Task 3: Preparing other urban data layers – Catchment Analyser

Description

This exercise introduces the Catchment Analyser tool to produce a single station or multiple stations metric catchment analysis (service area). This exercise requires the Public transport stations dataset and the OS Meridian2 road centre line dataset.

1) **Prepare the project**
   a) Make the public transport layer visible
   b) Make the OS Meridian2 road centre line visible
   c) Start the Catchment Analyser tool from the Space Syntax Toolkit menu or toolbar

2) **Run the catchment analysis for individual origins and all**
   a) The aim of this step is to run the catchment analysis for individual stations and for all stations combined (the minimum distance to any station)
   b) For the network layer, select the OS Meridian2 line layer
   c) For the origin layer, select the Public transport point layer
   d) Leave the custom origin names empty, or check and select 'name_of_st'
   e) For the cost bands, type the following distances: 400,800,1200,1600,2000
   f) Ensure the catchment network is ticked
   g) Click on the "..." button to save the catchment network output as a new shapefile.
   h) Ensure the catchment polygon is ticked
   i) Click on the "..." button to save the catchment polygon output as a new shapefile.
   j) If you leave these blank no files are created, only temporary layers that later need to be saved.
   k) Press run
   l) Two layers are created that show these network catchment bands and polygon bands

3) **Run the catchment analysis for individual lines**
   a) The aim of this step is to run the catchment analysis for individual underground (tube) lines rather than for individual stations
   b) For the network layer, select the OS Meridian2 line layer

c) For the origin layer, select the Public transport point layer

d) Click on the custom origin names

e) Select "lines" in the custom origin name menu

f) This will do the catchment for groups of stations based on the tube line.

g) For the cost bands, type the following distances: 400,800,1200,1600,2000

h) Ensure the catchment network is ticked

i) Click on the "..." button to save the catchment network output as a new shapefile.

j) Ensure the catchment polygon is ticked

k) Click on the "..." button to save the catchment polygon output as a new shapefile.

l) If you leave these blank no files are created, only temporary layers that later need to be saved.

m) Press run

n) Two layers are created that show these network catchment bands and polygon bands

4) **Visualise catchment analysis**

a) To visualise the catchment analysis for individual stations, double click on the "catchment_network" in the layers panel

b) Go to 'Style'

c) Under columns, select the "station" you would like to visualise

d) Click ok

e) This shows the catchment analysis for the individual station.

f) If you want to visualise the catchment analysis for all the stations, double click again on the "catchment_network" under the layers panel

g) Go to 'Style'

h) Under columns, select the "min_dist"

i) Click ok

j) This now shows the catchment analysis for all the stations

k) If you want to visualise the catchment analysis for individual tube lines, double click again on the "catchment_network" from the line results (step 3) under the layers panel

l) Go to 'Style'

m) Under columns, select the "line" you want to visualise (e.g. northern line)

n) Click ok

o) This now shows the catchment analysis from the stations on the specific tube line