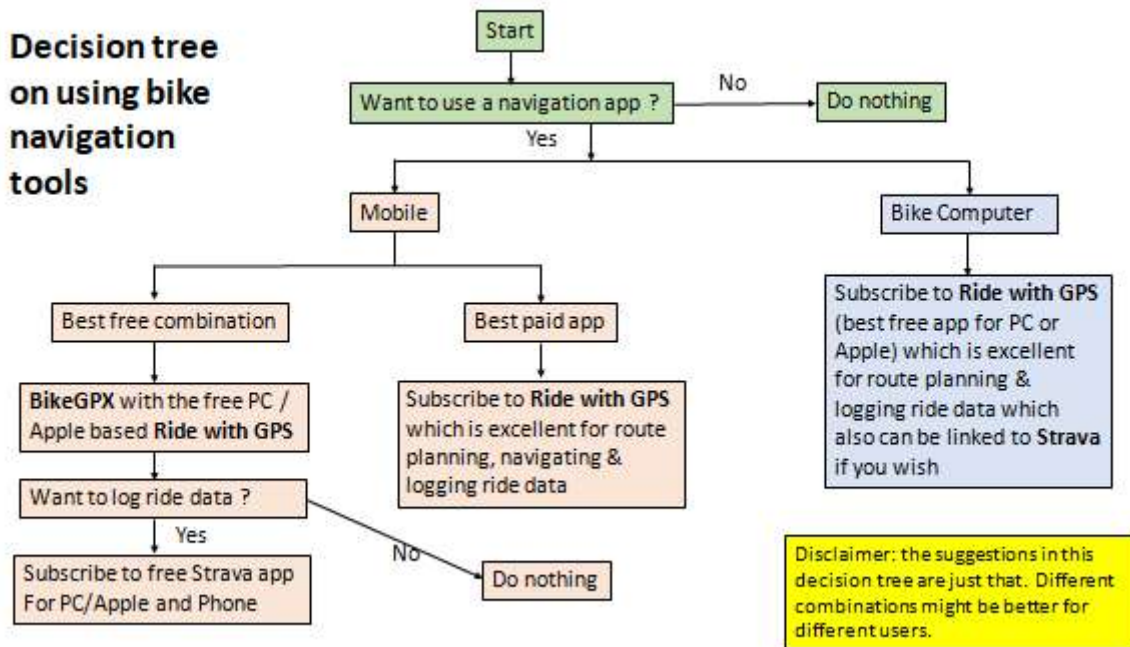


CREATING + USING ROUTES USING GPX FILES (Jan 2024)

What are GPX Files? A GPX file is a type of file that contains a list of precise locations for a route, which can be saved and exchanged between different devices and systems e.g. Ride with GPS, OS Maps, Garmin Connect on bike computer/ phone / laptop

There are various export formats notably **tcx** but the most reliable is **GPX Track**.

