POINTS OF INTEREST QUARTERLY UPDATE

NOTES ON THE BACKGROUND OF DATA SUPPLIES

MARCH 2015

Official

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James Terry, Technical Product Manager, is responsible for this document. The text for this document has been supplied by PointX Limited on the understanding that it will be reformatted into Ordnance Survey corporate standard style.

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Preface

This document is designed to provide an overview of the data supplies for Points of Interest (hereafter referred to as POI or the Product). It gives information about each of the data suppliers and it assumes a general knowledge of geographic information. If you find an error or omission in this guide, or otherwise wish to make a comment or suggestion as to how we can improve the guide, please contact us at the address shown below.

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INTRODUCTION

This document builds on, and is a progression of, earlier documentation detailing the background of data supplies used in Points of Interest. This assumes customers have access to all classes of data for all areas of the country, so depending on a customer's exact configuration, it is likely that certain sections of this document may not be relevant.

Not all customers receive the 'Provenance' field in their order configuration, so it might not be obvious to users which data feed individual records are from.

The intention of the Points of Interest product is to bring together information from various 'best-of-breed' suppliers. To this end, PointX® has entered into agreements with almost 150 data providers and this document gives more information on these, the data provided to PointX and how this is handled.

The base data has been processed to provide, as far as possible, a de-duplicated subset. The de-duplication employed does mean that unless a provider has been assigned as a preferred supplier, records coincident with records from other suppliers are likely to be removed from reporting. Thus, even though a supply from a provider may, for example, number 500 records, depending on the degree of overlap with other suppliers, a much smaller number of records might end up actually being reported in Points of Interest.

From the December 2004 release, all payphones and cash machines have been included, from March 2008 all WiFi hotspots and from March 2015 all Open Plaques, within relevant supplies, regardless of their positional accuracies, as these types of record are known to not be duplicated by other records held.

In order to establish the type of feature that each individual record describes, a classification is assigned. If previously unreported types of features are included, or existing information is reclassified, it may become necessary to amend or expand the product's classification system from time-to-time. Such classification amendments, when they occur, are detailed within the product amendments documentation separately circulated.

INDIVIDUAL PROVENANCE BACKGROUND

This section covers the characteristics of the current suppliers of information to PointX. Information is provided, where known, on geographic coverage, numbers of records, use the provider has for the data themselves, how it is collected, its quality and possible problems, supply frequency, stipulated processing times, likely change volumes and other information the provider holds, along with where it is likely to be reported within Points of Interest. It must be remembered that Points of Interest only reports information for Great Britain.

BUSINESS DATA

118 INFORMATION (MARKET LOCATION®)

Market Location was the company providing this data to PointX, although the dataset is actually owned by 118 Information.

This is a trade dataset that covers all of Great Britain and actually includes slightly more records than did the previously used Thomson Directories® holding. For the March 2012 Points of Interest release, just over 1.3 million records were reported over all groups and by September 2013 this had risen to over 1.4 million.

118 Information data was used originally, primarily to aid in credit-checking applications; however, it is a stated aim that this data becomes more widely used as a trade data holding in its own right and it is being maintained with this aim. A dedicated call centre telephones new businesses, based on a BT© Operator Services Information System (OSIS) feed, and various other data sources and strategies are used to maintain the database to keep it complete and minimise obsolete instances.

PointX is aware of certain trade data scenarios missing from such large datasets as Thomson Directories and 118 Information and has previously had to create these records itself. 118 Information is keen to work with PointX to get these instances included within its own holding, which will then save PointX having to maintain these itself, whilst also helping 118 Information and their other customers by making their holdings more complete. 118 Information also uses address validation software, so supplied addresses tend to be good.

Records are classified to a very granular level in most instances. However, there are certain types of activity that are aggregated into generic groupings or can be misclassified and this does cause issues.

PointX receives a data supply every month, although only every third month is processed. This will be incorporated into the PointX database within three months of receipt.

The 118 Information holding is a very good source for most trade and businesses, but as with Thomson Directories data previously, may not be as comprehensive as niche suppliers of a particular type of information, so by using the preferred supplier ranking, it is likely that these niche suppliers will report at the expense of 118 Information data, where they overlap. Also, for certain types of information, the 118 Information holding will be excluded from reporting wholesale; an example of this would be the non-reporting of 118 Information Post Offices®, as the Royal Mail® holding would be used instead.

A small number of businesses decline to be held on the 118 Information database (for a variety of reasons).

Churn within the 118 Information supply is quite large and tends not to be restricted to any geographic area.

Other information about the businesses is available from 118 Information, including phone numbers, which can be reported.

As all geocodes for these records have to be derived by PointX, there will be a percentage that is not located to the exact address or location:

- A provenance for total Great Britain coverage of general trade and business data within Points of Interest.

LOCAL DATA COMPANY (LDC)

This source of business data was partially implemented for the June 2011 release. In subsequent releases, more data was made available for potential reporting until the March 2012 release, when potentially all data was reported. However, as only certain customer types are contractually allowed to take data from this source, it has been ranked below all other provenances where possible.

LDC collects business information by both walking streets and telephoning chains of businesses. Thus in an area where LDC has walked, every business will be included in the supply of data received by PointX; however, in other areas, only those businesses that are deemed to be part of a chain will be included.

LDC surveys each of 500 000 retail premises twice a year (this is across the year and not on the same date) and analyses and sells the data as a service. Although it collects a number of attributes for each record (including images), there is no geocode so PointX has to assign geocodes to all records. This means that some records don't get accurate enough geocodes to allow them to report in the database.

