

# Assignment 6

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```
library(ggmap)

## Loading required package: ggplot2
bude <- geocode("Bude, UK")

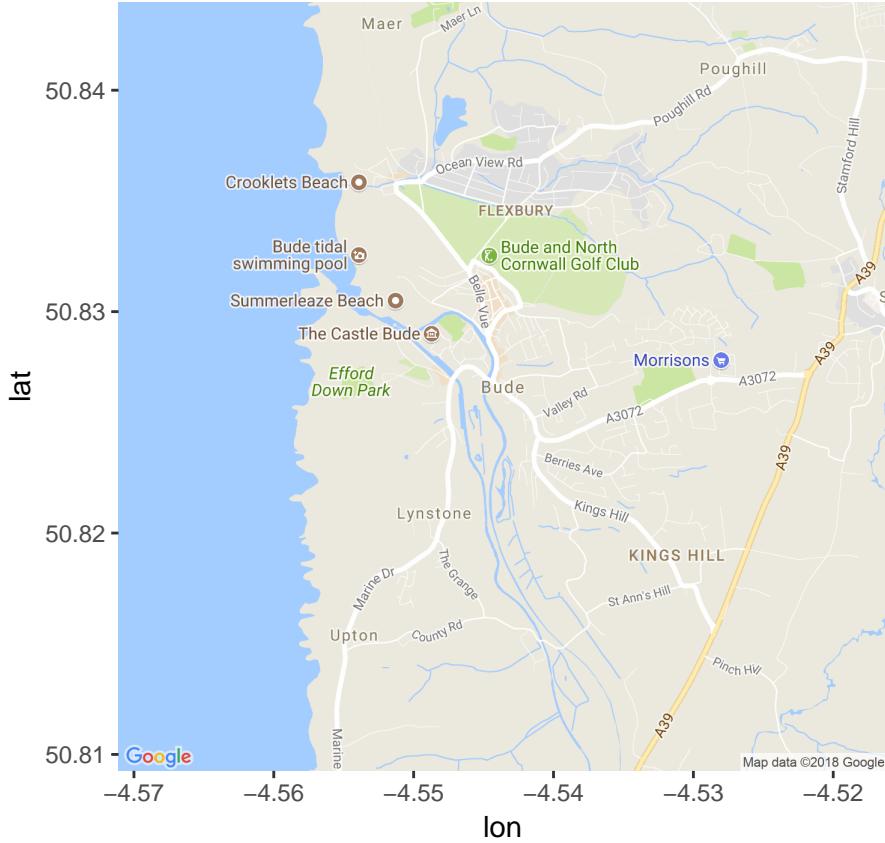
## Information from URL : http://maps.googleapis.com/maps/api/geocode/json?address=Bude,%20UK&sensor=fai
beach <- geocode(c("Summerleaze Beach Bude UK", "Crooklets Beach Bude UK"))

## Information from URL : http://maps.googleapis.com/maps/api/geocode/json?address=Summerleaze%20Beach%
## Information from URL : http://maps.googleapis.com/maps/api/geocode/json?address=Crooklets%20Beach%20
## Warning: geocode failed with status OVER_QUERY_LIMIT, location = "Crooklets
## Beach Bude UK"
```

## roadmap

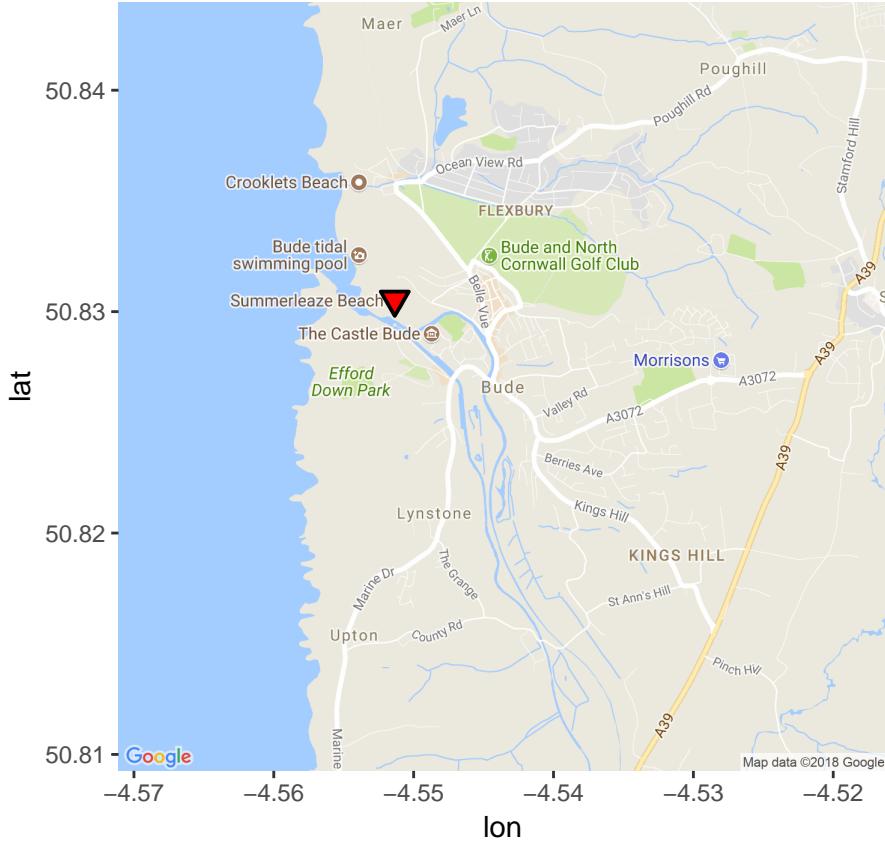
```
budemap <- get_map(bude, zoom=14, maptype="roadmap")