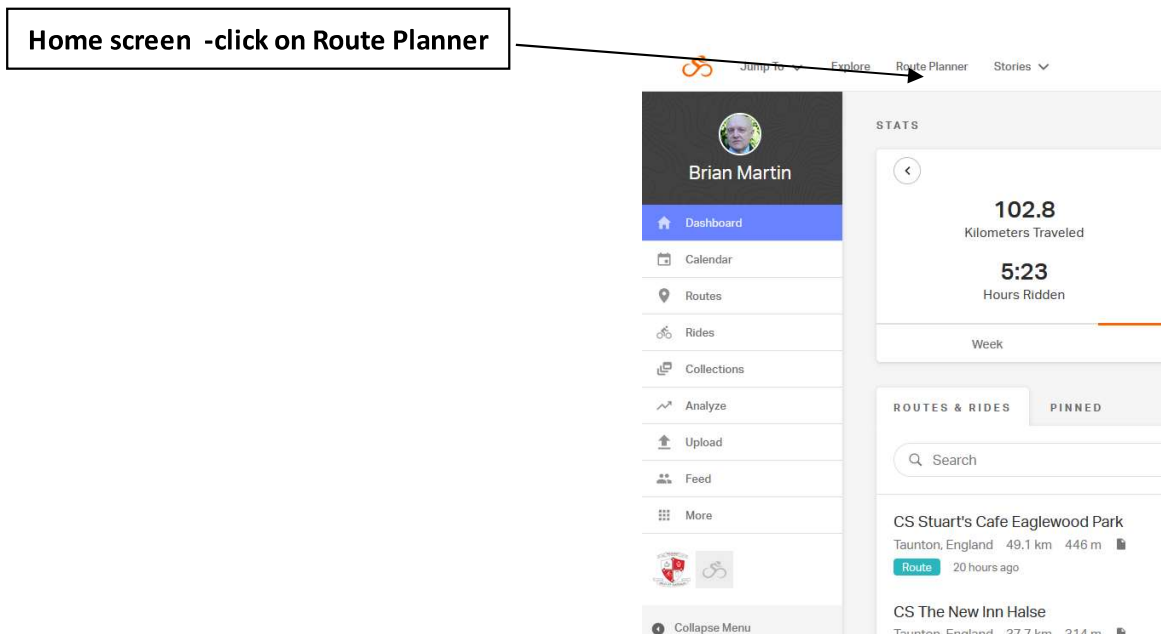


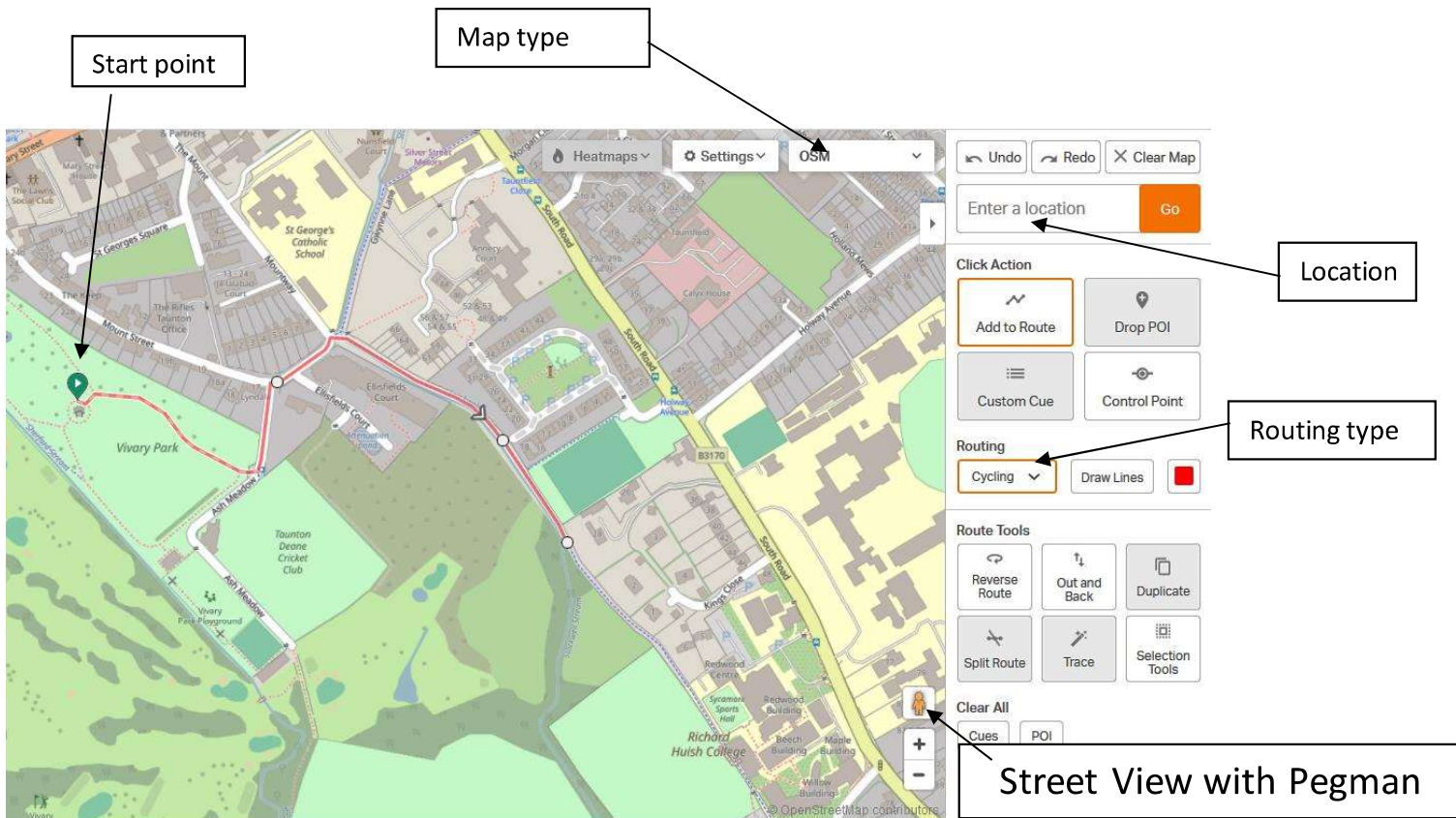
1. FIVE WAYS OF CREATING A GPX FILE FOR A RIDE