LDC records are classified at a granular level; however, their view of the business activity carried out at a location can differ from that of another PointX data supplier. This means that a record can be reported at least twice, from LDC and other suppliers. A good example of this is where 118 Information may report a location as a 'Charitable Organisation' whilst LDC might report it as a 'Charity Shop'. As it is quite possible that both activities are validly being carried out from the location, the de-duplication has been configured to allow both to coexist and report.

There is a large overlap with other data supplies that PointX uses, so not all LDC data is required. Thus Post Offices and a number of medical and educational records for example from LDC are not loaded.

Due to the ranking that has been used, LDC records will normally not report where they coexist with a similarly named and classified record from another supplier, thus only around 160 000 records will actually report in a full release. Some of these records could be unwanted duplicates where a business straddles two buildings and PointX has assigned a record to each building or where the same business has been supplied but with different names so it does not automatically de-duplicate. PointX is working to reduce the incidence of any such unwanted duplicates.

As LDC data includes a lot of churn, a monthly supply is received, of which every third one is processed. This will be incorporated into the PointX database within three months of receipt.

The LDC supply is intended to plug gaps within the trade holding, primarily in the larger towns and cities that it covers:

- A provenance to supplement business premises, especially in larger towns and cities.

FUEL STATION DATA

EXPERIAN®

This dataset was previously known as Catalist® and then Experian Catalist. Covering all of Great Britain, Experian is the authoritative source of information on fuel stations/petrol forecourts. This dataset is collected by field survey and is well maintained as sale of the data to third parties is the driver for it. Currently over 8 300 records are received for Great Britain (Experian also holds records for the Isle of Man and Northern Ireland), all of which hold detailed information on each site. Experian holds much more information on each site, such as fuel prices or types, than PointX needs to report. PointX also removes from reporting any sites that are under development or known to be closed so that only current sites should be reported.

Although Experian does provide geocodes for records, these are not always as accurate as PointX would like, so all records are geocoded by PointX. It is worth noting that certain PointX customer types are contractually excluded from receiving this data provenance.

All records are reported in the 'Petrol and fuel stations' class (10540737) in the 'Road and rail' Category of the 'Transport' Group and as churn is expected to be reasonably high, updates are undertaken for each release of Points of Interest:

- A provenance for total Great Britain coverage of fuel station data within Points of Interest.

As Experian also provides information on the presence of car washes and any convenience store located on the fuel station site, it has been possible from the September 2010 release to include this information in Points of Interest. Any car washes (almost 4 300) will be reported in class 02100183 'Vehicle cleaning services' whilst any shop element (around 7,500 of which just over 6,700 get through after de-duplication with other suppliers) will be reported within class 09470699 'Convenience stores and independent supermarkets'. It is perhaps worth noting that all elements, including the fuel station element, are likely to be reported within the same TOID® and generally this will be the shop building. Although car washes might in reality be represented by a different TOID, these will be within the same site and very close to the reported TOID. From late 2012 PointX has managed to load and process the car washes and convenience stores as separate data streams and it has been possible to report more specific geocodes for many of the car washes, especially within a site.

POINTX COLLATED TRADE ENTRIES

The following dataset has been processed by PointX but will be reported with the provenance shown in bold.

NATIONAL COASTWATCH INSTITUTION

This charitable, voluntary organisation operates almost 450 stations along the coast of England and Wales. These stations assist in the protection and preservation of life at sea and around the coastline, with the volunteers manning the stations keeping both a visual and audible watch.

As the function is safety at sea, all records are being reported within the 'Coastal safety' class in the 'Central and local government' category in the 'Public infrastructure' Group (06330407).

All records have telephone numbers assigned and almost all a web link.

This holding is believed to be comprehensive, although there will be a slight delay for inclusion of any new stations that come into effect.

POINTX COLLATED POINTS OF INTEREST ENTRIES

Further to the trade entries mentioned above, a number of records are reported with a 'PointX' provenance (see also the 'PointX' provenance records derived from Land-Line®). These are records for types of information known to be missing from the trade supplier that PointX has collated and continues to maintain.

Currently, these are primarily a range of banking and supermarket institutions including Aldi® food store, HSBC® bank, Lidl® supermarket, Nationwide® Building Society and Netto® food store locations.

For the June 2014 release around 160 locations of large solar farm installations have been loaded, which are reported in class 07410534 'Energy production'. Information on the Department of Energy and Climate Change (DECC) website was used as a starting point and further analysis and mapping used to assign geocodes. Only successful in about a third of the cases, this information supplements other renewable energy sites, especially wind, that PointX reports.

POST OFFICES

ROYAL MAIL

Post Office Limited provides a complete listing of Post Office information for the whole of the UK. The original supply numbered just under 20,000 records and once all records for Northern Ireland and duplicate records had been removed, a holding of around 18,000 records remained. Subsequent supplies have shown a significant reduction in the number of Post Offices to give just over 11,000 records by September 2012. This has dropped to nearer 10,700 in the March 2015 release.

The records have opening time information associated with them, as well as raw addresses, but in a format that requires quite intense bespoke processing to make it usable. Although the opening time information has been retained for possible future usage, it is currently not being reported within Points of Interest.

PointX has processed the records to provide, where possible, structured addresses and meaningful geocodes. In a small number of cases, it has not been possible to pinpoint the location referred to by the provided address and these records will not therefore be available for reporting. This is because of ambiguous, incorrect or incomplete location information being supplied.

How Post Office Limited uses this data itself is unclear and updates are intended as being on a six-monthly basis, due to the reasonable degree of churn apparent in the data holding, with the data being incorporated within two months of receipt.

The Royal Mail records provided here are known to be more definitive than the Post Office Limited holding from trade suppliers so the trade supplier versions are now never reported.

For those records where it has not been possible to assign either a reportable address or acceptable geocode, the currency of the feature must be questioned as some records do appear to be obsolete or contradictory.

