



Ordnance Survey

OS Open Greenspace

Technical specification

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Contents

Section	Page no
Preface	2
Purpose of this specification and disclaimer	2
Copyright in this specification	2
Contact details	2
Data copyright and other intellectual property rights	2
Trademarks	3
Using this specification	3
Chapter 1 Introduction	4
Product Overview	4
Chapter 2 Data Classification and Structure	5
Data Structure	5
Open Greenspace Classification scheme	5
Model Overview	5
Feature Types	6
GreenspaceSites	6
Attributes	6
Code Lists	7
AccessPoint	8
Attributes	8
Code Lists	8
Precision	8
Chapter 3 GML Overview	9
GML	9
Use of examples	9
Schema overview and location	9
Codelist Dictionaries	9
Example Record	10
GreenspaceSite	10
AccessPoint	10
Chapter 4 GML to ESRI Shapefile Mapping	11
Attribute Mapping	11
GreenspaceSite	11
AccessPoint	11

Preface

Purpose of this specification and disclaimer

This is the product specification (hereafter referred to as the specification) applicable to OS Open Greenspace (hereafter referred to as Open Greenspace). Changes to this specification may be made in collaboration with Greenspace stakeholders.

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Using this specification

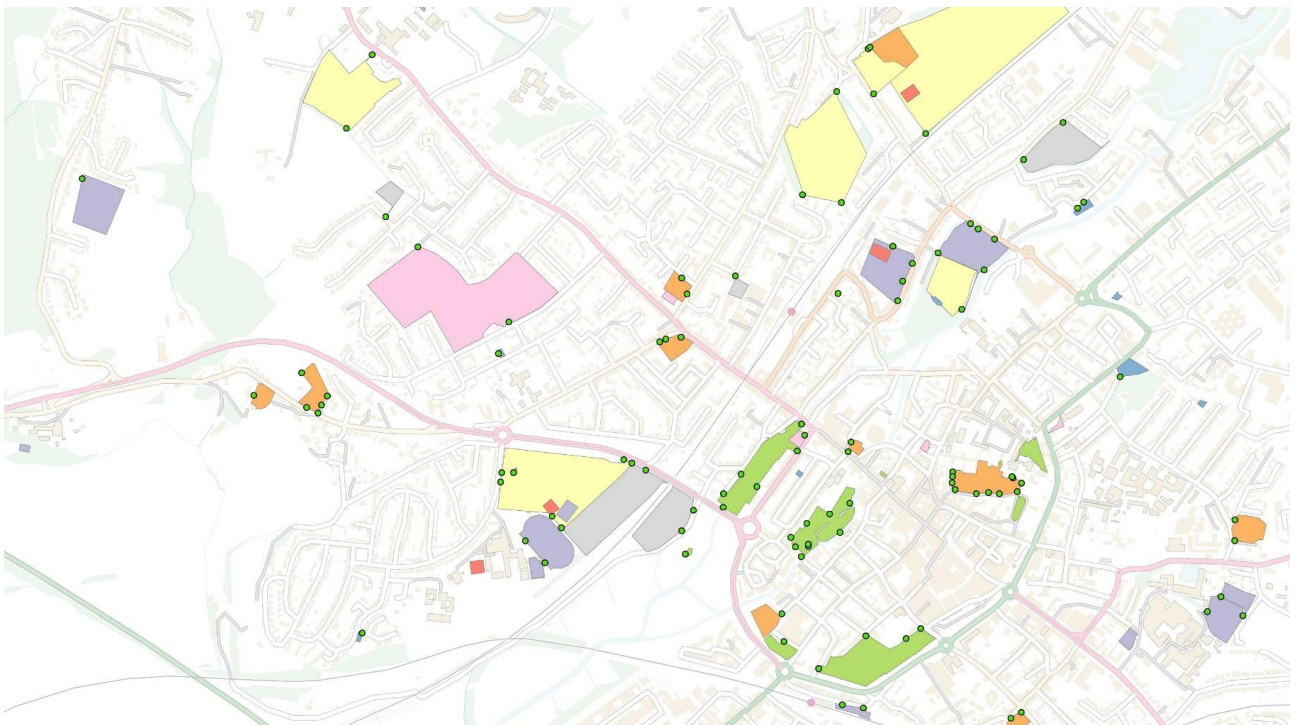
The documentation is supplied in portable document format (PDF) only. Free Adobe® Reader® software, which displays the specification, incorporates search and zoom facilities and allows you to navigate within. Hyperlinks are used to navigate between associated parts of the specification and to relevant Internet resources by clicking on the blue hyperlinks and the table of contents.