(A) **RidewithGPS** (RWGPS) - *probably most commonly used by cyclists*

Free for PC or Apple Computer

Phones or tablets need a subscription for route planning.





1. **Select type of Maps** (8 different types including satellite – the most useful for bike rides is OSM).
2. **Settings** - Imperial or Metric
3. Select the Routing type : Cycling, Driving, or Walking.
(Cycling plots on roads + bike paths, driving sticks to roads and walking selects footpaths. Mostly use cycling but select driving if you want to stick to roads or walking if using short section pavement.)
4. Enter start point into “ location box” + click on Go. (Alternatively, resize the map +click and drag to the start point)
5. The first click (start) will show as green point and will have an arrow in it, subsequent clicks to define the route will show as circles (these are known as control points)
6. click on various points to define your route
7. **Error, just click on ‘undo’.** Save - name it - describe route (optional) – choose ‘public’ / ‘private’ (Private means only you can see the route so if you are a leader and sharing the route use Public).
8. Choose the route - click ‘view’ - click ‘export’ - click GPX Track (.gpx) which will export your gpx file to your PC or Apple.

Google Street View

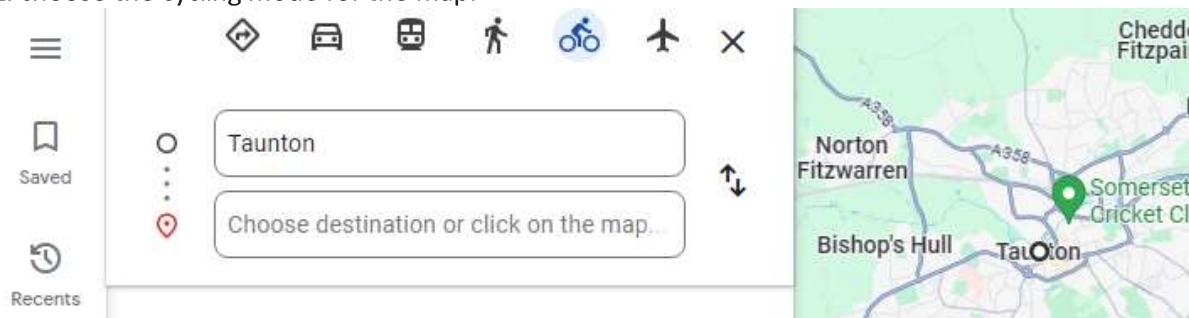
RWGPS has ‘Pegman’ which you drag it to a location and view the road layout (very useful for looking at things like potentially tricky junctions).