This data is now exclusively reported within the 'Post Offices' class of the 'Household, office, leisure and garden' category of the 'Retail' Group (09480763):

- Authoritative source of Post Offices.

LANDSCAPE DATA

The principal supplier of landscape data is Ordnance Survey. This provider shares a common provenance for both features, describing the landscape – based upon Ordnance Survey Land-Line and its successor, OS MasterMap® – and those describing trigonometric points. However, an additional PointX provenance offers a number of features sourced from Land-Line but further researched to allow the reporting of a structured address or a more contextual feature name.

ORDNANCE SURVEY (LAND-LINE/OS MASTERMAP)

Ordnance Survey Land-Line (and selected information from OS MasterMap) is used as the basis for a wide range of primarily non-postal address features, numbering just over 1.8 million records.

This Great Britain-wide source of data allows features as diverse as natural arches, waterfalls, ponds, lakes, electricity substations, letterboxes, lay-bys, public toilets, allotment gardens, cemeteries, stone circles, burial mounds, airfields, lych gates, commons, quarries, statues, fords, pylons, tennis courts and shooting ranges, to name but a few, to be included within Points of Interest.

The grid reference that is assigned is usually based on the positioning of the text string denoting the feature on the 'background' Land-Line mapping, and so this may not absolutely correspond to its position on the ground. As a feature can be shown by multiple text instances, it is possible for there to be duplication within this data, although de-duplication exercises have been performed to minimise this. Also, as the text strings can be very variable, it is very difficult to extract all valid instances required within Points of Interest, correctly.

Teams of surveyors continually update these detailed data; however, the PointX holding is based on snapshots and this has been subject to minimal maintenance, although what has been extracted is periodically de-duplicated against other data supplies where there is known to be a possible overlap. Some of the features in these snapshots could also have been out-of-date at the time of the snapshot as revisions were biased towards certain types of features. From the nature of the text string, PointX was able to classify what type of feature the string belongs to at a very granular level.

Elements have been replaced with extractions from OS MasterMap, the product superseding Land-Line, and over time, it is hoped more can be improved via this route.

There is no information to accompany the text string apart from its grid reference, so no address details are reported, although since the December 2010 release, all records will be assigned a geographic county and outbound postcode by PointX based upon their easting and northing.

As the range of features extracted is so wide, it is, therefore, not surprising that data with this provenance may be found throughout the classification system, with particular emphasis on the 'Transport', 'Public infrastructure', 'Manufacturing and production' and 'Attractions' Groups.

Only features that were believed to not significantly overlap with an alternative, definitive, bespoke supplier were extracted, in an effort to minimise duplication within Points of Interest:

- Main source of landscape features although potentially seriously out-of-date. Should be used to supplement other provenances when they are not definitive.

ORDNANCE SURVEY (TRIGONOMETRIC POINTS)

The second provenance reported as Ordnance Survey is the definitive dataset of trigonometric (trig for short) points across Great Britain, numbering just over 6 000 in total.

Trig points are very accurately surveyed and form the backbone from which mapping is produced in Great Britain's mapping system, so they are provided to PointX with very accurate geocodes.

The supply provided in January 2003 is the last available one, so although these are not susceptible to much churn, there will be, over time, more scope for the PointX holding to not reflect the reality of this dataset. Ordnance Survey does hold other information on the trigonometric points, such as their height and condition. All records are held in the 'Attractions' Group, 'Landscape features' category in the 'Trigonometric points' class (03190259):

- Definitive source for this type of information.

POINTX

Land-Line data was also further intensively processed by PointX and may be reported with a 'PointX' provenance. Specific types of feature that have been supplemented include places of worship, bowling greens, banks and government offices. In such instances, it has been possible to report a structured address or incorporate more context information into the name reported for a number of these records.

TRANSPORT INFRASTRUCTURE

DEPARTMENT FOR TRANSPORT

The first is the National Public Transport Access Nodes database (NaPTAN**)**. This is being collected nationwide for all transport access points with a domestic destination (so will not include any access points that are exclusively for international destinations). All of these records get reported in classes in one of the following categories in the 'Transport' Group: Public transport, Stations and infrastructure or Bus transport.

All bus stop and limited taxi rank information is available and has been loaded into Points of Interest, as well as train stations, ferry points and tram and metro stations/stops.

Over 355,000 bus stop records are exclusively reported within the existing 'Bus stops' class and almost 15,000 in the 'Hail and ride zones' class.

In the 'Hail and ride zones' class, a geocode is provided that is believed to fall within the extent of the zone. As this is a point it obviously does not equate to all of the absolute instances within the zone where a bus can be caught; however, is representative of the zone as a whole.

The NaPTAN dataset is promoted as being a definitive source of public transport access nodes and is regularly updated at a local level so as to be as current and comprehensive as can be practically expected. The database has been produced by the Department for Transport for use in journey planning applications.

PointX accesses the NaPTAN holding on a quarterly basis in step with the current release order generation regime so as to offer the best currency data. It is the intention that each refresh should be available within PointX no later than two months from when it was accessed.

There is a reasonable amount of churn within this data supply.

Geocodes are provided as a part of the supply to PointX and reported by PointX as are. It is believed that these geocodes have been collected using GPS so they should be accurate to within a few metres. However, as PointX is unable to guarantee that the TOID represented by the reported geocode relates to the bus stop itself, no TOID value or version is shown within Points of Interest.

The NaPTAN dataset replaces any previously reported train station information sourced from Ordnance Survey Land-Line.

Taxi ranks – that is, hackney carriages – were not previously available within Points of Interest so those available now are reported within the 'Taxi ranks' class. The current population is incomplete and only covers certain regions of taxi ranks, currently numbering just over 850 nationwide. As NaPTAN does not have an ongoing programme to collect all taxi ranks, this holding will either need to be supplemented, given a 'health warning' or removed, as deemed appropriate.