## Map from URL : http://maps.googleapis.com/maps/api/staticmap?center=50.826636,-4.543678&zoom=14&size=640x480
ggmap(budemap)
```



```
#two beaches
ggmap(budemap)+geom_point(
  aes(x=lon,y=lat),data=beach,fill="red",size=3,stroke=1)
```

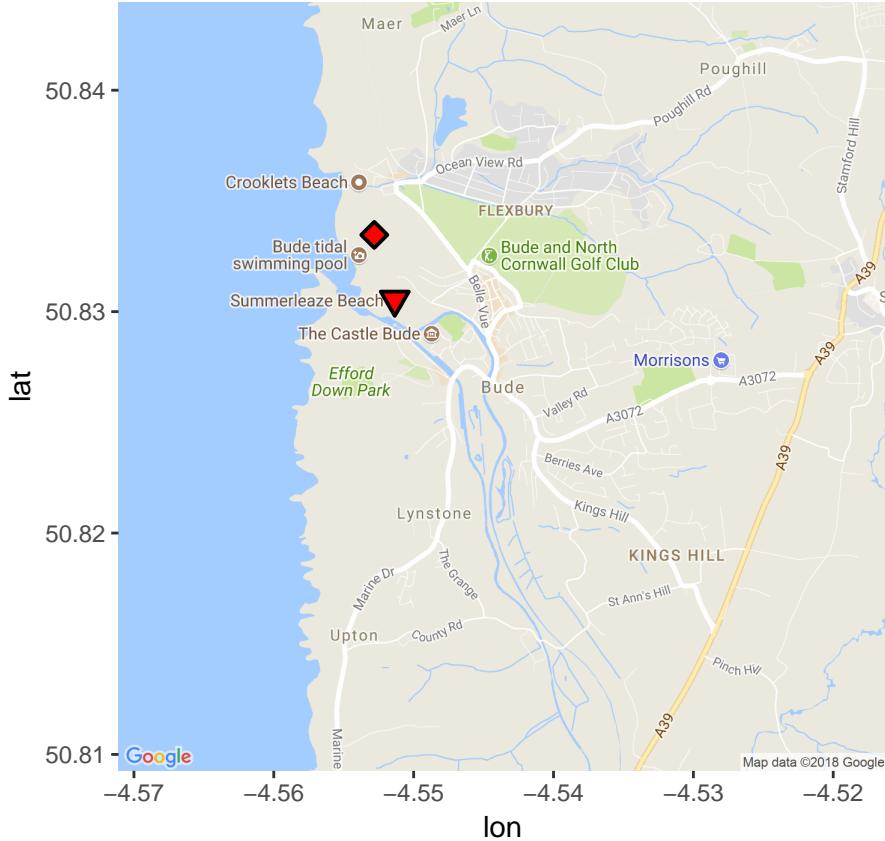
```
## Warning: Removed 1 rows containing missing values (geom_point).
```



```
#cricket ground
cricket <- geocode("Cricket Club Bude, UK")

