

LISTmap URL Parameters V1.3

Abstract

The entry point URL for LISTmap is:

<http://maps.thelist.tas.gov.au/listmap/app/list/map>

This will open the standard LISTmap mapping application in a browser – containing the default topographic basemap, the default set of tools, zoomed to the extent of Tasmania, with no additional layers added.

A set of parameters can be included as part of the URL to allow users additional functionality to add layers, alter the basemap, turn tools off, change the zoom extent, highlight features and filter results.

The LISTmap parameters are outlined in this document.

COP

The COP, Common Operation Picture, is based on LISTmap, but has additional functionality and security to support the Emergency Services Common Operating Picture. The entry point URL for COP is:

<http://maps.thelist.tas.gov.au/listmap/app/list/cop>

The main differences between /cop and /map are:

- /cop shows the COP tools
- /cop shows a list of logos in the print options

This document also applies to the COP interface. Any parameters specific to COP will be noted.

Parameter Syntax

When using LISTmap parameters, you need to construct URLs. A URL with parameters will have the following syntax:

<http://maps.thelist.tas.gov.au/listmap/app/list/map?<parameter1=value1>&<parameter2=value2>>

Where:

<http://maps.thelist.tas.gov.au/listmap/app/list/map> is the URL to LISTmap

? denotes the beginning of a parameter list

<parameter1=value1> is a name-value pair. The parameter values are case sensitive

& separates multiple parameter values

bmlayer

Description:

Alter the default basemap layer

Syntax:

bmlayer=LayerID

LayerID is a number that relates to a Layer ID in LISTmap

LayerID must refer to a layer that has been defined as a base map

If LayerID is not a basemap layer, no basemap layer will be shown

Security restrictions apply to basemap layers through the login

If a restricted basemap layer is defined the user does not have access to, no basemap will be shown

Example:

The following example starts LISTmap, with the State Orthophoto as the basemap layer.

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bmlayer=4>

<i>Basemap layerIDs</i>		
Basemap Layer IDs Name	LayerID	Access
No Base Layer	1	Public
Scanned maps	2	Public
Topographic	3	Public
State Orthophoto	4	Public
Google Satellite	6	Public
Topographic Grey	896	Public
ESGIS Map Book	897	Restricted

bmlayertrans

Description:

Set transparency value for basemap

Syntax:

bmlayertrans=TransparencyValue

TransparencyValue is a floating point number in the range 0.0 to 1.0

0.1 represents 10% transparency; 0.9 represents 90% transparency

MUST be used in conjunction with the **bmlayer** parameter

Example:

The following example starts LISTmap, with the State Orthophoto as the basemap layer set to a transparency of 40%.

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bmlayer=3&bmlayertrans=0.4>

Notes:

MUST be used in conjunction with the **bmlayer** parameter

layers

Description:

A comma separated list of layers to add to LISTmap

Syntax:

layers=Comma separated list of LayerIDs

Layers are added in the given order

The first layer in the list will be placed at the bottom of the Layer Manger, the last layer will be at the top

Use **bmlayer** parameter to set the basemap, otherwise no basemap will be the default.

Security restrictions apply

If the user does not have security access to a layer, it will not be added to the map

Example:

The following example adds layers 125,117,135 and 209 to the map, with 209 as the top layer.

<http://maps.thelist.tas.gov.au/listmap/app/list/map?layers=125,117,135,209>

The following example does the same as above, but adds the basemap layer as well.

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bmlayer=3&layers=125,117,135,209>

Notes:

To determine a LISTmap LayerID

Use Add Layer in LISTmap

Identify the layer you want to add, either through a search, or using the categories

Note the layer ID in light grey brackets next to the layer name

layerstrans

Description:

Set transparency value for layers

Syntax:

layerstrans=Comma separated list of transparency values

TransparencyValues are a floating point number in the range 0.0 to 1.0

0.1 represents 10% transparency; 0.9 represents 90% transparency

This parameter is only meaningful if the **layers** parameter is supplied. The order is important and must match the order given in the layers parameter.

If the layer is not accessible, then the matching transparency value is ignored.

If a transparency value is undefined, i.e. missing (layerstrans=,,,0.5,0.8) then it will be assumed to have a value of 1.

Example:

The following example adds layers 125,117,135 and 209 to the map, with 209 as the top layer. It sets the transparency for each of the layers.