With the volume of data being collected, the odd anomalous record is to be expected, but on the whole, the quality of this information appears good.

The SMS number for each bus stop is held within the NaPTAN database and is reported as qualifier data in Points of Interest:

- Definitive source for types of transport access points within its main remit.

DEPARTMENT FOR TRANSPORT (PARKING)

The second dataset provided by Department for Transport (DfT) is one of car parks. To help differentiate between this data from the NaPTAN data, it is reported with a provenance of 'Department for Transport (Parking)'.

Initiated in 2007, the car parking collection program by DfT has progressed, so the number of instances from this provider is fairly stable at over 21,500 records, although this number could creep up over time.

DfT has approached local authorities and commercial car park operators in order to produce what is hoped to be a definitive holding of car parks for Great Britain. This information is being used for transport provision, planning and analysis purposes. Records are provided with accurate geocodes that generally relate to a point centrally within the car park's extent, descriptive addresses and full specific car park name. It does; however, appear that only certain types of car park will be in this holding. As a few operators have not as yet provided information, this source is not yet complete. PointX aims to report this source over other car parking sources where instances coincide and will supplement this holding from other sources it has available to it. Updates of the DfT supply are received on a quarterly basis:

- The most complete and information-rich source of car parking information in Points of Interest.

TRANSPORT FOR LONDON®

London Underground® (Transport for London) has provided every station on the London Underground system.

The data is provided to PointX as a series of geocodes for station entrances and ticket halls.

This dataset is known to hold all London Underground stations and entrances with their definitive names, and is used by London Underground internally to represent its holdings.

It is not known how the data is collected, but being sourced from the operating body is assumed to be comprehensive and accurate.

Change within the holding is likely to be very small, so the data is only going to be updated annually, with any changes being reflected within two months of receipt.

Limited other information is provided but is not reported within Points of Interest.

Station records are reported within the 'Transport' Group in the 'Public transport, stations and infrastructure' category as 'Underground network stations' class (10570761) and the entrances in the 'London Underground entrances' class (10570794):

- Definitive source for stations and their entrances on the London Underground network.

SPORTING INFORMATION

THE SPORTS COUNCIL FOR WALES®

This information, on sporting facilities within Wales only, is those facilities that are registered with The Sports Council for Wales and accessible to the general public. These are typically at schools and sports centres and although obviously not comprehensive, do appear to give a good representation of facilities.

There are nearly 900 activity locations that relate to over 500 facility locations.

The data is believed to be used by the council for provision of funding, but their capture and maintenance methodologies are unclear.

Data is provided with a much-generalised grid reference and fairly poor address, neither of which can be reported without further enhancement by PointX.

Given that multiple activities may be undertaken at a given location as provided by the Sports Council, each are assigned the same grid reference.

The type of facility is well differentiated, however, and gets reported by PointX in the classes within the 'Sports complex' category of the 'Sport and entertainment' Group.

Updates are received six-monthly, as the change in the data is quite small and these are implemented within two months of receipt. Other information regarding the facilities is held by the provider:

- Good provenance for most sporting facilities within Wales.

SPORT SCOTLAND

This dataset encompassing Scotland only describes those sporting facilities that are registered with Sport Scotland and are accessible to the general public. Again, these are typically schools and sports centres.

There are over 10,000 activity locations that relate to around 6,000 facility locations – these are not absolutely comprehensive but appear to be almost so. The data is believed to be used for provision of funding but their capture and maintenance methodologies are unclear. The data does appear to be better maintained than that for the Sports Council for Wales.

Although reasonable grid references are supplied, these are not always present or of sufficient quality for use within Points of Interest, around 6,100 instances get reported, so these are derived based on the location (again all facilities at that location should have the same grid reference assigned by PointX). Supplied address information is also inconsistent so is enhanced by PointX where possible.

The supplied classification is very granular and all records with this provenance will be reported in classes within the 'Sports complex' category of the 'Sport and entertainment' Group.

Updates are received six-monthly as there is some change in the data and these should appear within the Points of Interest database within two months of receipt.

Other information on the facilities is held by the provider:

- Good provenance for most sporting facilities within Scotland.

SERVICE AREA INFORMATION

The following provenances supply information on service areas that have been used to populate the 'Restaurants' class (01020043) in the 'Eating and drinking' category in the 'Accommodation, eating and drinking' Group. It should be noted that the more generic 'Motorway service stations' class (10540735) is populated using the PointX provenance mentioned earlier.

Updates tend to contain few changes, are received six-monthly and are incorporated into the Points of Interest database within two months of receipt.

All of the providers hold additional information on the sites and these include phone numbers and managers' names.

No grid references are supplied and the raw addresses are not always absolutely correct and so both are enhanced by PointX. The data is held by the suppliers to help them manage their holdings and can be taken as being definitive for each brand concerned. It is believed that these constitute the majority of instances for such features, viewed primarily as roadside eateries.

MOTO®

This is information on all (just over 40) of the Moto motorway service area establishments throughout Great Britain.

WELCOME BREAK® GROUP LIMITED

This is information on all (currently just over 30) of the Welcome Break motorway service area establishments throughout Great Britain.

ROADCHEF® MOTORWAYS LIMITED

This is information on all (currently just over 25) of the RoadChef motorway service area establishments throughout Great Britain.

LITTLE CHEF®

This is information on both the roadside and motorway Little Chef locations, numbering less than 80 throughout Great Britain:

- These are definitive provenances for each of these brands.

COURT INFORMATION

There are two niche suppliers of court information that are updated annually, as the amount of change within the data is small.

Information is incorporated into the Points of Interest database within two months of receipt.

