace the default ONS MSOA names
- The support of Windows XP installation has been withdrawn.

A user guide titled 'Getting Started with TEMPro (Version 7.0)' has also been made available.

Migrating to the NTEM 7.0 and 7.1 data sets

It is important for the Department to keep the NTEM data sets sufficiently current to allow robust and relevant transport modelling and appraisal and to promote effectively informed decision-making.

Users should be aware of the Department's advice on updating extant modelling work in the [Proportionate Update Process](#) document in WebTAG. In principle, analytical work should make use of the latest NTEM data set for forthcoming decisions. However, there may be occasions where it would not be proportionate to update analysis that is based on the previous NTEM data set (i.e. it would take significant resource and delay transitioning to the new data set **and** it is judged that there will not be a significant impact on the analysis). For this reason, both new-release and previous sets are available for download on this web site.

It is recommended that analysis using NTEM 6.2 data should be subject to proportionate sensitivity tests to determine whether the impact of migrating to NTEM 7.0 or 7.1 is significant relative to the decision the analysis is informing. This will involve evidence-based judgment.

2. Frequently Asked Questions (FAQs)

Data and methodology

What should I do if my base year pre-dates the NTEM7 base year of 2011?

The most up-to-date evidence should be used wherever possible. Models with the base year older than five years should ideally be updated at the next possible opportunity. If an update of the model is not immediately possible or proportionate then users should then use NTEM6.2 growth rates between their base year 2011 and NTEM7 growth rates from 2011 onwards.

Does the more granular zoning system in NTEM 7 mean certain developments are included in the dataset?

No, planning data is still provided at the local authority level and these households are distributed to the NTEM zones according to expected growth factors derived from historic trends. For more information see the [NTEM planning data guidance note](#) and the question below.

I wish to use NTEM data to assess the impact of a development without the use of a formal transport model. Is my development included in the data set?

Nowhere in the derivation of the NTEM planning data is there an explicit assumption that particular developments do or do not go ahead.

With detailed local development information, the practitioner may adjust the distribution of households or jobs at the zone level. This adjustment may be achieved by using the 'Alternative planning assumptions' functionality within the TEMPro software. For more information on this refer to [TAG Unit M4 – Forecasting and Uncertainty](#) - Section 7.3 The Reference Forecast.

Please note that for modelling purposes, TEMPro figures must be used as control totals over a larger area, usually the district level. This implies that if the jobs or households in a zone are adjusted, equal and opposite adjustments must be made in other zones (say, in the local authority) to match the total from the NTEM data set.

For more details about the use of NTEM data for different applications and the standard approach to take into account uncertainty in transport forecasting (including developments), please see [TAG Unit M4 – Forecasting and Uncertainty](#).

The source of the development assumptions within the NTEM data set are stated in the [NTEM planning data guidance note](#), annex F.

Why are there multiple versions of data on this site?

The NTEM 7.0 dataset is the currently adopted dataset to be used in current transport models and appraisals. The previous dataset NTEM 6.2, is still available to enable analysts to continue work on projects that started before the new data was released and to review historic models.

From where do I get national traffic growth forecasts?

National traffic growth forecasts from the National Transport Model (NTM) are published by the Department on the DfT web site. For convenience TEMPro 7.1 contains a database with [2015 road traffic forecast](#).

How does TEMPro treat goods vehicle traffic?

The NTEM data set includes travel by vehicles owned by households and hence does not include freight vehicles. For forecasts of freight traffic - available by region, road type and vehicle class - refer to the results of the National Transport Model, noting the answer to the previous question.

Do NTEM datasets include a high or low growth scenario?

No - the current version of NTEM provides central growth forecasts only. All forecasting has uncertainty. See [TAG Unit M4 – Forecasting and Uncertainty](#), for further details of how uncertainty should be reported.

Please confirm the meanings of Production and Attraction as found in the current TEMPro software?

Trip Production is defined as the home end of a Home Based trip or as the origin of a Non Home Based trip. Trip Attraction is defined as the non home end of a Home Based trip or the destination end of a Non Home Based trip. Further details can be found in TAG Supplementary Guidance – NTEM Sub-Models.

How do P/As and O/Ds differ with respect to time periods?

A production and attraction for a home-based trip takes the time period of the from-home trip. This includes the out-trip and the return-trip. For example, a person travelling to work in the AM peak period and returning home in the PM peak will produce two AM peak productions at home and two AM peak attractions at work. Origins and destinations take their time period from the time of departure from the origin.

Why don't NTEM population figures match national figures?

