Developer documentation and tools

Open Referral UK Data Standard Guidance

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Version 1.0 This will be the version when it is finalised in March 2020.

Introduction

This document provides guidance on using the Open Referral UK data standard for locally delivered services.

It is the successor to the Local Government Association's (LGA's) comma separated values (CSV) schema developed by iStandUK and published published on LG Plus in February 2017. It constitutes the official schema developed in partnership by the LGA, iStandUK and partners involved in the Local Digital OpenCommunity programme.

The Standard conforms to and extends the international Open Referral standard.

Purpose

Open Referral UK defines the structure of data expected in interfaces between standards compliant software. It also gives ranges of expected values for some fields.
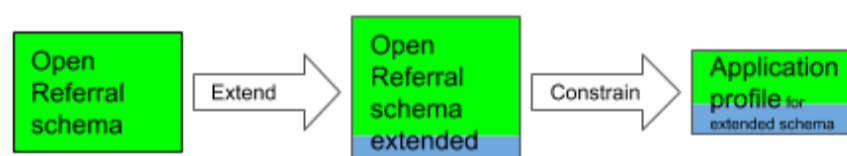
The standard determines the structure of responses to application programming interface (API) web methods that return service and related data. The API is defined here.

Design Principle for Open Referral UK

The standard provides for recording sufficient data to be able to identify a small target set of services that closely meet the needs of a prospective service user, as given by the user's location and circumstances.

Open Referral UK and Open Referral

The OpenReferral schema defines a structure for human services data - that is, a directory of services that meet human needs. Open Referral UK *extends* Open Referral to support richer data where needed. It then *constrains* the resultant schema by means of an *application profile* which says what fields are recommended for English use and what external vocabularies to reference.
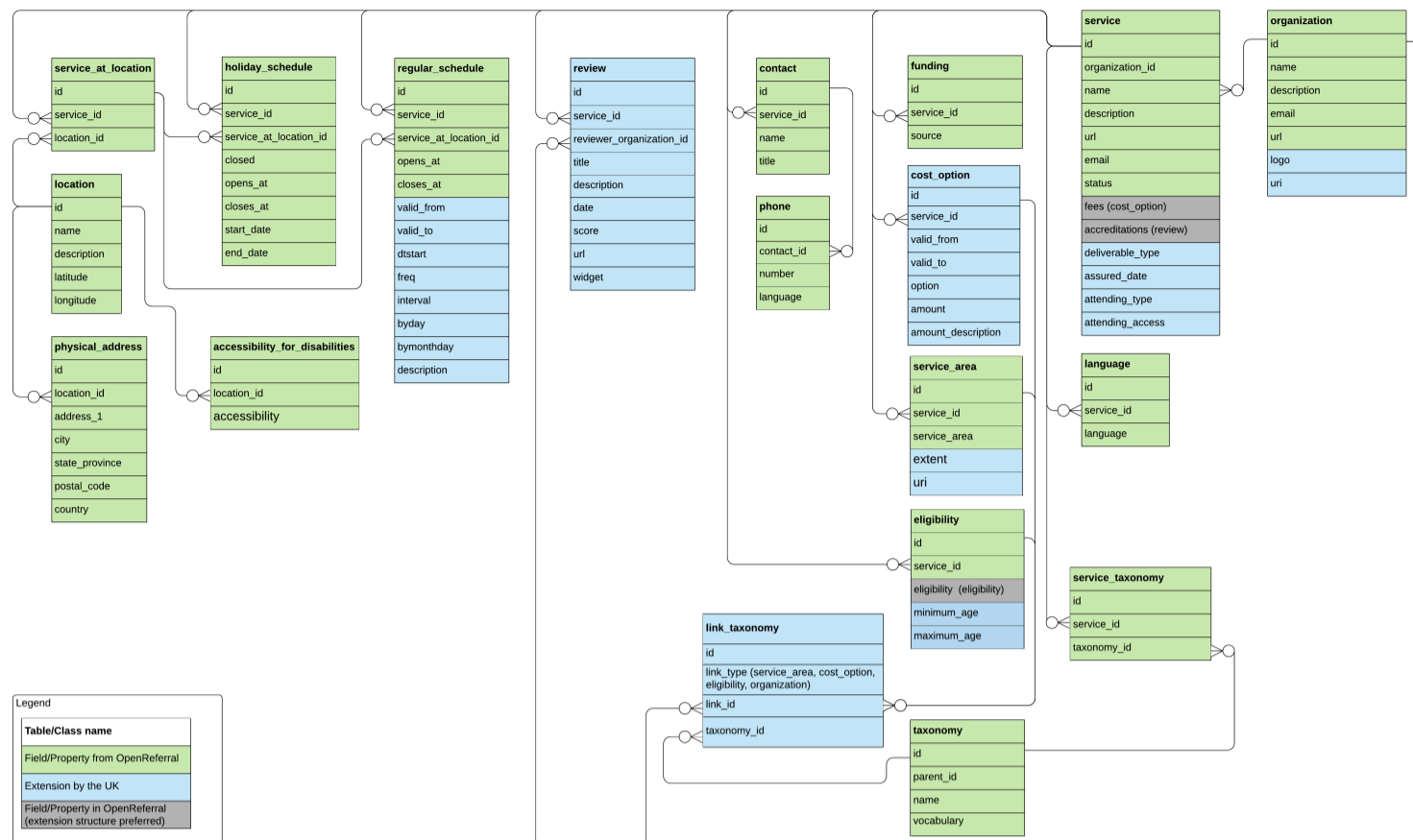