The vast majority of datasets get reported in the 'Courts, court services and tribunals' class (06330409) although a few records from The Court Service are included within the 'Solicitors, advocates and notaries public' class (02090154); the former class falls within the 'Central and local government' category of the 'Public infrastructure' Group, whilst the latter within the 'Legal and financial' category of the 'Commercial services' Group.

The suppliers hold other information on the courts.

PointX both enhances the supplied address information and determines a grid reference for each record.

SCOTTISH COURT SERVICE

The Scottish Court Service provides just over 50 records covering the courts in Scotland only. This is data used on the Scottish Courts website and is comprehensive. De-duplication does reduce the number of instances that get reported from this provenance significantly:

- Good provenance for courts within Scotland.

THE COURT SERVICE

The Court Service supplies information on over 300 Crown and county courts from throughout England and Wales and over 200 magistrate's courts. Also included is a mix of other information (Immigration Appellate Authority, Tribunal and Probate Registry locations) from across the whole of Great Britain. This data is used on the Court Service website. Any coincident Market Location Crown court instances will report over those entries from The Court Service; just over 400 instances end up being reported from this provenance:

- Good provenance for Crown and county courts in England and Wales.

ATTRACTION INFORMATION

There are a series of suppliers of attraction information.

HISTORIC HOUSES ASSOCIATION

The Historic Houses Association supplies a complete listing of over 1000 properties from across Great Britain that are open to its members and the paying public. Information is provided both as a booklet and on its website and these are used alternatively six-monthly for updates as the data is fairly static. Much additional information about each of the properties is also held.

As the grid references provided are not suitable for reporting within Points of Interest, these are generated along with structured addresses where possible.

Detailed descriptions and keys as to the type of facility allow records to be mapped at a granular level to classes within the 'Botanical and zoological' and 'Historical and cultural' categories within the 'Attractions' Group.

Information is incorporated into the Points of Interest database within two months of receipt:

- Definitive source of information for this organisation's membership; however, not a comprehensive holding of heritage-type properties.

ASSOCIATION OF SCOTTISH VISITOR ATTRACTIONS

This is a listing of all of the Association of Scottish Visitor Attractions members, currently numbering over 450, although as some are duplicated by other supplies, the number getting reported from this source in Points of Interest is just over 300.

These are primarily tourist attractions from throughout Scotland that are reported in classes across the 'Attractions' Group, although there are also other classes represented such as 'Business-related consultants' (02040064) and 'Gymnasiums, sports halls and leisure centres' (04240293).

All records have to be mapped to a Points of Interest class manually using the name of the feature as a guide, as no supplier classification is provided.

Other details are held by the supplier, such as contact names and telephone numbers.

Change in the data is small, so updates are only processed every six months and these will be in the Points of Interest database within two months of receipt.

PointX both enhances the supplied address information and determines a grid reference:

- Useful provenance for attractions within Scotland but not definitive.

VISIT BRITAIN

Visit Britain previously supplied two types of data to PointX. This was accommodation and attraction information. Accommodation data reporting using this provenance has been completely removed from the March 2013 release onwards. Data was provided by each of Visit Britain (England), Visit Britain (Scotland) and Visit Britain (Wales).

The information was used by Visit Britain to promote tourism both through attractions to visit and places to stay. The data holding provided does contain anomalous address and name information and although geocodes were provided, these are often misleading or incorrect. As a result, PointX attempts to geocode records and will not use the supplied geocodes. It is not always possible to pinpoint the required location from the supplied address so some records do not get reported in Points of Interest. Other more detailed information on the features was held by Visit Britain, which is either not supplied to, or used by, PointX.

For the March 2012 release and since, PointX ranked this supplier for reporting behind any coincident supplier of the same information as the data was not actively being maintained (Visit Britain became obsolete). Since late 2012 PointX sought to actively remove or replace Visit Britain records with a view to switching off the provenance fully during 2013.

ATTRACTIONS

The Visit Britain attraction holding for England was nearly 4,000 records, Scotland almost 1,000 and Wales around 300 records.

The majority of records appear in the 'Attractions' Group, as would be expected; however, odd entries can also be found in the 'Sport and entertainment', 'Public infrastructure', 'Manufacturing and production', 'Retail' and 'Transport' Groups.

Records will have their names followed by the text 'Visit Britain Assessed' when they had been assessed by Visit Britain, and will have no following text when they have not been formally assessed.

Visit Britain data was previously updated on a six-monthly basis. There was likely to be a reasonable degree of churn, especially in the accommodation holding:

- Was a good source of a wide range of accommodation and attraction information but as it is not actively being maintained it is being phased out.

NATIONAL TRUST FOR SCOTLAND

This supply is a complete listing of the nearly 80 properties and land holdings from across Scotland open to the National Trust for Scotland membership and to the paying public.

The information is used in the National Trust for Scotland membership booklet and website and a lot of additional information on the entries is also supplied but not reported.

Provided location information tends to be descriptive and with some entries being land holdings, including groups of islands, it is difficult to geocode all records supplied accurately.

As the data holding does not change much, an annual update is performed and this will be in the Points of Interest database within a month of receipt. Records are individually classified by PointX, as no supplier classification is supplied. These are all currently to classes within the 'Botanical and zoological', 'Historical and cultural' and 'Landscape features' categories within the 'Attractions' Group.

National Trust for Scotland properties may also be supplied by trade suppliers and these instances can be reported in preference so care should be taken if provenance is used to produce a definitive holding:

- Definitive provenance for this organisation's holding but again not comprehensive for heritage type locations in Scotland.

ROYAL SOCIETY FOR THE PROTECTION OF BIRDS®

The Royal Society for the Protection of Birds (RSPB) provides information on the over 180 bird reserves that this wildlife conservation charity maintains across Great Britain.

The information is used to produce a members' booklet and for use in the RSPB website and a lot of additional information is available for each reserve; this is not reported by PointX.