The population figures in NTEM datasets give the population resident in households. This excludes residents of communal establishments. The population data in TEMPro is mid-year, hence comparisons with the Census will show a systematic difference.

In the forecast years, population may vary slightly from projected national figures. This is a result of the household allocation process where population from trend-based sources are allocated to policy-based dwellings. Where the population trends are significantly higher than the planned dwelling supply, this implies unacceptable changes to household sizes and structures. In this case, NTEM populations may be resultantly lower than the trend-based source. This is also relevant for household projections, which are also from trend-based sources.

Software and installation

Opening NTEM Regional Datasets

The datasets have not been designed to be accessed directly by the end-user. The datasets are MS Access databases, the data structure is fairly complicated and the files contain huge amounts of data in a fairly user unfriendly format. However, there is a very user friendly way of querying the data and accessing the data you require, which is to use the TEMPro application, which can be downloaded from this site. The download contains an installation file which needs to be run on your machine to install the software. The "Getting Started" document (also available to be downloaded from this site) explains exactly how to install the software.

The NTEM datasets have not been password protected for technical reasons; however, users are still advised to use them via the TEMPro software.

When I run the software I get a message which says "You do not have any datasets in your data folder"?

The most likely problem is that the datasets have not been saved in the DATA sub-folder of the application folder and therefore the software cannot find them. When installing the TEMPro system under 32-Bit versions of Windows the default DATA sub-folder is C:\Program Files\TEMPRO7\DATA though users are allowed to change this during the installation process. You should ensure that your regional datasets are copied to the DATA sub-folder. For 64-Bit versions of Windows the default DATA sub-folder is C:\Program Files (x86)\TEMPRO7\DATA.

Further details of how to install the TEMPro software and Data are given in the 'Getting Started with TEMPRO (Version 7.0)' document.

How do I install TEMPRO on a server?

TEMPro was designed and implemented as an application to be installed and run on a local machine. Therefore, we do not recommend that users install the TEMPro software on a server as TEMPro has not been designed to allow multi-user operation. However, datasets can be installed on a server and accessed by multiple users.

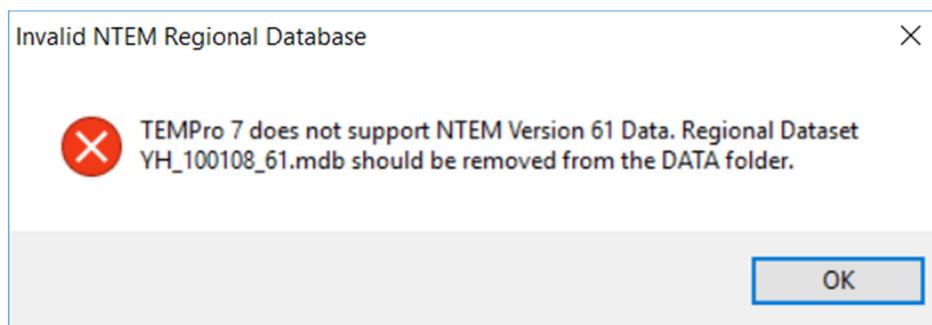
Further details of how to install the TEMPro software and Data are given in the 'Getting Started with TEMPRO (Version 7.0)' document.

Under what versions of Windows does TEMPro run?

TEMPro Version 7.0 runs under Microsoft Windows 10, Windows 8.1, Windows 8, Windows 7 or Windows Vista (both 32-bit and 64-bit versions). Earlier versions of TEMPro can be installed on earlier versions of Windows.

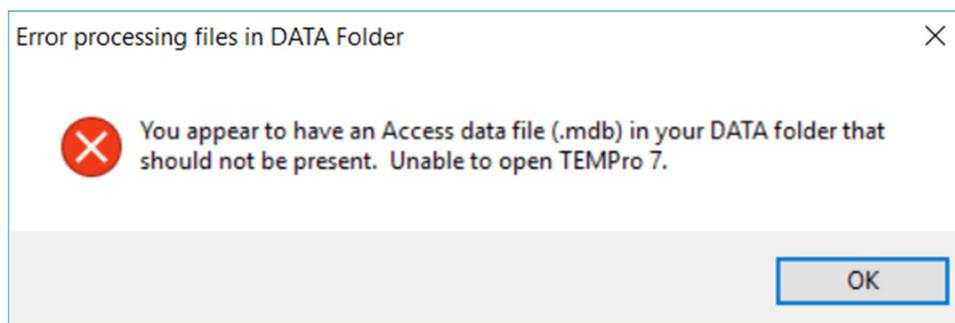
What versions of NTEM datasets can TEMPro 7.0 analyse?