The application profile reflects user needs identified by LGA work with pilot councils and proposed changes recommended by OpenCommunity discovery work. The document Community Services Data as an Application Profile of Open Referral assigns MoSCoW (Must, Should, Could, Won't) prioritisations to the proposed changes.

The standard defined here reflects LGA findings combined with some "Must have" changes recommended by OpenCommunity. Further recommendations will be incorportaed in later releases in line with feedback from people implementing the standard. Issues and proposed changes are logged in the Github Issues list.

This Entity Relation Diagram shows the structure of data, distinguishing parts of the core Open Referral standard used from extensions introduced for Open Referral UK.

[Open a high-resolution version of the raw image in a new tab](#)

Data structure

The Open Referral UK standard is defined [here in JSON format](#) compliant with the [Open Knowledge Foundation's tabular data package format](#).

It comprises:

- Tables, which may also be seen as classes in a data structure
- Table fields, which may be seen as class properties

Service directories supporting the standard may keep their data in the structure given or may just transform it to that structure for API requests. The tabular data package format can also be used for bulk import/export between directories.

Each table and field is described below.

Open Referral UK Application Profile for Human Services Data

A specification of the Open Referral standard for Human Services as extended by OpenCommunity and Local Government Association work in the UK. Includes an Application Profile for use with English services.

organization

The organization record is used to provide basic description and details about each organization delivering or reviewing services. Each service should be linked to the organization responsible for its delivery. One organization may deliver many services. Note that the LGA extension table 'link_taxonomy' enables many taxonomy terms to associated with an organization. These can define the type of organization e.g.

- charity
- voluntary group
- local authority

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string (uuid)	Open Referral field used in application profile	Each organization must have a unique identifier.	-	True	True
name	string	Open Referral field used in application profile	The official or public name of the organization.	-	True	False
description	string	Open Referral field used in application profile	A brief summary about the organization. It can contain markup such as HTML or Markdown.	-	True	False
email	string (email)	Open Referral field used in application profile	The contact e-mail address for the organization.	-	False	False

url	string (url)	Open Referral field used in application profile	The URL (website address) of the organization.	-	False	False
logo	string	Extension for LGA	A URL to an image associated with the organization which can be presented alongside its name.	-	False	False
uri	string (url)	Extension for LGA	A persistent identifier to uniquely identify the organization.	-	False	False