Chapter 1 Introduction

Product Overview

OS Open Greenspace depicts the location and extent of spaces such as parks and sports facilities that are likely to be accessible to the public. Where appropriate, it also includes access points to show how people get into these sites. Its primary purpose is to enable members of the public to find and access green spaces near them for exercise and recreation.

As an open data product, this will become part of the OS Open Data portfolio, which currently consists of a range of datasets such as OS Vector Map® District, OS Open Map - Local, OS Terrain® 50 and OS Open Roads. For more information on the open data portfolio see the [OS website](#).



Greenspace Open data showing polygons and access points over OS Open Map - Local

Chapter 2 Data Classification and Structure

Data Structure

The data structure is described below by means of UML class diagrams and accompanying tables containing text.

Open Greenspace Classification scheme

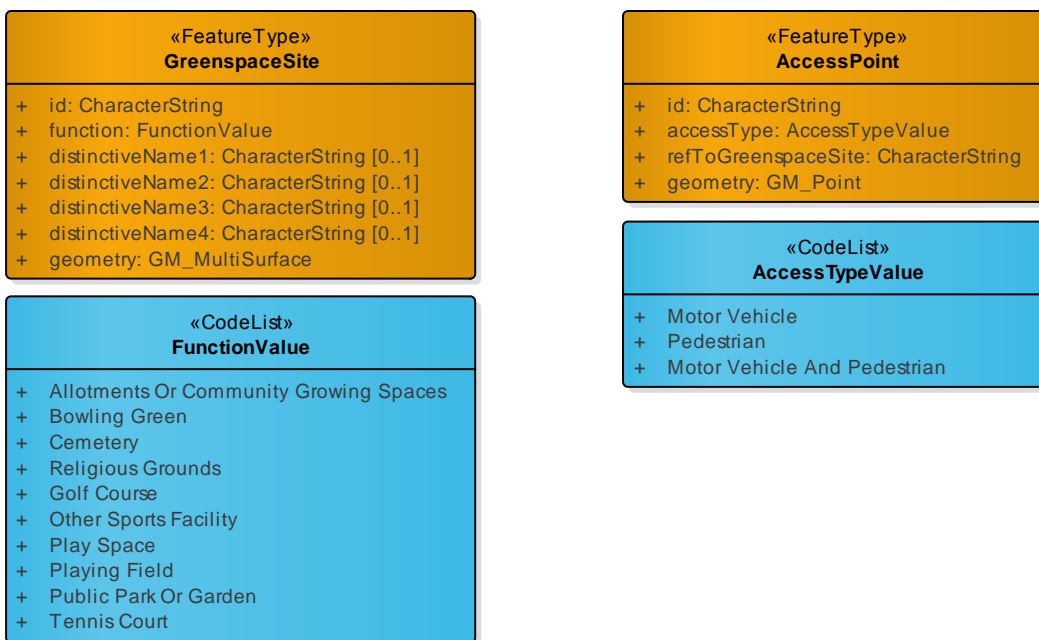
Open Greenspace consists of the following classifications:

- Public parks or gardens
- Play spaces
- Golf courses
- Sports areas or playing fields
- Churchyards or burial grounds
- Allotments or community growing spaces

A full table of these classifications and associated Ordnance Survey real world terms and their definitions is included in the code lists below.

Model Overview

Greenspace Open is constructed as per the following UML diagrams:



Feature Types

Open Greenspace contains two feature types; *GreenspaceSites* and *AccessPoints*.

GreenspaceSites

GreenspaceSites are polygons which depict the outer limits of a feature which may or may not have a physical boundary. These can be single or multi-part polygons.