## Information from URL : http://maps.googleapis.com/maps/api/geocode/json?address=Cricket%20Club%20Bude
ggmap(budemap)+geom_point(
  aes(x=lon,y=lat),data=beach,fill="red",size=25,stroke=1)+geom_point(
  aes(x=lon,y=lat),data=cricket,fill="red",size=3,stroke=1)

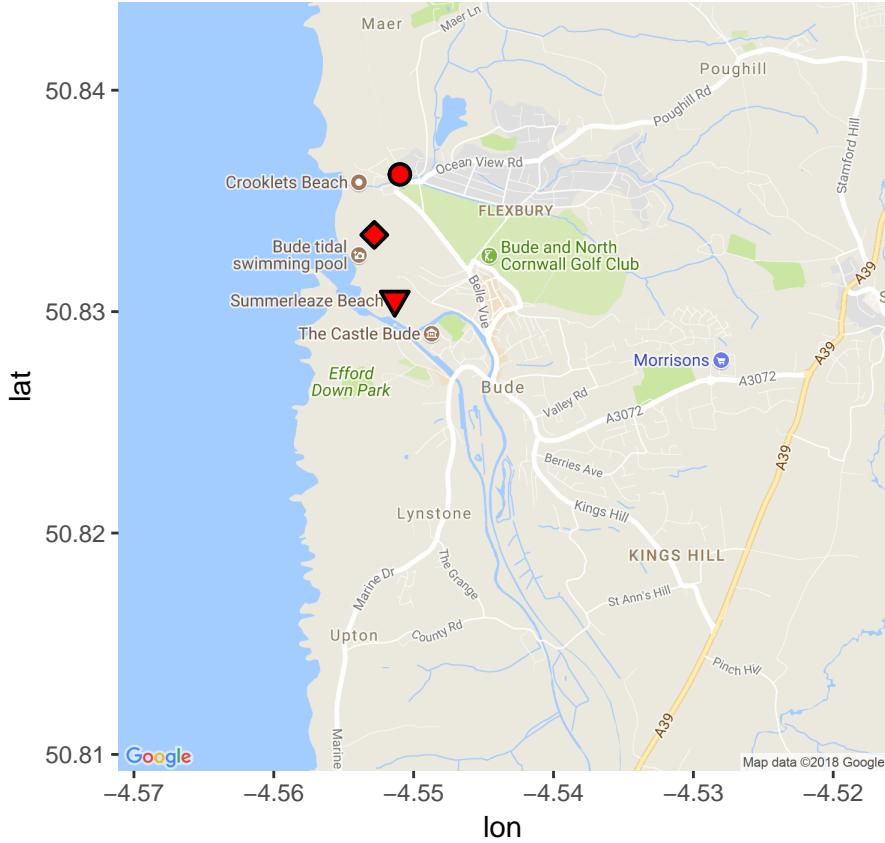
## Warning: Removed 1 rows containing missing values (geom_point).
```



```
#a nearby pub
pub <- geocode("Crooklets Inn Bude ,UK")

## Information from URL : http://maps.googleapis.com/maps/api/geocode/json?address=Crooklets%20Inn%20Bude
ggmap(budemap)+geom_point(
  aes(x=lon,y=lat),data=beach,fill="red",size=3,shape=25,stroke=1)+geom_point(
  aes(x=lon,y=lat),data=cricket,fill="red",size=3,shape=23,stroke=1)+geom_point(
  aes(x=lon,y=lat),data=pub,fill="red",size=3,shape=21,stroke=1)