service

Services are provided by organizations to a range of different groups. Details on where each service is delivered are contained in the services_at_location table.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string (uuid)	Open Referral field used in application profile	Each service must have a unique identifier.	-	True	True
organization_id	string	Open Referral field used in application profile	The identifier of the organization that provides this service.	-	True	False
name	string	Open Referral field used in application profile	The official or public name of the service.	-	True	False
description	string	Open Referral field used in application profile	A description of the service. It can contain markup such as HTML or Markdown.	-	False	False
url	string (url)	Open Referral field used in application profile	URL of the service	-	False	False
email	string (email)	Open Referral field used in application profile	Email address for the service	-	False	False
status	string	Open Referral field used in application profile	The current status of the service.	• active • inactive • defunct • temporarily closed	False	False
fees	string	Open Referral field excluded from application profile	Details of any charges for service users to access this service. Application Profile Notes: Use structured information where available in preference to this text field. LGA defines an extension table for 'cost_option'. This 'fees' field can contain a single human-readable description of costs. The 'cost_option' table can optionally add a further breakdown that can be filtered on.	-	False	False
accreditations	string	Extension for LGA	Details of any accreditations. Accreditation is the formal evaluation of an organization or program against best practice standards set by an accrediting organization. Application Profile Notes: Use structured information where available in preference to this text field. LGA defines an extension table for 'review'. This 'accreditations' field can contain a single human-readable description of reviews. The 'review' table can optionally add a further breakdown that can be filtered on.	-	False	False

deliverable_type	string	Extension for LGA	A categorisation of the nature of the output of the Service. Application Profile Notes: Expected to reference a taxonomy rather than an enumeration in future versions	• Advice • Assessment • Counselling • Equipment • Financial Support • Information • Permission • Training	False	False
assured_date	string	Extension for LGA	The date that the information about the service was last checked	-	False	False
attending_type	string	Extension for LGA	How to attend this service. Application Profile Notes: Expected to reference a taxonomy ratehr than an enumeration in future versions	• phone • online • venue • home visit	False	False
attending_access	string	Extension for LGA	Access restrictions for this service. Application Profile Notes: Expected to reference a taxonomy ratehr than an enumeration in future versions	• referral • appointment • membership • drop-in	False	False

service_taxonomy

The service taxonomy creates a link between a service and one or more classifications that describe the nature of the service provided.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each service must have a unique identifier.	-	True	True
service_id	string (uuid)	Open Referral field used in application profile	The identifier of the service at a given location.	-	True	False
taxonomy_id	string	Open Referral field used in application profile	The identifier of this classification from the taxonomy table.	-	True	False

service_at_location

The services at location table creates a link between a service and a specific location.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each entry must have a unique identifier.	-	True	True
service_id	string (uuid)	Open Referral field used in application profile	The identifier of the service at a given location.	-	True	False
location_id	string (uuid)	Open Referral field used in application profile	The identifier of the location where this service operates.	-	True	False

location

The location tables provides details of the locations where organizations operate. Locations may be virtual, and one organization may have many locations.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string (uuid)	Open Referral field used in application profile	Each location must have a unique identifier	-	True	True
name	string	Open Referral field used in application profile	The name of the location	-	False	False
description	string	Open Referral field used in application profile	A description of this location.	-	False	False
latitude	number	Open Referral field used in application profile	Y coordinate of location expressed in decimal degrees in WGS84 datum.	-	False	False

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
longitude	number	Open Referral field used in application profile	X coordinate of location expressed in decimal degrees in WGS84 datum.	-	False	False

phone

The phone table contains details of the telephone numbers are used to contact organizations, services, and locations.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each entry must have a unique identifier	-	True	True
contact_id	string	Open Referral field used in application profile	The identifier of the contact for which this is the phone number	-	True	False
number	string	Open Referral field used in application profile	The phone number	-	True	False
language	string	Open Referral field used in application profile	A comma separated list of ISO 639-1, or ISO 639-2 [language codes] (available at http://www.loc.gov/standards/iso639-2/php/code_list.php) to represent the languages available from this phone service. The three-letter codes from ISO 639-2 provide greater accuracy when describing variants of languages, which may be relevant to particular communities. Application Profile Notes: 'en' for english	-	False	False

contact

The contact table contains details of the named contacts for services and organizations. Note that in the HSDS data package format, if an individual is the contact for multiple services, their details may be duplicated multiple times in this table, each time with a new identifier, and with the rows containing different service ids.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each contact must have a unique identifier	-	True	True
service_id	string (uuid)	Open Referral field used in application profile	The identifier of the service for which this is a contact	-	True	False
name	string	Open Referral field used in application profile	The name of the person	-	False	False
title	string	Open Referral field used in application profile	The job title of the person	-	False	False