Attributes

«FeatureType» GreenspaceSite		
Definition: A spatial area object describing the geometry, extent, and function of a real-world feature. This does not imply a physical boundary.		
Attribute: id		
Definition: Unique identifier of the site		
Type: CharacterString	Length: 38	Multiplicity: [1]
Attribute: function		
Definition: Description of the function of the site		
Type: FunctionValue	Length: 40	Multiplicity: [1]
Attribute: distinctiveName1		
Definition: The name of the site		
Type: CharacterString	Length: 254	Multiplicity: [0..1]
Attribute: distinctiveName2		
Definition: The name of the site		
Type: CharacterString	Length: 254	Multiplicity: [0..1]
Attribute: distinctiveName3		
Definition: The name of the site		
Type: CharacterString	Length: 254	Multiplicity: [0..1]
Attribute: distinctiveName4		
Definition: The name of the site		
Type: CharacterString	Length: 254	Multiplicity: [0..1]
Attribute: geometry		
Definition: The geometry of the greenspace area.		
Type: GM_MultiSurface	Length:	Multiplicity: [1]

Code Lists

Code List: FunctionValue	
http://www.os.uk/xml/codelists/OpenFunctionValue.xml Value defining the function of the green space	
Value	Description
Allotments or Community Growing Spaces	Areas of land for growing fruit, vegetables, and other plants, either in individual allotments or as a community activity. Produce is for the growers own consumption and not primarily for commercial activity.
Bowling Green	A specially prepared area intended for playing bowls.
Cemetery	Areas of land associated with burial areas.
Religious Grounds	Areas of land associated with churches and other places of worship. Only included where there are significant areas of green space (over 500m ² of natural space - identified as surfaces that are not manmade, such as grass, woodland and bare earth).
Golf Course	A specially prepared area intended for playing golf
Other Sports Facility	Land used for sports not specifically described by other categories. Includes those facilities where participation in sport is the primary use of the area.
Play Space	A specially prepared area intended for children's play, usually linked to housing areas or parks and containing purpose built equipment. Not captured if within schools or paid-for tourist attractions.
Playing Field	Large, flat areas of grass or specially designed surfaces, generally with marked pitches, used primarily for outdoor sports, i.e. football, rugby, cricket.
Public Park or Garden	<p>Areas of land designed, constructed, managed and maintained as a public park or garden. These normally have a defined perimeter and free public access, and generally sit within or close to urban areas.</p> <p>Access is granted for a wide range of uses and not usually restricted to paths or tracks within the area. May include areas with managed facilities such as benches and flowerbeds, and more natural areas.</p>
Tennis Court	A specially prepared area intended for playing tennis.

AccessPoint

Access points are point geometries which depict either vehicular or pedestrian access into a Greenspace Site.

Attributes

«FeatureType» AccessPoint		
Definition: The spatial object type defining a point feature which would normally lie on the boundary of a site extent where there is access into or out of the site.		
Attribute: id		
Definition: The unique identifier of the access point.		
Type: CharacterString	Length: 38	Multiplicity: [1]
Attribute: accessType		
Definition: Describes the nature of the access permitted at the access point.		
Type: AccessTypeValue	Length: 40	Multiplicity: [1]
Attribute: refToGreenspaceSite		
Definition: The unique identifier of the greenspace site to which the access point relates.		
Type: CharacterString	Length: 38	Multiplicity: [1]
Attribute: geometry		
Definition: Location of the point		
Type: GM_Point	Length:	Multiplicity: [1]

Code Lists

Code List: AccessTypeValue	
http://www.os.uk/xml/codelists/AccessTypeValue.xml	
Value describing the type of access indicated by the access point.	
Value	Description
Motor Vehicle	Access point permits access to motor vehicles.
Motor Vehicle and Pedestrian	Access point permits access to motor vehicles and pedestrians.
Pedestrian	Access point permits access to pedestrians.

Precision

Open Greenspace geometry is published with a precision of 2 decimal places.

Chapter 3 GML Overview

The Open Greenspace product is supplied in GML version 3.2.1. This chapter describes how Open Greenspace is defined in GML. An understanding of XML (eXtensible Mark-up Language) and XML schemas is required.

GML

GML is an XML grammar for expressing geographic features. GML serves as a modelling language for geographic systems as well as an open interchange format for geographic transactions on the Internet. More information can be found on the Open Geospatial Consortium (OGC®). <http://www.opengeospatial.org/standards/gml>

The XML specifications that GML is based on are available from the World Wide Web Consortium (W3C): <http://www.w3.org>.

Information about Unicode and UTF-8, the character encoding we have chosen, is available on the Unicode Consortium website: <http://www.unicode.org>.

Use of examples

Any use of examples in this chapter that mention specific data content are to be taken as examples only.

Schema overview and location

XML schemas are used to define and validate the format and content of the GML. The GML v3.2.1 specification provides a set of schemas that define the GML feature constructs and geometric types. These are designed to be used as a basis for building application-specific schemas, which define the data content.