To get out of this mode click on the Arrow in the black box

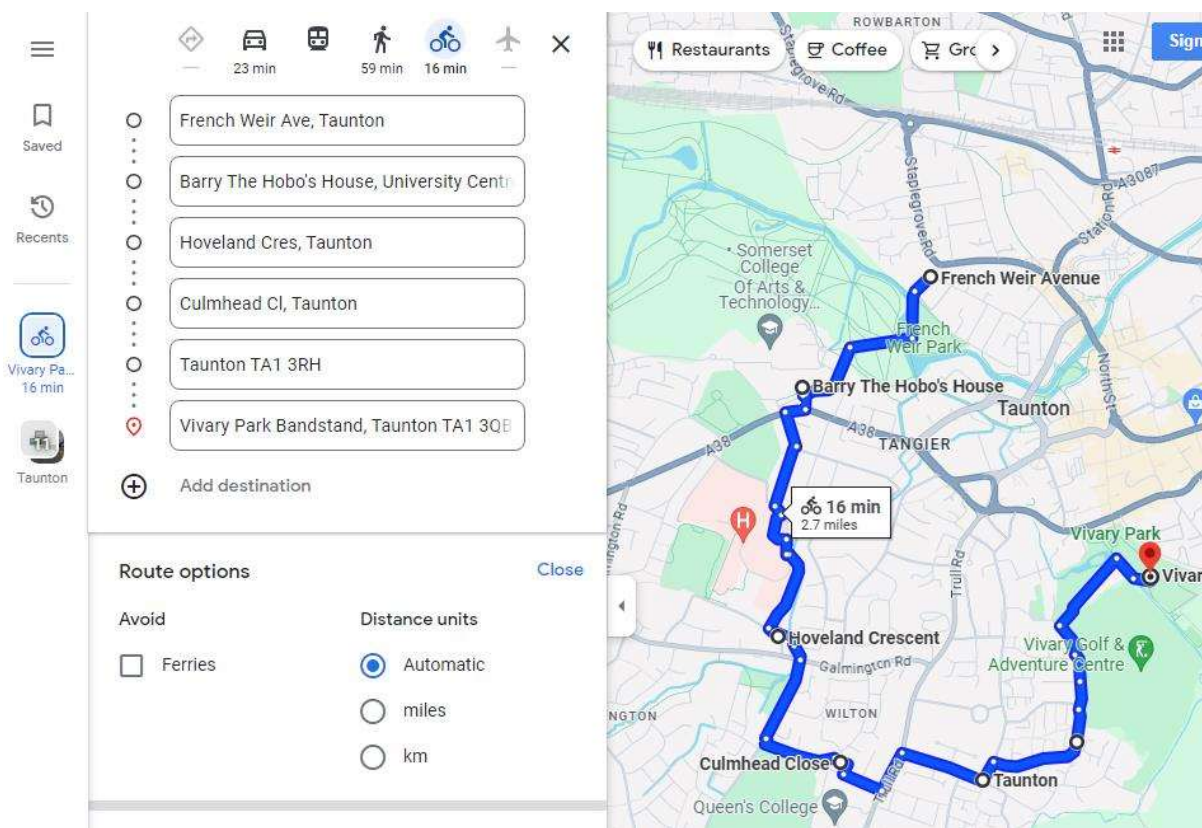


(B) GOOGLE MAPS To create a round trip you need to enter a several waypoints.

1. Click the directions icon.
2. choose the cycling mode for the map.

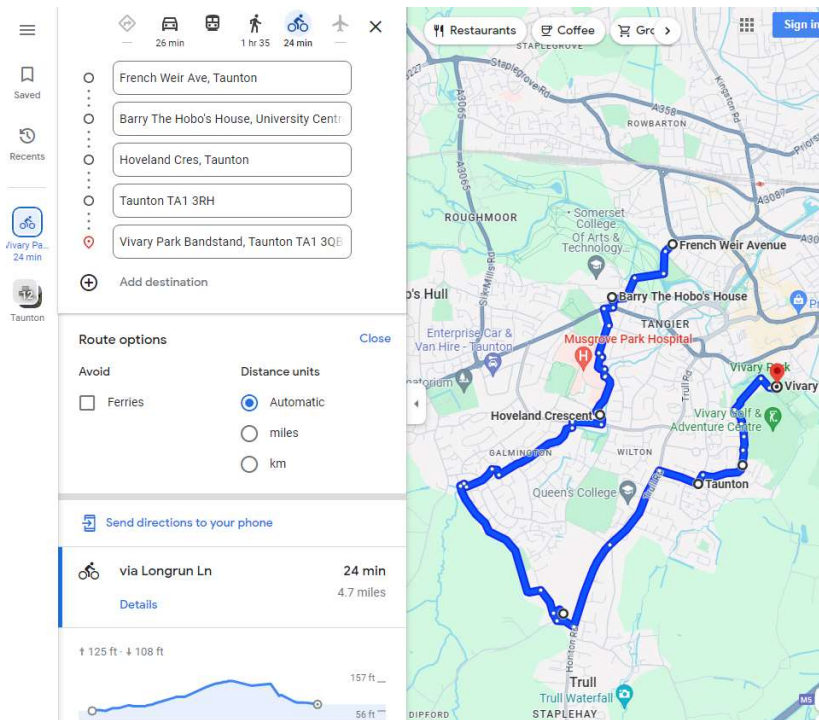


3. Add Waypoints (can change order)



Adjust Your Route (if needed)

Now you can adjust your route. Click and hold any portion of the route to drag it onto a trail or a more bike-friendly road.