All records are reported in the 'Bird reserves, collections and sanctuaries' class (03160232) in the 'Botanical and zoological' category in the 'Attractions' Group.

Polygons were supplied to PointX, which were then converted to a representative grid reference, assigned, where possible, to the reserve's visitor centre or car park or, failing that, centrally within the site.

Because this dataset is very static, updates are only being performed annually and should be reflected in the Points of Interest database within two months of receipt:

- Definitive provenance for this organisation's holding but not comprehensive for all bird reserves and sanctuaries.

OPEN PLAQUES

Open Plaques is a community based project started in 2009 which documents and promotes commemorative plaques with a remit to get the information widely distributed and re-used. Within Great Britain there are almost 9,000 instances.

Reported plaques typically commemorate people or events to a specific location with any that are general and not denoting anything specific, or relate to people or events with no connection to the vicinity of the plaque, being excluded. More information can be found on their website at www.openplaques.org.

The March 2015 PointX release was the first to include Open Plaques and as there are no believed duplicates within this holding, or any overlap with other existing suppliers, all positional accuracies get reported. Records are only reported in the "Unspecified and Other Attractions" class 03200269 and the type of plaque if known, or "Not Specified" if not, is reported in the "Qualifier Data" field. The initial release has erred on the side of caution as to how accurate the supplied geocodes are until we are able to validate them although many are actually very good. Ongoing it is the intention to improve the grids and better structure the reported addresses as time allows.

- Definitive single provenance for commemorative Plaques

OTHER ORGANISATIONS PROVIDING INFORMATION

NATIONAL ASSOCIATION OF CITIZENS ADVICE BUREAUX

This information covers over 1,500 National Association of Citizens Advice Bureaux locations from across England and Wales, although only just over half of these end up getting reported from this provenance in Points of Interest.

The organisation does not appear to have any centres in Scotland. Information is used in the National Association of Citizens Advice Bureaux website and other details are held on each of the offices but not reported within Points of Interest.

All of the records that get reported are in the 'Counselling and advice services' class (05290358) in the 'Health support services' category of the 'Education and health' Group.

As the centres are usually quite distinctive, it has been possible to allocate accurate grid references and structured addresses to the vast majority of records.

Change in the data holding is quite small, so updates are only performed six-monthly – with them appearing in the Points of Interest database within two months:

- Definitive provenance for this organisation's holding.

DRIVING STANDARDS AGENCY®

This supply of information covers both practical and theory driving test centres. There are nearly 150 theory centres nationwide and over 400 practical test centres. Practical test centres are broken down into type, with the overwhelming majority being ordinary practical test centres, although there are odd Long Goods Vehicle and Ministry of Defence® (MoD) practical test centres provided as well. From the December 2012 release the test centre type will be shown as Qualifier information.

All records from this provenance will be reported in the 'Driving test centres' class (06330411) in the 'Central and local government' category of the 'Public infrastructure' Group.

It has been possible to allocate accurate grid references and structured addresses to nearly all of the provided records. As a centre is often likely to perform both a practical and a theory test function in many instances, and within the current classification system in place no differentiation is made between the two types, de-duplication is enforced so that only a single record will be reported at each location.

The holding is believed to be used by the Driving Standards Agency both for internal management and public service provision purposes.

Update supplies are received on a six-monthly basis and will be reflected within the Points of Interest database within two months of receipt:

- Definitive holding of this type of information within Great Britain.

BRITISH WIND ENERGY ASSOCIATION

The British Wind Energy Association (BWEA) is the trade and professional body for the UK wind and marine renewables industries. Its UK Wind Energy Database (UKWED) is the most definitive database on wind energy projects in the UK. Points of Interest reports turbines where they are known to have been built and their location verified and wind farms where a site can be identified. Should a site only be at the planning or consented stage then PointX will not include it.

Nationwide, there are over 450 sites and over 3,500 individual turbines although these numbers are increasing year on year. Not all of these end up being reported; however, all records from this provenance that do will be reported in the 'Energy production' class (07410534) in the 'Industrial features' category of the 'Manufacturing and production' Group.

All reported records will have meaningful grid references with turbines being absolute whilst sites will be at a reasonably central location. Turbines and sites will coexist where both have been identified. Individual turbines will have the name of the site followed by 'Turbine' whilst those instances relating just to the site itself will just report the site name.

The database is believed to be used by the BWEA both for internal management and public promotion and education purposes.

Update supplies are received on a six-monthly basis and will be reflected within the Points of Interest database within two months of receipt:

- Definitive holding of this type of information within Great Britain.

PAYPOINT®

This dataset has just over 26,000 entries, of which almost 25,500 cover Great Britain. The records relate to locations where payment of bills and services and prepayments for mobile telephones and energy meters can be made. All records from this provenance are reported in the 'PayPoint locations' class (02090811) in the 'Legal and financial' category in the 'Commercial services' Group.

PayPoint provides grid references that PointX report, although as a few could be improved upon, PointX is doing this where practical. As a payment site is often likely to perform a wider retail or service function, efforts have been made to prevent removal of PayPoint records where possible, although odd instances have been removed as they appear to be duplicates in the raw supply. The holding is believed to be used by PayPoint both for internal management and marketing purposes.

Update supplies are received on a six-monthly basis and will be reflected within the Points of Interest database within two months of receipt:

- Definitive holding of this type of information within Great Britain.

EMERGENCY SERVICES INFORMATION

PointX is supplied with information from each of the emergency services for ambulance, fire brigade and police stations. This numbers around 150 suppliers in all, and each authority, brigade, service or constabulary will cover a specific area and be mutually exclusive for the type of emergency service being reported. These suppliers combined should be definitive for this type of information and cover all of Great Britain.