## Warning: Removed 1 rows containing missing values (geom_point).
```

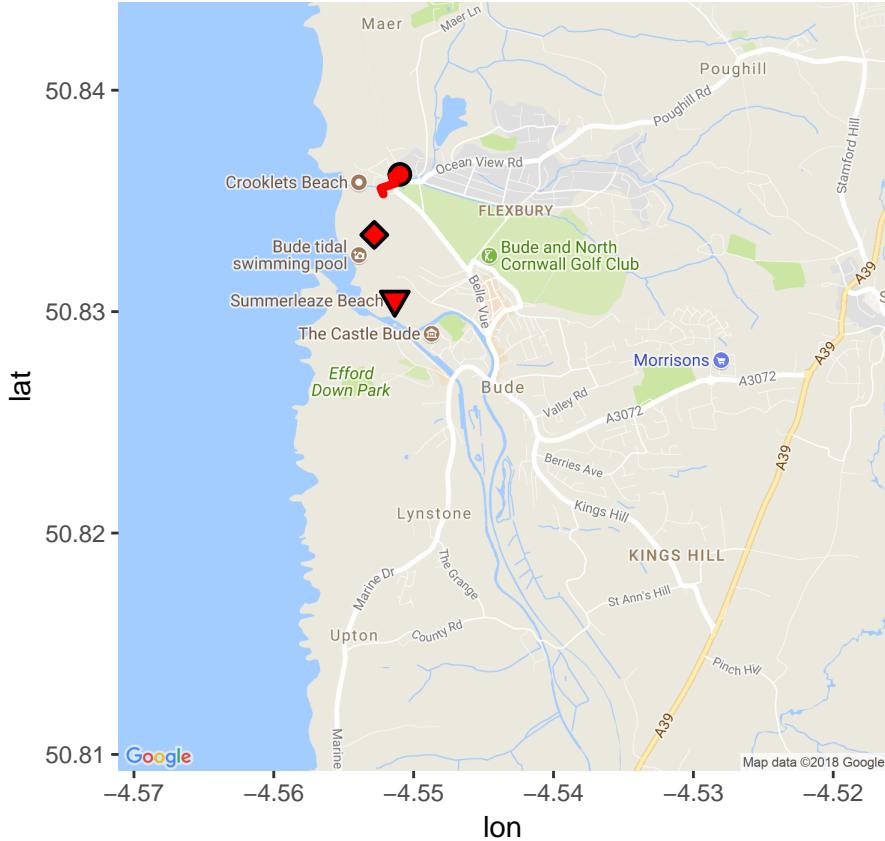


```
#route from cricket ground to the pub
```

```
from <- "Cricket Club Bude, UK"
to <- "Crooklets Inn Bude, UK"
route <- route(from,to,structure="route")
```

```
## Information from URL : http://maps.googleapis.com/maps/api/directions/json?origin=Cricket+Club+Bude,
ggmap(budemap)+geom_point(
  aes(x=lon,y=lat),data=beach,fill="red",size=3,shape=25,stroke=1)+geom_point(
    aes(x=lon,y=lat),data=cricket,fill="red",size=3,shape=23,stroke=1)+geom_point(
      aes(x=lon,y=lat),data=pub,fill="red",size=3,stroke=1)+geom_path(
        aes(x = lon, y = lat), colour = "red", size = 1.5,
        data = route, lineend = "round"
  )
```

```
## Warning: Removed 1 rows containing missing values (geom_point).
```

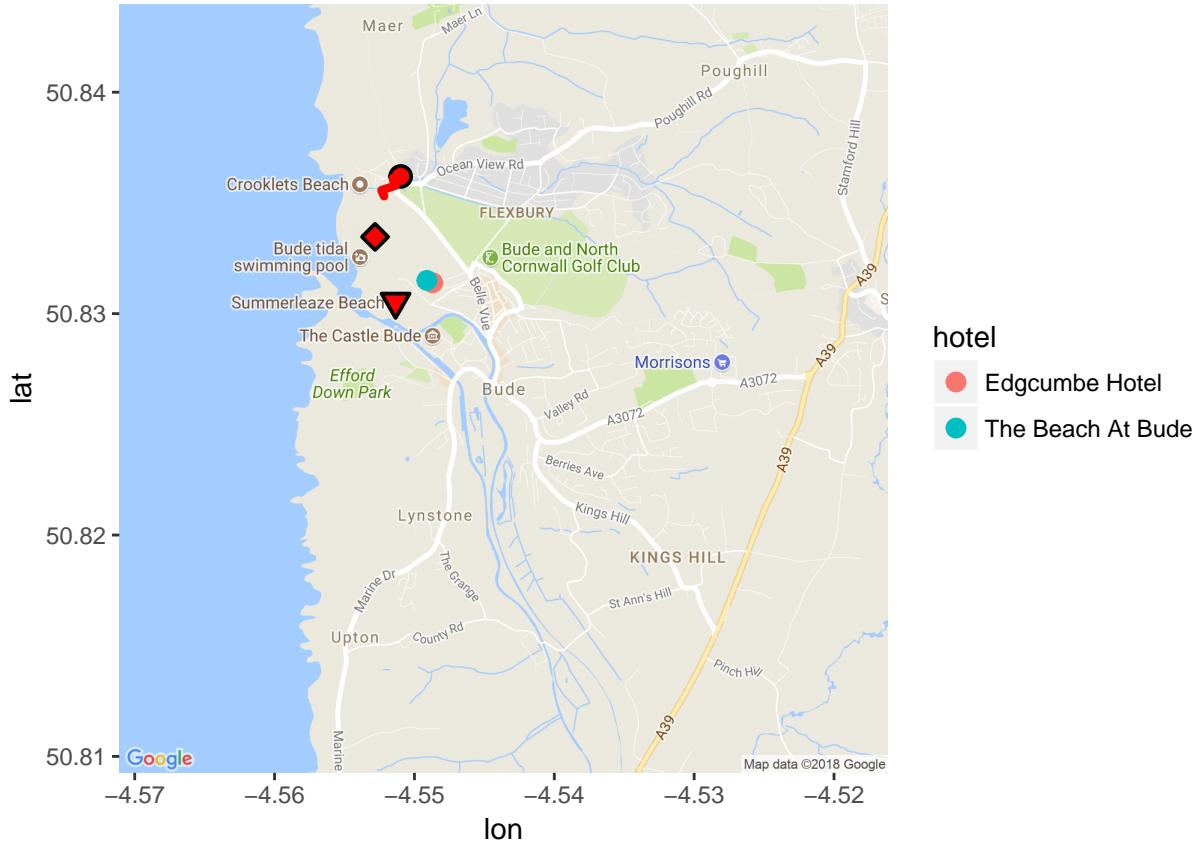


#Hotels