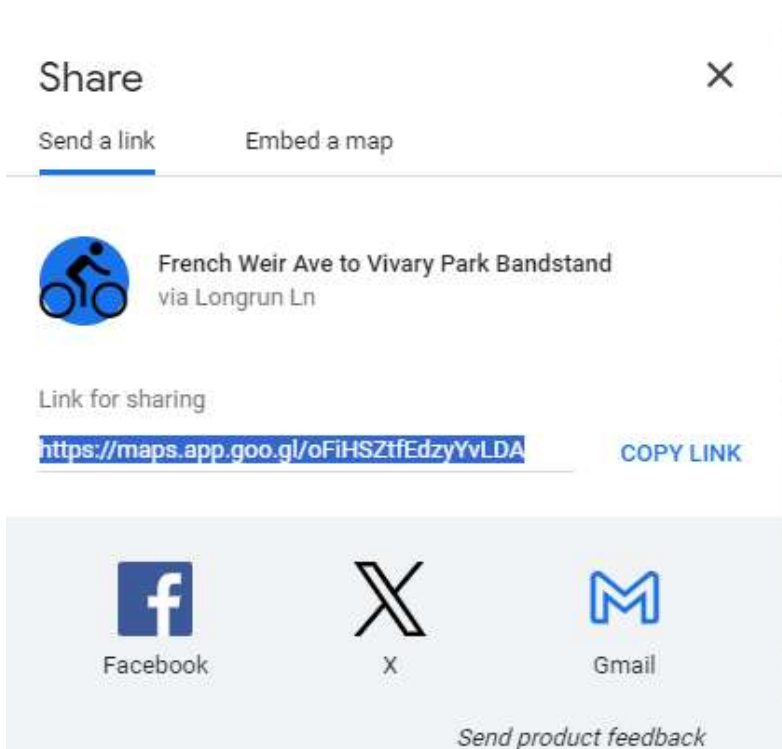
Click, hold, and drag to change your route.

As you change your route, Google will recalculate the total distance and the amount of elevation change. Google Maps shows you the total distance for your route and how much the elevation will change.

CREATE A GPX FILE from Google Maps

- Copy link into <https://mapstogpx.com/> then download file to your computer.
- Alternatively, use GMaps2GPX app to convert the link.
- Rename the file to indicate route.
- Upload to appropriate app or Garmin

Send the Route to Your Mobile



‘Click on send directions to your phone’ then copy link and send it to your mobile phone.

If you are signed into Google on your mobile and on your computer, Google Maps should have your phone available on a list of options. If not, you can email a link to yourself and open that link on your mobile.

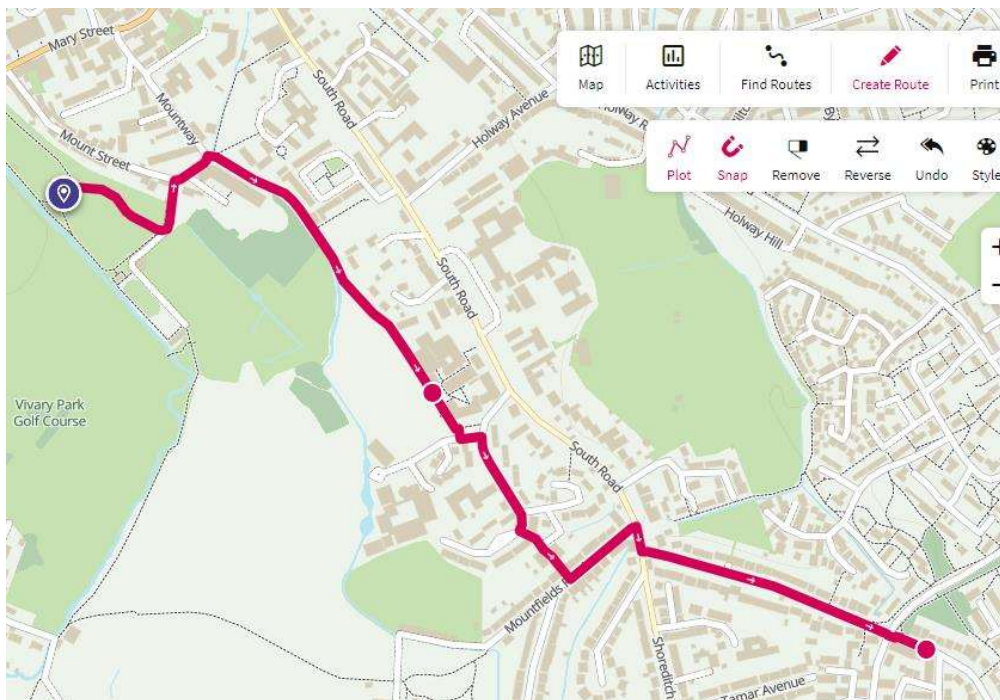
(C) Ordnance Survey

Standard, greenspace, and aerial mapping of Great Britain all for free.

now has 'snap' function to easily follow roads or paths.

