

Steam Engines of England 1706-1803 GIS shapefile documentation by Max Satchell

filename: 1706_1803EngSteamEngines.shp

This ArcGIS shapefile provides location and attribute data for 2175 documented stationery steam engines in England 1706-1803. This shapefile derives from data kindly supplied by John Kanefksy. The great majority of the engines were geolocated by Mike Gill with the remainder being geolocated by Max Satchell, Sean Bottomley and Xuesheng Xu. This work was undertaken as part of *Transport, urbanization and economic development in England and Wales c.1670-1911* project funded by the Leverhulme Trust and *Modelling the Transport Revolution and the Industrial Revolution in England* funded by the National Science Foundation directed by Leigh Shaw-Taylor and Dan Bogart. Our thanks go out to these organisations and to John Kanefsky for allowing us to use his data and for Mike Gill in generously giving his time and unparalleled knowledge of mining and industry to geolocate so many of the engines. The shapefile comprises the standard ArcGIS .shx, .shp, .sbx, .sbn, .prj and .dbf files. The dbf file is described below.

Attribute data

1706_1803EngSteamEngines.dbf

The dbf table contains the following fields

Field	Data Type	Description
FID	Object ID	Unique ID for each row in the table
Shape	Point	Point for each steam engine
ObjectID_1	Long Integer	ID
Pre	Text	The year of first operation sometimes not known or approximate
Location	Text	The physical location of the engine, where first built. Often this is only the name of the operator or owner of the engine
Owners_etc	Text	The person, company or organisation who owned it, where known
No	Text	Where several engines were erected at the same location or premises, these are numbered in the chronological sequence, as known / assumed
Type	Text	Whether Newcomen pumping, Watt pumping, Watt Rotary, Common Rotary, Savery, or one of the many other configurations of engine used during the century
County	Text	Kanefsky county
Industry	Text	Industry
Purposes	Text	What the engine did: Pumping water, recirculating over a water wheel, driving textile machinery, etc
Maker	Text	Where known who was the designer, principal engineer or other mens rea. (Boulton and Watt dominate this column)
HP	Text	The recorded nominal or delivered horsepower as recorded by contemporaries or calculated by historians. This is often conjectural and generally not comparable between industrial sectors or individual engines
Cylinder	Text	The internal diameter of the cylinder, to the nearest inch
Stroke	Text	The internal diameter of the cylinder, to the nearest inch. Generally the most relevant comparator of the power of an engine
Moved_etc	Text	If known, whether the engine was moved to another location or scrapped (Abandoned) or constitutes a major rebuild. (On the original spread sheet version these are entered as "m", "a" and "r")
Possible_e	Text	The existence of the engine is unconfirmed (Possible) or in some cases conjectural (Unlikely). Includes some engines first recorded after 1800. (On the original spread sheet version these are entered as "P", and "Unl.")
References	Text	The sources and provenance of the installation, in abbreviated form. A complete bibliography of sources is in compilation and will be added to this website in due course
Comments	Text	Other useful details of context, where this illuminates the entry
Source_of_	Text	who (Mike Gill, Xuesheng Xu, etc) geolocated each engine and generated its co-ordinates
X_COORD	Double	Eastings
Y_COORD	Double	Northings

Country	Text	country i.e. England
YEAR	Long Integer	The year in which the engine first started work - often qualified in fields "1stYrUnCnt" and "1stYrApprx "
COUNTY_1	Text	ancient county
HUNDRED_OR	Text	Hundred or wapentake
CONCAT	Text	County and hundred name concatenated
1stYrUnCnt	Double	"1" = The year in which the engine first started work uncertain
1stYrApprx	Double	"1" = The year in which the engine first started work approximate
1stYrOK	Double	"1" = The year in which the engine first started work OK
Moved	Double	"1" = engine moved
Abandod	Double	"1" = engine abandoned
Rebuilt	Double	"1" = engine rebuilt
Possible	Double	"1" = engine possible but not certain
P_Rebuilt	Double	"1" = possibly rebuilt
Unlikely	Double	"1" = engine's existence unlikely
Sheet1_un	Double	1801-1881 mappable unit ID

Colours

yellow = Kanefsky data largely unaltered

green = Kanefsky data cleaned up and systematised

white = GIS derived data

Co-ordinate system

British_National_Grid

Projection: Transverse_Mercator

False_Easting: 400000.000000

False_Northing: -100000.000000

Central_Meridian: -2.000000

Scale_Factor: 0.999601

Latitude_Of_Origin: 49.000000

Linear Unit: Meter

GCS_OSGB_1936

Datum: D_OSGB_1936

Citation guidelines

Gill, M., Kanefsky, J., Satchell, M., Bottomley, S., Xu, X., Bogart, D., Shaw-Taylor, L., 1706-1803 England Steam Engines GIS shapefile documentation (2020). This dataset was created with funding from the Leverhulme Trust (RPG-2013-093) and the National Science Foundation (SES-1260699). A description of the dataset can be found in Satchell, M., 1706-1803 England Steam Engines GIS shapefile documentation (2020) available at:

<http://www.geog.cam.ac.uk/research/projects/occupations/datasets/documentation.html>

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Errors and further corrections

We have contributed many hours to create this GIS and have struggled to make it as accurate as possible. However, we remain interested in refining it still further. If you spot something that is wrong with the locations of the engines or their attribute data email details to campop@geog.cam.ac.uk