```
hotel.d <- data.frame(lat=c(50.831393,50.831501),
                       lon=c(-4.548689,-4.549108),
                       hotel=c("Edgcumbe Hotel","The Beach At Bude"))

ggmap(budemap)+geom_point(
  aes(x=lon,y=lat),data=beach,fill="red",size=3,shape=25,stroke=1)+geom_point(
    aes(x=lon,y=lat),data=cricket,fill="red",size=3,shape=23,stroke=1)+geom_point(
      aes(x=lon,y=lat),data=pub,fill="red",size=3,shape=21,stroke=1)+geom_path(
        aes(x = lon, y = lat), colour = "red", size = 1.5,
        data = route, lineend = "round"
)+ geom_point(dat = hotel.d, aes(x=lon, y=lat, color = hotel),size = 3)

## Warning: Removed 1 rows containing missing values (geom_point).
```

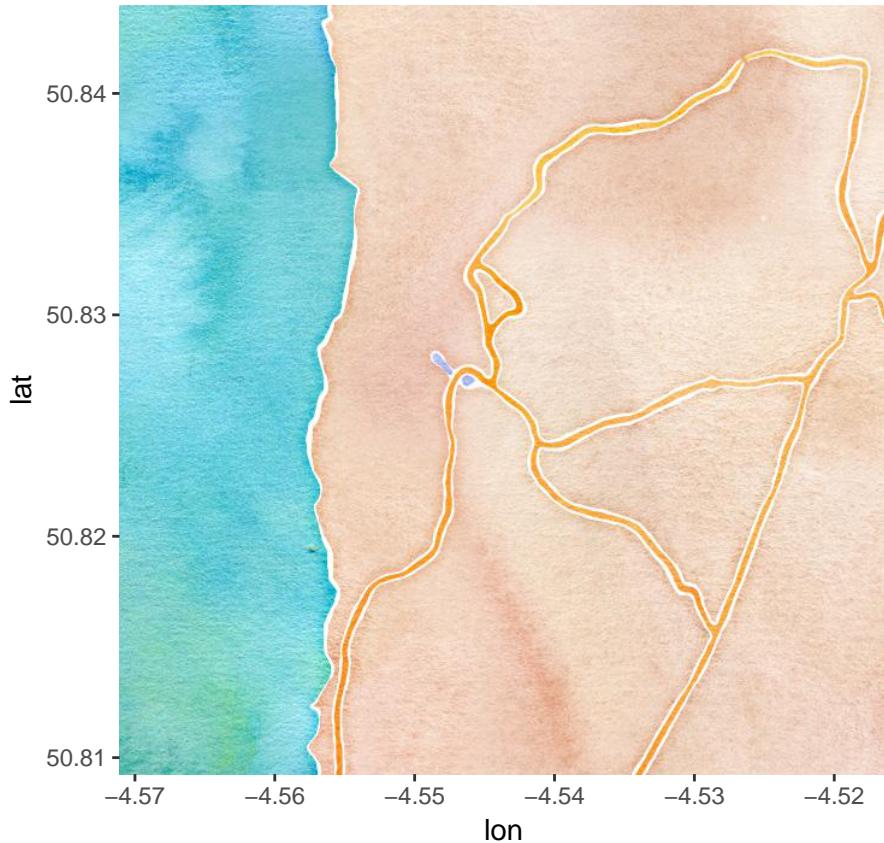


## watercolor