Can print OS maps relevant to your trip. Basic app limited. Can record different types of activities.

Feature	Free	Premium
OS Standard Mapping	✓	✓
Plot, record and follow routes	✓	✓
OS Explorer and Land ranger Mapping	✗	✓
Global snap-to-path	✗	✓
National Parks snap-to-path	✗	✓
View purchased maps offline	✓	✓
Import and export routes	✗	✓
Augmented Reality	✗	✓
Aerial 3D	✗	✓



(B) Strava good route planning tool, but you need a subscription to plot a route.

Click on dashboard → My Routes → create new route → choose cycling → create route → Save to My routes.



My Routes / Test

Test

Cycling Route

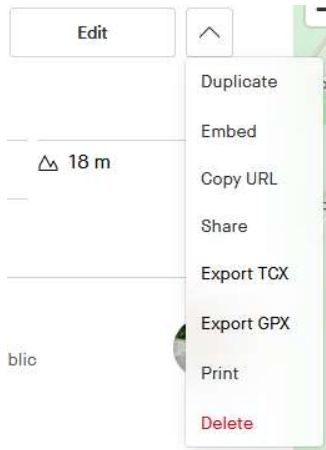


Route and Elevator



If you are using your phone to navigate you will be able to use the file as is. To export to use on a bike computer click the down arrow. This will then give you the series of options shown in the illustration below.

Down Arrow



Select Export GPX which will export the gpx file to your computer.

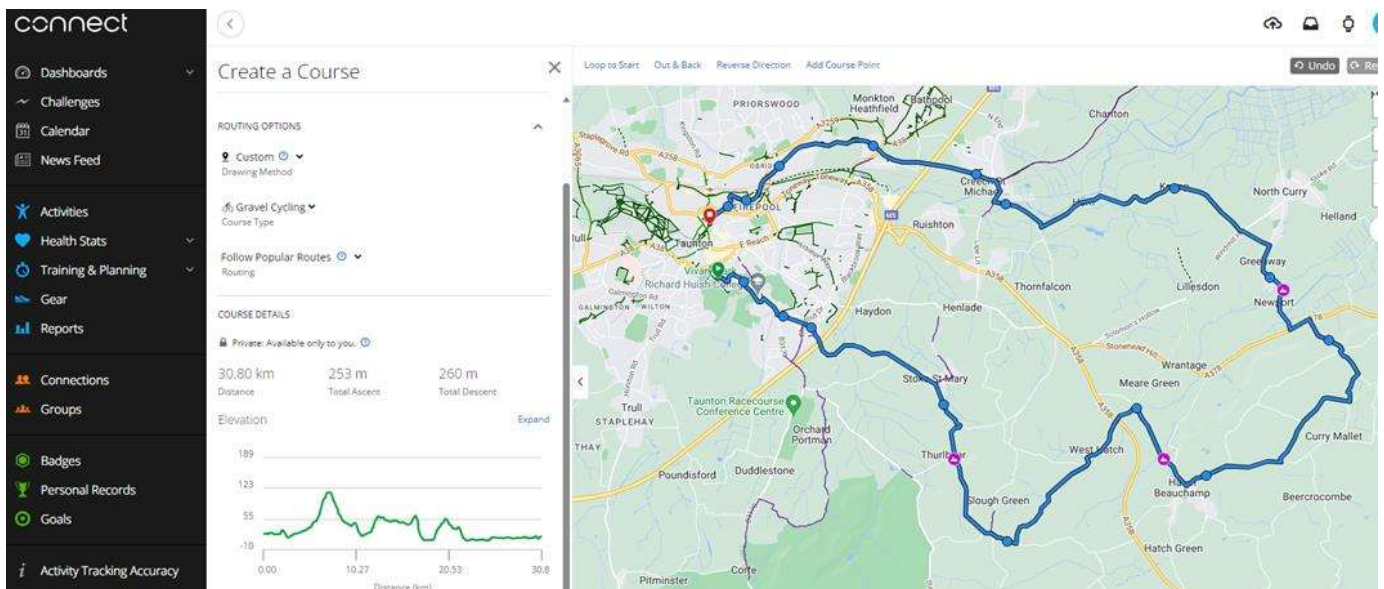
Garmin 'New Files' when Garmin connected to computer (or to your preferred file for later use)

For sections using footpath or new road you may need to switch manual mode on for those sections. When following cycle paths click fairly frequently to prevent going on roads.