The schema document defines the namespace, <http://namespaces.ordnancesurvey.co.uk/Open/Greenspace/1.0>, this is defined in the XSD at: <https://www.ordnancesurvey.co.uk/xml/open/greenspace/1.0/OSOpenGreenspace.xsd>

Codelist Dictionaries

<http://www.os.uk/xml/codelists/OpenFunctionValue.xml>

<http://www.os.uk/xml/codelists/AccessTypeValue.xml>

Example Record

GreenspaceSite

```
<os:featureMember>
  <ogsp:GreenspaceSite gml:id="id5D92FD8F-BC8A-F1B9-E053-2362A00AD8C6">
    <ogsp:function
codeSpace="http://www.os.uk/xml/codelists/OpenFunctionValue">Public Park Or Garden</ogsp:function>
    <ogsp:distinctiveName1>Austenwood Common</ogsp:distinctiveName1>
    <ogsp:geometry>
      <gml:MultiSurface gml:id="id5D92FD8F-BC8A-F1B9-E053-2362A00AD8C6-0"
srsName="urn:ogc:def:crs:EPSG::27700" srsDimension="2">
        <gml:surfaceMember>
          <gml:Surface gml:id="id5D92FD8F-BC8A-F1B9-E053-2362A00AD8C6-1">
            <gml:patches>
              <gml:PolygonPatch>
                <gml:exterior>
                  <gml:LinearRing>
                    <gml:posList>499766.16 189765.97
499775.5 189741.8 499785.3 189694.7 499826.6 189686.1 499857.65 189685.3 499909.85 189662.85 499916.85
189658.65 499933.1 189630.45 499967.2 189609 500007.65 189598.2 500017.15 189606.6 500024.25 189632.2
500052.45 189661.55 500051.55 189673.1 499968.8 189747.55 499884.95 189835.4 499836.55 189806.75 499830.2
189793.3 499823.05 189790.85 499830.2 189733.95 499785.9 189731.6 499767.55 189831.85 499820.4 189842.35
499834.05 189809.6 499877.65 189835.95 499816.15 189886.45 499779.9 189930.8 499745.45 189961.1 499738.45
189962.8 499729.05 189958.25 499722.95 189949.2 499726.1 189911.8 499738.65 189830 499766.16
189765.97</gml:posList>
                  </gml:LinearRing>
                </gml:exterior>
              </gml:PolygonPatch>
            </gml:patches>
          </gml:Surface>
        </gml:surfaceMember>
      </gml:MultiSurface>
    </ogsp:geometry>
  </ogsp:GreenspaceSite>
</os:featureMember>
```

AccessPoint

```
<os:featureMember>
  <ogsp:AccessPoint gml:id="id999FC44B-44BE-4040-B7A6-7947A1F97F34">
    <ogsp:accessType
codeSpace="http://www.os.uk/xml/codelists/AccessTypeValue">Motor Vehicle And Pedestrian</ogsp:accessType>
    <ogsp:refToGreenspaceSite>id5D92FD8F-BC8A-F1B9-E053-
2362A00AD8C6</ogsp:refToGreenspaceSite>
    <ogsp:geometry>
      <gml:Point gml:id="id999FC44B-44BE-4040-B7A6-7947A1F97F34-0"
srsName="urn:ogc:def:crs:EPSG::27700" srsDimension="2">
        <gml:pos>499766.16 189765.97</gml:pos>
      </gml:Point>
    </ogsp:geometry>
  </ogsp:AccessPoint>
</os:featureMember>
```

Chapter 4 GML to ESRI Shapefile Mapping

OS Open Greenspace is supplied as an ESRI Shapefile. An ESRI Shapefile is an open file format to store geometry and attribute information about spatial features.

Attribute Mapping

The naming of attributes between GML and ESRI Shapefile will be different as shape files are limited to 10 characters for an attribute name. Therefore, the following tables map the GML attribute name to the attribute name in the shape files.

The GML contains an attribute which describes the geometry of the feature; this is not applicable for a shape file as they are separated by their geometry.

GreenspaceSite

GML Attribute	ESRI Shape Attribute
id	id
function	function
distinctiveName1	distName1
distinctiveName2	distName2
distinctiveName3	distName3
distinctiveName4	distName4

AccessPoint

GML Attribute	ESRI Shape Attribute
id	id
accessType	accessType
refToGreenspaceSite	refToGSite

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