physical_address

The addresses table contains the physical addresses for locations. The address fields are in a US form, and some fields are mandatory e.g. city.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each physical address must have a unique identifier.	-	True	True
location_id	string (uuid)	Open Referral field used in application profile	The identifier of the location for which this is the address.	-	True	False
address_1	string	Open Referral field used in application profile	The first line(s) of the address, including office, building number and street.	-	False	False
city	string	Open Referral field used in application profile	The city in which the address is located.	-	True	False

state_province	string	Open Referral field used in application profile	The state or province in which the address is located.	-	True	False
postal_code	string	Open Referral field used in application profile	The postal code for the address.	-	True	False
country	string	Open Referral field used in application profile	The country in which the address is located. This should be given as an ISO 3361-1 country code (two letter abbreviation). Application Profile Notes: Use 'GB'	-	True	False

regular_schedule

The regular_schedule table contains details of when a service or location is open under normal circumstances. Each entry in the table can relate to one and only one day of the week. Open Referral UK extends this table to add extra fields used in the iCal standard to allow for more flexible scheduling.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each entry must have a unique identifier	-	True	True
service_id	string (uuid)	Open Referral field used in application profile	The identifier of the service for which this is the regular schedule Application Profile Notes: Use either service_id or service_at_location_id. Use service_id to give opening times for accessing the service with no location. Use service_at_location_id to give opening times for a location for the service.	-	False	False
service_at_location_id	string	Open Referral field used in application profile	The identifier of the 'service at location' table entry, when this schedule is specific to a service in a particular location.	-	False	False
weekday	integer	Extension for LGA	The day of the week that this entry relates to Application Profile Notes: Although this is required in the base Open Referral UK schema, it may not be suitable for an iCal schedule record.	-	True	False
opens_at	time	Open Referral field used in application profile	The time when a service or location opens. This should use HH:MM format and should include timezone information, either adding the suffix 'Z' when the date is in UTC, or including an offset from UTC (e.g. 09:00-05:00 for 9am East Coast Time.	-	False	False
closes_at	time	Open Referral field used in application profile	The time when a service or location opens. This should use HH:MM format and should include timezone information, either adding the suffix 'Z' when the date is in UTC, or including an offset from UTC (e.g. 09:00-05:00 for 9am East Coast Time.	-	False	False
valid_from	date	Extension for LGA	The date from which the schedule information is valid.	-	False	False
valid_to	date	Extension for LGA	The last date on which the schedule information is valid.	-	False	False

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
dtstart	date	Extension for LGA	iCal - The date of the first event is the schedule. Necessary when using the 'interval' feature Application Profile Notes: Necessary when using the 'interval' feature.	-	False	False
freq	string	Extension for LGA	iCal - How often the frequency repeats. E.g. Frequency use one of WEEKLY or MONTHLY. Application Profile Notes: See the 'interval' field for combinations to make other frequencies.	• WEEKLY • MONTHLY	False	False
interval	number	Extension for LGA	iCal - How often the frequency repeats. E.g. Interval 2 for Frequency WEEKLY gives Fortnightly Application Profile Notes: For example - interval 2 for freq WEEKLY gives Fortnightly	-	False	False
byday	string	Extension for LGA	iCal - Comma seperated days of the week. E.g. SU,MO,TU,WE,TH,FR,SA. Where freq is MONTHLY each part can be preceded by a positive or negative integer to represent which occurrence in a month. E.g. 2MO is the second Monday in a month. -1FR is the last Friday	-	False	False
bymonthday	number	Extension for LGA	iCal - Day number in a month if frequency is MONTHLY Application Profile Notes: if freq is MONTHLY	-	False	False
description	string	Extension for LGA	Human readable description of the availability of the service. Application Profile Notes: Should match up with the iCAL field. E.g. 'The 2nd Monday of every month from 8:00pm till 12:00pm'	-	False	False