(E) GARMIN CONNECT

Select 'Training and Planning' then 'Courses'. Select 'create new' then 'gravel bike' option. Search Taunton UK (or other start point).

Click start point and then subsequent junctions/paths.



2. USING A GPX FILE TO FOLLOW A ROUTE

2a GOOGLE MAPS (free)

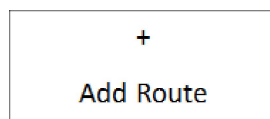
Turn on audio to hear directions after starting navigation.

2b USING PHONE (small one off payment) + advise small external battery.

BikeGPX app is available free for apple and android phones.

For under £10 you can purchase a one off upgrade the app to 'premium' to have reminder beeps before turnings. This could be very useful when your phone is dimmed to conserve battery.

DOWNLOAD a route. Click in box



From computer: Open BikeGPX on your laptop/tablet. Click in box to upload file.
After selecting GPX file a QR code is created.
Scan QR code to upload route to your phone.

From website e.g. Ridewithgps - Choose a route you would like to ride (e.g., from the club website),
copy the URL (e.g. <https://ridewithgps.com/routes/34577867>).

Open BikeGPX app, select add route, select enter a web address then
paste <https://ridewithgps.com/routes/34577867> . You now have the route on your phone.

Conserving phone battery

Before using the app make sure your phone is fully charged.

Have a USB battery pack to ensure you do not drain your phone battery + allows brighter screen.

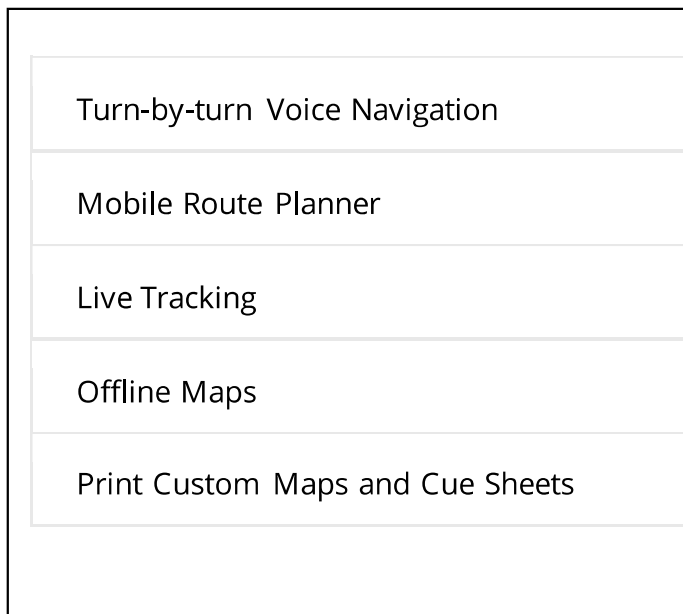
If you take a short cut on your ride the app recognises when you re-join your planned route

SUGGESTED SETTINGS:

Display, units and alerts	2D , autorotate Km (1km = 1 square on OS map)
Battery and power	Disable screen lock= on Dim screen automatically Dim after 30 seconds (to conserve battery) Dimmed brightness 5%
Account	n/a
Dashboard gauges	All off
Bluetooth sensors	off
Tracklog recording	Switch on to record a ride

2c USING PHONE WITH REGULAR SUBSCRIPTION

RidewithGPS requires annual subscription to have map + directions on a phone.