Currently, TEMPro Version 7 can analyse version 6.2 or version 7.0 NTEM regional datasets. If earlier versions of the datasets are included in the TEMPro 7.0 DATA subfolder, then an error message is produced when opening the application. An example is shown below.



On opening TEMPro Version 7.0 I receive an error message specifying that I have an additional Access database in the TEMPro DATA subfolder. What should I do?

The following error message may be encountered.



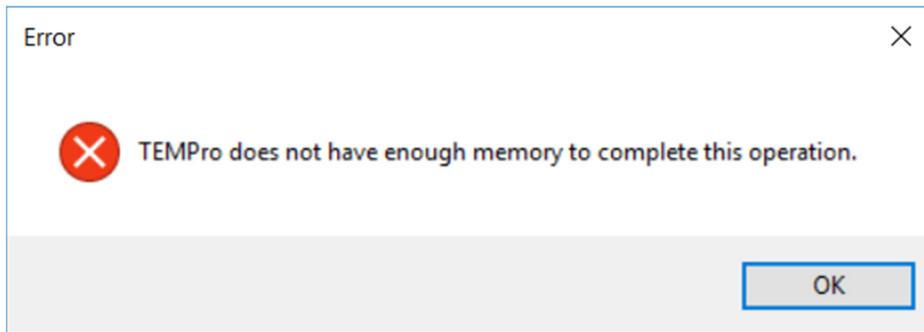
Check your DATA subfolder to ensure that the only Access databases (.mdb files) it contains are:

- NTEM regional datasets (versions 6.2 or 7.0)
- dbTEMPROsavedSelections.mdb
- NTMTrafficForecastsDB.mdb.

Delete/move any other .mdb files that are found there and try running the TEMPro 7.0 application again.

Why do I receive an out-of-memory message when running TEMPro for a large selection of geographical areas?

For example:



The increase in the number of zones available in the NTEM 7.0 regional datasets means that older PCs with < 3GB of memory will not be capable of processing large numbers of geographical areas for all scenarios. For example, to process 'Trip Ends by Car Availability' for 'All Purposes Individually' over all zones of all NTEM regional datasets requires a PC with ~3GB of RAM (assuming no other applications are using memory on the PC).

Can I install TEMPPro 7.0 alongside an earlier version of TEMPPro?

TEMPPro Version 7.0 can be installed alongside an earlier version of TEMPPro (for example, if you wish to maintain access to NTEM datasets earlier than version 6.2). You should ensure that the two versions are accessing different DATA subfolders (this will always be the case if the default installation settings have been selected).

I am having problems installing TEMPPro?

To install any software, including TEMPPro, on a Windows Vista (or Windows XP) machine you have to have administrator rights. If your organisation has an IT department then we recommend that they install the software for you, ensuring that ALL users have rights to use the software. If you do not have the support of an IT department and are unsure how to gain administrator rights then please contact the TEMPPro support team.

I am having problems getting the download to work?

If you experience problems downloading the software and/or datasets then check the policy on length of connection as your machine may timeout before the end of the download. It is possible to increase the connection time settings, although you may need your IT department to make this change. If this does not appear to be the problem then you should check your firewall settings and if necessary update them. If you continue to experience problems then please contact the TEMPPro support team.

Can I get data in Excel format?

Yes TEMPPro results can be exported to Excel. Alternatively, you can copy the results data from the grid on the results screen and then paste that data into another application such as Excel. For more information on this functionality please see the TEMPPro help file.

Are there any differences between installing TEMPPro on 64-Bit and 32-bit versions of Windows?

TEMPro is a 32-Bit application (that has been made Large Address Aware to increase memory usage up to 4GB) but can still be installed on 64-Bit versions of Windows. However, because it is installed as a 32-Bit application, the installation folder is C:\Program Files (x86)\TEMPRO7. If the application is installed on a 32-bit version of Windows, the installation folder is C:\Program Files\TEMPRO7.

Please ensure that you copy your NTEM regional datasets to the correct DATA subfolder prior to using TEMPro. The self-executing zip file that is used to provide the data allows the location of the DATA subfolder to be specified during the extraction process.

Further details of how to install the TEMPro software and Data are given in the 'Getting Started with TEMPRO (Version 7.0)' document.

Why do I get the message "ERROR READING SETUP INITIALIZATION FILE" when I try to run the TEMPro installation package?

The message is an indicator that the installation package has been corrupted during the download process (the file is normally much smaller than it should be). Please re-download the installation package and try to install TEMPro again.

Accessing Technical Support

For further support, please contact Atkins Ltd / Hartley McMaster Ltd.

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