<http://maps.thelist.tas.gov.au/listmap/app/list/map?layers=125,117,135,209&layerstrans=0.1,0.4,0.5,0.9>

Notes:

MUST be used in conjunction with the **layers** parameter

layout-options

Description:

A comma separated list of options to change the user interface

Syntax:

Layout-options=Comma separated list of options

Option	Result
TOOLS_OFF	Remove the Tools button from the interface
TOOLS_MAP_OFF	Remove the Map Tools menu item from Tools
TOOLS_DRAWING_OFF	Remove the drawing tools menu item from Tools
TOOLS_EXPORT_OFF	Remove the export tools menu item from Tools
TOOLS_COP_OFF	Remove the COP Tools menu item from. Option only available in COP
BASEMAPS_OFF	Remove the Basemaps button from the interface
LAYER_MANAGER_OFF	Remove the Layers button from the interface
TITLE_BAR_OFF	Remove the Title Bar from the interface
LAYER_LIST_OPEN	Open the Layers List
DEBUG	Enables right click menu

Examples:

To make a minimal user interface:

http://maps.thelist.tas.gov.au/listmap/app/list/map?layout-options=TOOLS_OFF,BASEMAPS_OFF,LAYER_MANAGER_OFF,TITLE_BAR_OFF

To add layers (125,117,135,209) and opens the Layer List

http://maps.thelist.tas.gov.au/listmap/app/list/map?layers=125,117,135,209&layout-options=LAYER_LIST_OPEN

Notes:

Options must be in **CAPITALS** – they are case sensitive

bookmarkid

Description:

Open LISTmap with a pre-defined bookmark number.

Syntax:

bookmarkid=BookMarkID

BookMarkID is a number that refers to a previously created bookmark

Example:

This example links to an area over Hobart with Cadastre turned on:

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bookmarkId=117>

Notes:

Bookmarks are created by using the Map Tools, Create Bookmark button.

When Bookmarks are first created :-

- If you are logged in – the Bookmark will be stored on the LISTmap server, and available on any machine/browser when you are logged in
- If you are not logged in – the Bookmark will be stored on the local machine via cookies for the current machine/browser
- The Bookmark will be private – no one else will have access to the Bookmark. You cannot just copy the URL and share them

When you share a Bookmark, via Map Tools - Open Bookmarks – and select one of the share options, they become public, and can be viewed and shared with other users.

Security restrictions are applied to the layers in a bookmark through the login.

- If a user is logged in, adds restricted layers, creates a bookmark and shares it
 - If a user other than the creator opens the bookmark, and has security access to the layers, they will see the layers
 - If a user other than the creator does not have security access to the layers, those layers they do not have access to will be dropped from the layer list
 - If the user is not logged in and opens a link to the bookmark, they will see only the public layers, and all restricted layers will be removed from the layer list (as they are not logged in – once they are logged in, they will have access to all the layers)

Zoom to map extent

Zooming to a map extent can be achieved by defining a bounding box consisting of the coordinates of the lower left and upper right corners, or via the coordinates of the centre point and extent in metres.

The Spatial Reference System Number of the coordinates must be specified.

srs

Description:

The EPSG spatial reference system number for the coordinates defining the **bbox** or **cpoint**.

Syntax:

srs=EPSG:EPSGNumber

EPSG NUMBER	Description
4283	GDA94 latitude-longitude
28355	MGA94 Zone 55
3857	Web Mercator Auxiliary Sphere

bbox

Description:

Zoom to a bounding box, defined by a coordinate pair for the lower left, and upper right corners.
Defined by four comma separated float-values specifying the target extent

Syntax:

bbox= llx,lly,urx,ury

where

ll = lower left

ur = upper right.

Example:

This example zooms to an area around Hobart, using longitude and latitude coordinates defined on GDA94 datum.

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bbox=147.1,-42.9,147.5,-42.8&srs=EPSG:4283>

Notes:

Requires the SRS to be specified.

Note that by definition, Longitude defines the X axis, and Latitude defines the Y axis, and therefore the coordinate pair is (Longitude,Latitude).

cpoint

Description:

Zoom to centre point, defined by a coordinate pair and map extent.

Defined by three comma separated float-values specifying the centre point of the map and the extent in metres.

Syntax:

cpoint= x,y,extent

where

x=x coordinate of centre point

y=y coordinate of centre point

extent=Extent of map in metres

Example:

This example zooms to an area around Sandy Bay, using longitude and latitude coordinates defined on GDA94 datum, and an extent of 5000 metres.

<http://maps.thelist.tas.gov.au/listmap/app/list/map?cpoint=147.34,-42.9,5000&srs=EPSG:4283>

Notes:

Requires the SRS to be specified.

Note that by definition, Longitude defines the X axis, and Latitude defines the Y axis, and therefore the coordinate pair is (Longitude, Latitude).

Add highlight feature as a new layer

Add features to the map that meet a query on the specified layer, and highlight the result.

Usually used to highlight a parcel of land in the cadastral layer where the PID is equal to the query value.