holiday_schedule

The holiday_schedule table contains details of when a service or location is open during holidays. Each entry in the table describes a period of one or more days, and the operating times on those days. there is potential for this table to be deprecated if iCal rules are adopted in regular_schedule.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each entry must have a unique identifier	-	True	True
service_id	string (uuid)	Open Referral field used in application profile	The identifier of the service for which this is the holiday schedule Application Profile Notes: Use either service_id or service_at_location_id. Use service_id to give opening times for accessing the service with no location. Use service_at_location_id to give opening times for a location for the service.	-	False	False

service_at_location_id	string	Open Referral field used in application profile	The identifier of the 'service at location' table entry, when this schedule is specific to a service in a particular location.	-	False	False
closed	boolean	Open Referral field used in application profile	Indicates if a service or location is closed during a public holiday	-	True	False
opens_at	time	Open Referral field used in application profile	The time when a service or location opens. This should use HH:MM format and should include timezone information, either adding the suffix 'Z' when the date is in UTC, or including an offset from UTC (e.g. 09:00-05:00 for 9am East Coast Time.	-	False	False
closes_at	time	Open Referral field used in application profile	The time when a service or location closes. This should use HH:MM format and should include timezone information, either adding the suffix 'Z' when the date is in UTC, or including an offset from UTC (e.g. 09:00-05:00 for 9am East Coast Time.	-	False	False
start_date	date	Open Referral field used in application profile	The first day that a service or location is closed during a public or private holiday	-	True	False
end_date	date	Open Referral field used in application profile	The last day that a service or location is closed during a public or private holiday	-	True	False

funding

The funding table describes the sources of funding for a service or organisation

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each entry must have a unique identifier	-	True	True
service_id	string (uuid)	Open Referral field used in application profile	The identifier of the service in receipt of this funding	-	True	False
source	string	Open Referral field used in application profile	A free text description of the source of funds for this organization or service.	-	False	False

eligibility

The eligibility tables contains details of the eligibility criteria for particular services. Note that the LGA extension table 'link_taxonomy' enables many taxonomy terms to associated with an eligibility. A design principle for the standard is to "to be able to identify a small target set of services that closely meet the needs of a prospective service user". The approach to eligibility has been designed to enable a complex set of criteria to be coded so that services can be effectively filtered by a user's needs and circumstances.
The design allows for one entry on this table for each set of qualifying conditions - for example

- Over 60, AND Male
  OR
- In receipt of Universal Credit

Each set of AND conditions is then coded into this eligibility structure so that

- Age ranges use the minimum_age and maximum_age fields
- Other circumstances are defined as taxonomy entries using the link_taxonony table.

A 'human-readable' version of the coded conditions can also be provided in the 'eligibility' field.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each entry must have a unique identifier	-	True	True

service_id	string (uuid)	Open Referral field used in application profile	The identifier of the service for which this entry describes the eligibility criteria	-	True	False
eligibility	string	Extension for LGA	The rules or guidelines that determine who can receive the service. Application Profile Notes: Use structured information where available in preference to this text field. OR permitted values should be removed from the LGA Application Profile.	• adult • child • teen • family • female • male • Transgender • Transgender - M to F • Transgender - F to M	False	False
minimum_age	number	Extension for LGA	The minimum age required to meet this eligibility requirement.	-	True	False
maximum_age	number	Extension for LGA	The maximum age required to meet this eligibility requirement.	-	True	False

service_area

The service_area table contains details of the geographic area for which a service is available. Note that the LGA extension table 'link_taxonomy' enables many taxonomy terms to associated with a service_area. These can define the type of area e.g.

‣ administrative geography
‣ natural neighbourhood
‣ town

UK geographies can be referenced in [ONS statistical geographies](#) and in [Natural Neighbourhoods](#).

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each service area must have a unique identifier	-	True	True
service_id	string (uuid)	Open Referral field used in application profile	The identifier of the service for which this entry describes the service area	-	True	False
service_area	string	Open Referral field used in application profile	The geographic area where a service is available. This is a free-text description, and so may be precise or indefinite as necessary.	-	False	False
extent	string	Extension for LGA	A definition of the polygon defining the area, in geojson.	-	False	False
uri	string	Extension for LGA	A persistent identifier to identify an area.	-	False	False

language

The language table contains details of the languages that are spoken at locations or services. This does not include languages which can only be used with intepretation.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each language must have a unique identifier	-	True	True
service_id	string (uuid)	Open Referral field used in application profile	The identifier of the service for which the entry describes the languages in which services are delivered	-	True	False
language	string	Open Referral field used in application profile	Languages, other than English, in which the service is delivered. Languages are listed as ISO639-1 codes.	-	False	False

accessibility_for_disabilities

The accessibility_for_disabilities table contains details of the arrangements for access to locations for people who have disabilities