2d USING A GARMIN BIKE COMPUTER:

First consider RECOMMENDED SETTINGS

Open 'Tools' (spanner) - Activity profiles -profile - navigation

1. settings for MAP (a)orientation ('north up' = map view or 'track up' = 'satnav' view),
(b) autozoom on,
(c) guide text 'always display',
(d) map visibility auto
2. settings for ROUTING go back to navigation and choose settings for ROUTING

- (a) Activity - Cycling (avoids unpaved roads + narrow lanes) or MTB (for off road, switch off 'Lock on road' as can take you down an adjacent road)
- (b) Recalculation- Switch off (can take you home rather than destination if riding on wrong side of road + uses battery)
- (c) Avoidance setup – disable all (this allows you to avoid tolls, major roads, unpaved roads)

For turn-by-turn directions with a base map installed e.g. on Edge 810:
Settings accessible from Activity Profiles:

UPLOAD A GPX FILE to GARMIN COMPUTER

(a) Connect Garmin to PC – select Garmin drive garminfolder, choose 'NewFiles'. Drag GPX file to 'New Files' folder then 'safely remove' your Garmin from PC.

OR (b) Install Garmin Express, Connect Garmin to PC, click on 'Garmin' and open 'Garmin' folder - Sync files.

OR (c) send to a device (iPhone with RidewithGPS app, new Garmin)



NOW USE YOUR GARMIN ON A RIDE

- Open files (left bottom of screen) and open courses, select a course (or section)
- select '**RIDE**', select **tick** want to go to beginning of course or **X** if you are starting part way round course (e.g. after coffee stop).

2d WAHOO CYCLE COMPUTER

To use a GPX file with Wahoo, you can follow these steps:

Open the ELEMNT app on your phone. Tap the "Workout" tab and select "Choose a route".

Pair your ELEMNT device with your phone. Select your route using the button at the top.



3. COMPARISON GPX SYSTEMS

Attribute	Ride with GPS	Strava	OS maps	Google Maps	Garmin Connect	BikeGPX
Main functions	Plan Route Navigation Performance	Plan Route Navigation Performance Social App	Plan Route Navigation	Plan + follow routes	create routes for Garmin Devices	PHONE BASED Navigation
Record ride	Yes (premium version)	Yes (premium version)	No	No	Yes	Yes
Map quality	Very good	Good	Good	OK	OK	OK
Range maps	8	3	3 + overlays	limited	3	1
Maps worldwide	Yes	Yes	Yes	Yes	Yes	Yes
create a route	Very easy	Very easy	1 st time not intuitive	Yes	Very easy	N/A
edit a route	Very easy	Very easy	Easy	N/A	Very easy	N/A
Pegman Street view	Yes	No	No	Yes	No	N/A
'Snap' to route	Yes	Yes	Yes	Yes (may deviate)	Yes	N/A
Export GPX, TCX files	Yes	Yes	Yes	No	Yes	N/A
Use on phone	Yes	Yes	Yes	Yes	Yes	Only on phone
PC / Apple route planning	FREE	PAY	PAY	FREE	FREE	N/A
Phone route planning	PAY	PAY	PAY	FREE	FREE	N/A
basic app	FREE	FREE	FREE	FREE	FREE	FREE
Phone App navigation	Yes	Yes	Yes	Yes	No	Yes
Premium Annual subscription	80\$ only needed for phone navigation	£54.99 - features include live route logging	£24.99	Free	Free	£5.99 one- off app cost

OTHER APPS

Attribute	Komoot	Cycle Travel	Bike Map	Map my Ride	WAHOO bike computer
Main functions	Plan Route Navigation	A to B routes. (for use other cyclists)	Plan Route Navigation	Plan Route Navigation	Navigation Record
Record ride	Yes	No	Yes	No	Yes
Map quality	Good	Reasonable	Good	Good	Good
Range maps	2 more in premium	4	9	7	
Maps worldwide	Yes	Yes	Yes	Yes	Yes
create a route	Easy, bit fiddly	Easy, bit fiddly	Easy	Easy, bit fiddly	No
edit a route	Very easy	easy	Easy	Easy, bit fiddly	No
Pegman Street view	No	No	No	Yes	No
'Snap' to route	Yes	Yes	Yes	Yes	No
Export GPX, TCX files	Yes	Yes	Yes	GPX	Yes
Use on phone	Yes	Yes	Yes	Yes	No
PC / Apple route planning	No	No	No	No	No
Phone route planning	Pay	No	No	No	No
basic app	Free	Free	Free	Free	N/A
Phone App navigation	Yes	Yes	Yes	Yes	N/A
Premium Annual subscription	£60 (£40 year 1) Includes live logging	Free	39 €	Free	N/A