The number of records from individual suppliers will vary depending on their coverage, from a handful to over a hundred. In total, there are just over 1,100 ambulance stations, just under 2,000 fire stations and just over 1,500 police stations reported.

Ambulance stations are reported in the 'Ambulance services' class (05290356) of the 'Health support services' category within the 'Education and health' Group, fire stations in the 'Fire brigade stations' class (06330414) and police stations within the 'Police stations' class (06330422), both classes falling in the 'Central and local government' category within the 'Public infrastructure' Group.

Each of the providers of information will hold additional information on the stations and the data is held for public information purposes.

As the station information does change somewhat over time, individual updates are performed on an annual cycle and should appear within the Points of Interest database within two months of receipt (often much less).

In practice, each supplier tends to provide information at a different time of year so within any single month, there is likely to be some change occurring to the Points of Interest database for this type of information.

Provenances include Avon and Somerset Constabulary, Scottish Fire and Rescue Service and East of England Ambulance Service to name but three.

PointX both enhances the supplied address information and determines a grid reference:

- Combined provenances produce a definitive source for this type of information.

PAYPHONES (INCLUDING TELEPHONE BOXES)

UK PAYPHONE DIRECTORY

UK Payphone Directory, formerly known as Komtel, provides just under 90,000 payphones from across Great Britain. This is believed to encompass all of the major networks and is, therefore, almost definitive.

UK Payphone Directory sold the data as a business so it was actively maintained up until late 2012 when in effect the database was suspended, primarily as no new phone boxes were being installed. There was previously a lot of churn so updates were processed quarterly by PointX. Updates had appeared within the Points of Interest database within two months of receipt.

The data is provided with descriptive locations, which are reported in Points of Interest as non-compliant addresses. These can include spelling mistakes and anomalies; however, are deemed useful by indicating where the payphone is. Geocodes are provided by UK Payphone Directory but as these are of varying quality, and are often wrong, PointX needs to generate geocodes for reporting. All payphones that are part of a bank of payphones should be reported with the same descriptive location and geocode information.

The name of the payphone or call box is reported only as 'Public Telephone'. However, where a valid match can be made for payphones falling within buildings with a postal address, the geocode assigned will be that of the building seed.

It is possible that some payphones given will have restricted access, as they are located within workplaces.

The UK Payphone Directory data is used to exclusively populate the 'Public telephones' class (06340460) in the 'Infrastructure and facilities' category within the 'Public infrastructure' Group.

From December 2004 onwards, payphones can report street- or locality-level positional accuracies:

- Only provenance for this type of information.

WIFI HOTSPOTS

BT OPENZONE®, O2 LIMITED® AND THE CLOUD®

These three suppliers provide instances of WiFi enabled locations across the UK; these range from cafes, hotels, sports facilities and offices to payphones. First supplied only by BT Openzone for the March 2008 release, when there were just over 10,000 instances, the supply is now split between the three suppliers with BT Openzone reporting almost 5,000 instances, O2 Limited just over 4,500 and The Cloud nearly 10,000.

Different service providers are included in the data and features will have been reported with names that incorporate this in the format of 'WiFi Hotspot (*Service Provider*)' where *service provider* will be 'The Cloud', 'T-Mobile UK', 'BT Openzone', 'iBAHN' and so on, as appropriate.

BT Openzone, O2 Limited and The Cloud data is used to exclusively populate the 'WiFi hotspots' class (06340802) in the 'Infrastructure and facilities' category within the 'Public infrastructure' Group. This is believed to encompass the major networks and is, therefore, reasonably complete.

Information is sourced either from websites or email updates and is used to promote WiFi as a facility by these providers. It is updated within Points of Interest on a quarterly basis where we are able to get updates from each supplier.

PointX is able to allocate structured addresses for many instances, although duplicates in the supply have been removed on receipt and those relating to mobile locations, for example, on a train, have not been captured.

As we believe duplicates have been removed and no other supplier of such information is used, WiFi hotspots can report street- or locality-level positional accuracies for them in it:

- Only provenances for this type of information.

CASH MACHINES

VOCALINK

This is a supply of over 67,000 automatic teller machines (ATM) or cash machine locations covering all of Great Britain and is received by VocaLink from the various members in its network.

It is believed that there are a few ATMs not on the VocaLink network. However, this source is the most comprehensive available, with the majority of ATMs being present.

As there are various contributors of information to VocaLink, the quality of data provided to PointX does vary considerably, depending on the original source. However, VocaLink makes every effort to standardise and raise the quality of its data.

It also appears that in rare instances, two different members operate and can provide information on the same ATM to VocaLink.

There is quite a lot of churn in this dataset so updates are processed quarterly in line with PointX releases and should appear in the Points of Interest database within two months of being received.

Potentially, obsolete records could be included, as although monitoring of ATM usage is carried out, they often fall within buildings subject to refurbishment, with ensuing barring of access to the public for periods of time, and so this is not used as a reason to remove records.

Although no grid references are provided, the addresses supplied are generally of a high enough quality to allow the ATM to be located to the correct building.

ATMs are similar to payphones in nature, in that they often occur in groups and can be situated within buildings. PointX has processed the ATMs in a similar manner, allocating the same grid reference where possible to each machine in a grouping – this geocode is often at the building seed of the building within which the ATM is situated.

The name reported is now of the format 'Cash Machine (Institution)'. The 'Institution' part is the name of the organisation running this part of the LINK network.

VocaLink also holds additional information for each ATM including, amongst other things, public accessibility which is reported as qualifier information by PointX.

All ATM data provided by VocaLink is reported in the 'Cash machines' class (02090141) of the 'Legal and financial' category within the 'Commercial services' Group.

VocaLink data has to be removed from any PointX supply to companies on the VocaLink house accounts list, unless express permission to supply it is agreed.