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each entry must have a unique identifier	-	True	True
location_id	string (uuid)	Open Referral field used in application profile	The identifier of the location for which the entry describes the accessibility provision	-	True	False
accessibility	string	Open Referral field used in application profile	Description of assistance or infrastructure that facilitate access to clients with disabilities. Application Profile Notes: A suitable list of enumerated values needs to be agreed on. OR permitted values should be removed from the LGA Application Profile.	-	False	False

taxonomy

Each service can be categorized according to one or more taxonomy terms. The taxonomy table contains a list of taxonomy identifiers, their names, and, for hierarchical taxonomies, their structure.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Open Referral field used in application profile	Each taxonomy entry must have a unique identifier. If combining multiple taxonomies with overlapping identifiers, use a prefix to distinguish them. The prefix can be a CURIE which must be resolvable by all software consuming the data.	-	True	True
name	string	Open Referral field used in application profile	The name of this taxonomy term or category.	-	True	False
parent_id	string	Extension for LGA	If this is a child category in a hierarchical taxonomy, give the identifier of the parent category. For top-level categories, this should be left blank.	-	False	False
vocabulary	string	Open Referral field used in application profile	If this is an established taxonomy, detail which taxonomy is in use. For example, AIRS or Open Eligibility.	-	False	False

cost_option

The cost option table contains the costs of a service at certain points in time. This is an LGA Extension table. This table provides a structured version of the text information contained in the 'fees' field of the 'service' table.

This is an extension table.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Extension for LGA	Each entry must have a unique identifier	-	True	True
service_id	string (uuid)	Extension for LGA	The identifier of the services for which the entry describes the cost	-	True	False
valid_from	date	Extension for LGA	When this price is valid from	-	False	False
valid_to	date	Extension for LGA	When this price is valid to	-	False	False

option	string	Extension for LGA	Conditions associated with the cost option. Application Profile Notes: e.g. • For the over 60's • 1st session	-	False	False
amount	number (currency)	Extension for LGA	The cost of the option, expresssed as an amount in a currency (expected to be GBP by Open Referral UK).	-	False	False
amount_description	string	Extension for LGA	Specific details qualifying the cost amount, e.g. 'per session'	-	False	False

review

The review table contains service reviews made by organizations. This is an LGA Extension table. This table provides a structured version of the text information contained in the 'accreditations' field of the 'service' table.

This is an extension table.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Extension for LGA	Each entry must have a unique identifier	-	True	True
service_id	string (uuid)	Extension for LGA	The identifier of the services for which the entry describes a review	-	True	False
reviewer_organization_id	string	Extension for LGA	The id to an entry on the 'organization' table to identify the organization that has provided the review	-	False	False
title	string	Extension for LGA	The title of the review	-	False	False
description	string	Extension for LGA	A detailed description of this review	-	False	False
date	date	Extension for LGA	The date of the review	-	False	False
score	string	Extension for LGA	The review score Application Profile Notes: e.g. '3 star'	-	False	False
url	string	Extension for LGA	A URL were the review can be read	-	False	False
widget	string	Extension for LGA	Code that can be embedded into a web page to give more information about a review.	-	False	False

link_taxonomy

This table enables a taxonomy item to be associated with other classes in the model. This is an LGA Extension table. This table enables a taxonomy item to be associated with other classes in the model.

This is an extension table.

Field Name	Type (Format)	Source	Description	Allowed Values	Required?	Unique?
id	string	Extension for LGA	A unique identifier for the link taxonomy	-	True	True
link_type	string	Extension for LGA	The class that the taxonomy applies to	• organization • eligibility • cost_option • service_area	True	False
link_id	string	Extension for LGA	The identifier of the class	-	True	False
taxonomy_id	string	Extension for LGA	The identifier of this classification from the taxonomy table.	-	True	False

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