The parameters hilayer and hiquery must be used together. The Layer must also be in the map.

zoomtohilayer=true

Description:

If set to true, zoom to the extent of the hiquery, else use the current map extent

Syntax:

zoomtohilayer= true

hilayer

Description:

The layer number of the highlight layer, to which the query will be applied

Syntax:

hilayer= LayerID

LayerID is the LISTmap layer number specifying the highlight layer

Basemap layers are not valid

The hilayer must be in the map, either added via the layers parameter or in a bookmark

Layers of the following service types are permitted: -

ArcGIS Rest, WFS, KML and GeoRSS

Security restrictions apply

User must have security access to a layer

Notes:

To determine a LISTmap LayerID

Use Add Layer in LISTmap

Identify the layer you want to add, either through a search, or using the categories

Note the layer number in light grey brackets next to the layer name

hiquery

Description:

The string value of the highlight query

Usually used to highlight a parcel of land in the cadastral layer where the PID is equal to the query value

Syntax:

hiquery= queryString

The hiquery is usually of the form PID=123456

The map page will display first, and then the query performs

If the query returns a result, the features in the layer that meet the query will be highlighted, and if

zoomtohilayer=true, the map will zoom to the result

If the query is valid, but no results meet the query, then nothing will be highlighted

If an invalid query is passed, no results are returned

No validation is performed, and no error returned

Will require queries to contain HTML encoding to replace certain characters:

http://www.w3schools.com/tags/ref_urlencode.asp

The format of the string differs for each service type of the highlight layer.

ArcGISRest:

The format is very similar to the layerdefs format of the ArcGISRest service.

Example:

Example 1:

This example adds the cadastral parcels layer, sets the query layer to the parcels layer, and sets the query on the layer to PID=566891.

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bmlayer=3&layers=210&hilayer=210&hiquery=PID%3D5668915&zoomtohilayer=true>

Example 2:

In this example I start by setting the topographic basemap layer (3). This is done by:

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bmlayer=3>

I then added the cadastral layer (210)

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bmlayer=3&layers=210>

The highlight layer is set to the same layer(210), with the query is PID=1586373

Note we are using HTML URL encoding.

Thus the URL is:

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bmlayer=3&layers=210&hilayer=210&hiquery=PID%3D1586373>

and finally we zoom to the result

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bmlayer=3&layers=210&hilayer=210&hiquery=PID%3D1586373&zoomtohilayer=true>

Example 3:

Planning scheme example

Query Filter

Description:

Allows you to filter the features of individual layers by specifying definition expressions for those layers.
Only available for ArcGIS REST layers.

Syntax:

query=layerId1:layerDef1;layerId2:layerDef2

where layerId1, layerId2 are the layer ids returned by the map service resource

layerDef1, layerDef2 are the definition expressions for the layer

If an invalid query is passed, no results are returned

No validation is performed, and no error returned

Will require queries to contain HTML encoding to replace certain characters:

http://www.w3schools.com/tags/ref_urlencode.asp

You can remove the filter from the layer management panel.

Example 1:

In the example below the land tenure layer is filtered so that only private freehold land is shown. Land Tenure is layer 125, and the query being applied on the Land Tenure layer is: Ten_class='Private Freehold'. Therefore the query is:

125:ten_class='Private Freehold'

With no HTML encoding the URL would look like:

http://listmaptesttext.thelist.tas.gov.au/listmap/app/list/map?bmlayer=3&layers=125&query=125:ten_class='Private Freehold'

With URL encoding it becomes:

http://maps.thelist.tas.gov.au/listmap/app/list/map?bbox=147.1,-42.9,147.5,-42.8&srs=EPSG:4283&bmlayer=3&layers=125&query=125:ten_class=%27Private%20Freehold%27

Example 2:

In the example below the planning zone layer is filtered so that only general residential is shown. Planning Zones is layer 967, and the query being applied is: zonecode=10.

Therefore the query is:

967:zonecode=10

With URL encoding it becomes:

<http://maps.thelist.tas.gov.au/listmap/app/list/map?bbox=147,-41.5,147.2,-41.4&srs=EPSG:4283&bmlayer=3&layers=967&query=967:zonecode=10>

Example 3:

In the example below we combine the two queries in example 1 and example 2 to add the two filtered layers to the map.

http://maps.thelist.tas.gov.au/listmap/app/list/map?bbox=147,-41.5,147.2,-41.4&srs=EPSG:4283&bmlayer=3&layers=125,967&query=967:zonecode=10;125:ten_class=%27Private%20Freehold%27

Notes:

The Query Filter layer is added to the Layer List, and identified as filtered by including the (filtered) test in the name of the field. Expanding the symbols in the Layer Manager reveals a RemoveFilter button – to remove the filter.

To obtain the field names for the layers, one has to navigate the ArcGIS REST Services Directory to find the layer, and thus the fieldnames for that layer.

References:

Service Endpoint Details:

Users may need to navigate the ArcGIS REST Services directory to find the field names of layers being served to LISTmap. This can be done through the following URL:

<http://services.thelist.tas.gov.au/arcgis/rest/services>

ArcGIS REST API

http://resources.arcgis.com/en/help/arcgis-rest-api/index.html#/The_ArcGIS_REST_API/02r300000054000000/

ArcGIS Server REST API

<http://services.thelist.tas.gov.au/arcgis/sdk/rest/index.html?catalog.html>