From December 2004 onwards, cash machines can report street- or locality-level positional accuracies, ensuring all ATM's get reported:

- Required provenance for this type of information but not completely comprehensive.

HEALTH INFORMATION

NHS® CHOICES®

This is the provenance that is reported for NHS instances of Parenting and childcare services and a few Counselling and advice services, classes 05280809 and 05290358, in England.

BEECHWOOD HOUSE PUBLISHING LTD

Possibly better known by their Binley's brand name, Beechwood House Publishing Ltd provides information on health-related facilities.

Their supply includes hospitals, clinics, health centres, medical and laboratory pharmaceutical wholesalers, chemists and pharmacies, dentists, doctor's surgeries and health authorities. Coverage does not include individual doctors although these can often be supplied alongside the practice name.

As a bespoke supplier of this type of information it is believed to be comprehensive, with over 51,000 records covering the whole of Great Britain. Preferred supplier implementation means that where a record from this supply would previously have been masked from reporting by a trade supplier record that it will now be reported in preference although some records are de-duplicated within the supply itself.

The data is actively maintained and sold as a service by Beechwood House Publishing Ltd and it holds much extra information on the facilities concerned. Telephone number information can be provided for records from this provenance.

The provided addresses can be variable in quality. However, as the features being reported are often distinctive, it has been possible for PointX to geocode the majority accurately and to provide structured addresses for most records.

Often, individual departments within a hospital are provided with the same locational identifier. In such instances, records are geocoded by PointX to a central location and all such departments within a hospital will be de-duplicated in version 2 data. The only exception to this is to allow hospitals to report as both a general hospital and an accident and emergency facility when both functions are present.

Records are primarily reported in the classes within the Health practitioners and establishments category in the Education and health Group.

There is a reasonable amount of churn within the data so updates are processed quarterly and will appear in the PointX database within two months of receipt.

- Preferred provenance for most types of health facilities, believed to be reasonably comprehensive.

EDUCATION INFORMATION

DFES

This is actually sourced from the government bodies responsible for education provision in Great Britain – National Assembly for Wales, DfES and the Scottish Executive. The reported provenances will be 'Welsh Assembly Government' for records in Wales, 'Edubase' for those in England and 'Information and Analytical Services Division – Education Department' for those in Scotland.

Totalling around 29,000 records, this is the authoritative source of compulsory school-age educational establishments, as it is produced and maintained by the relevant education authority for reporting on, and provision of, educational activities.

The first release of Points of Interest to contain this data was in September 2007 and updates are processed on a six-monthly basis.

Raw information from these suppliers is generally good, although some addresses do need to be tidied up. A lot of further information is held by DfES on features; however, this is either not received, or is not used by PointX.

Records will primarily be reported in the 'Primary, secondary and tertiary education' category with some also in the 'Education support services' category:

- Preferred supplier for compulsory school-age educational establishments.

CUSTOMER FEEDBACK – POTENTIALLY ALL DATA TYPES

POINTX

This PointX-collated Points of Interest holding is being built up over time to hold information requiring reporting as a result of customer feedback.

To date, when customer feedback is received by PointX, the information provided can be implemented in a limited number of ways.

It might have been that non-reported information was actually held but at a sufficiently poor positional accuracy so as to preclude inclusion within the product. In such cases, feedback information utilising local knowledge could allow sufficient positional accuracy improvement to allow subsequent inclusion.

If a feature was missed, that is, missing from an existing data provider's supply but was felt that it probably should have been included – the supplier would be informed of the omission and the record could then be received in subsequent supplies.

Alternatively, in some instances, if text was available within Land-Line that could be used to identify the missing feature, then a record with a PointX Land-Line provenance could be generated.

However, certain non-reported instances, either as a consequence of the PointX de-duplication routines (despite the fact that the feature may possess sufficiently good positional accuracy) or the lack of an existing mechanism to enable the generation of a record may conspire to make ultimate inclusion within the product difficult.

This provenance is intended to allow feature reporting from either scenario. The number of records allocated to this provenance depends upon both the level and type of customer feedback that is received. Such feature generation fully exploits the local knowledge that some PointX customers are undoubtedly able to offer.

This dataset can additionally be populated by the results of any missing entity identification that PointX itself is able to perform, with the research required for feature creation being undertaken in-house.

Once records have been assigned to this provenance, it is expected that they will be reviewed on the annual anniversaries of their creation to confirm that the details presented remain valid.

Records reported bearing this provenance have the potential to be drawn from across the complete spectrum of the Points of Interest classification system, although initial entries are concentrated primarily from within the 'Accommodation, eating and drinking', 'Attractions', 'Commercial services', 'Retail' and 'Transport' Groups.

OVERLAPS

As can be seen from the brief backgrounds on each provenance given above, there are ones that either do not overlap at all or do so to a lesser or greater degree. Some of these overlaps are at a class resolution whilst others are nearer the dataset level. Obviously there is some overlap between trade suppliers and more niche suppliers of information in the health and education areas especially, but there can also be regional overlaps, so for example, golf courses can be duplicated nationally between 118 Information and regionally with Sport Scotland and Sports Council for Wales.

This is also true at a Points of Interest class level, where 'Books and maps' (09480674) can be supplied by 118 Information and The Education Company. 'Historic buildings including castles, forts and abbeys' (03170244) can be supplied by National Trust for Scotland, 118 Information, Historic Houses Association, Association of Scottish Visitor Attractions, Visit Britain (one of England, Scotland or Wales), PointX and Ordnance Survey. As this last example includes both different types of historic buildings and regional provenances the overlaps will vary considerably.

PointX's data reporting of duplicates has been minimised; however, as a result, many – and potentially, in some cases, all – of a provenance cannot be included.