```
budemap1 <- get_map(bude, zoom=14, maptype="watercolor")

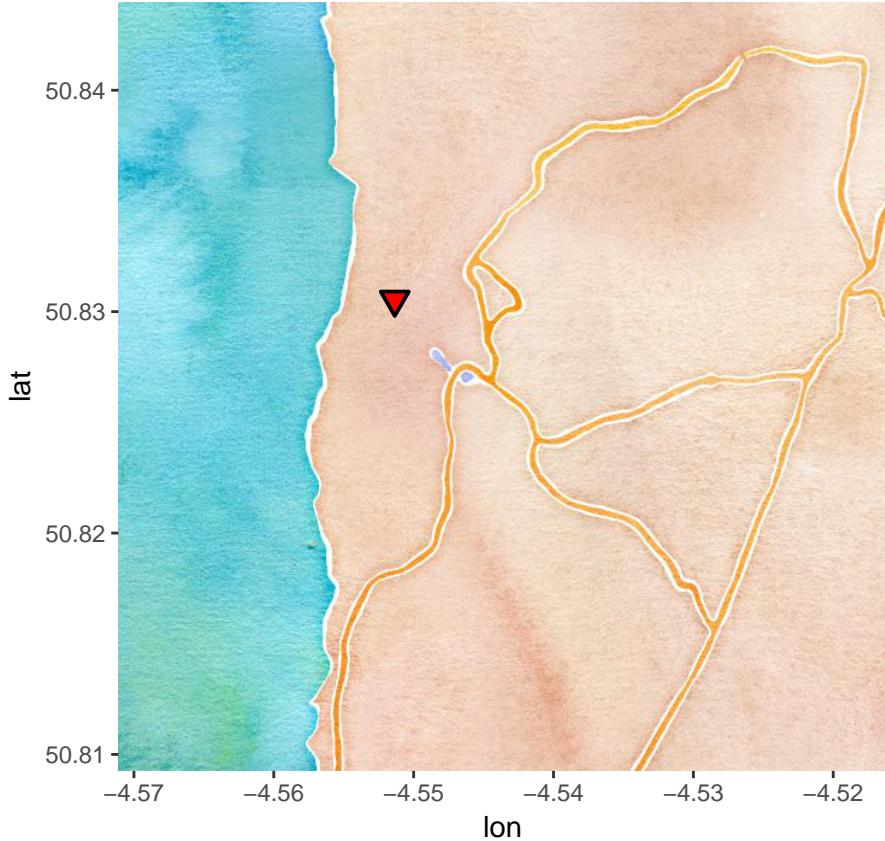
## maptype = "watercolor" is only available with source = "stamen".
## resetting to source = "stamen"...
## Map from URL : http://maps.googleapis.com/maps/api/staticmap?center=50.826636,-4.543678&zoom=14&size=640x640
## Map from URL : http://tile.stamen.com/watercolor/14/7983/5496.jpg
## Map from URL : http://tile.stamen.com/watercolor/14/7984/5496.jpg
## Map from URL : http://tile.stamen.com/watercolor/14/7985/5496.jpg
## Map from URL : http://tile.stamen.com/watercolor/14/7986/5496.jpg
## Map from URL : http://tile.stamen.com/watercolor/14/7983/5497.jpg
## Map from URL : http://tile.stamen.com/watercolor/14/7984/5497.jpg
## Map from URL : http://tile.stamen.com/watercolor/14/7985/5497.jpg
## Map from URL : http://tile.stamen.com/watercolor/14/7986/5497.jpg
## Map from URL : http://tile.stamen.com/watercolor/14/7983/5498.jpg
## Map from URL : http://tile.stamen.com/watercolor/14/7984/5498.jpg
```

```
## Map from URL : http://tile.stamen.com/watercolor/14/7985/5498.jpg
## Map from URL : http://tile.stamen.com/watercolor/14/7986/5498.jpg
ggmap(budemap1)
```



```
#two beaches
ggmap(budemap1)+geom_point(
  aes(x=lon,y=lat),data=beach,fill="red",size=3,stroke=1)

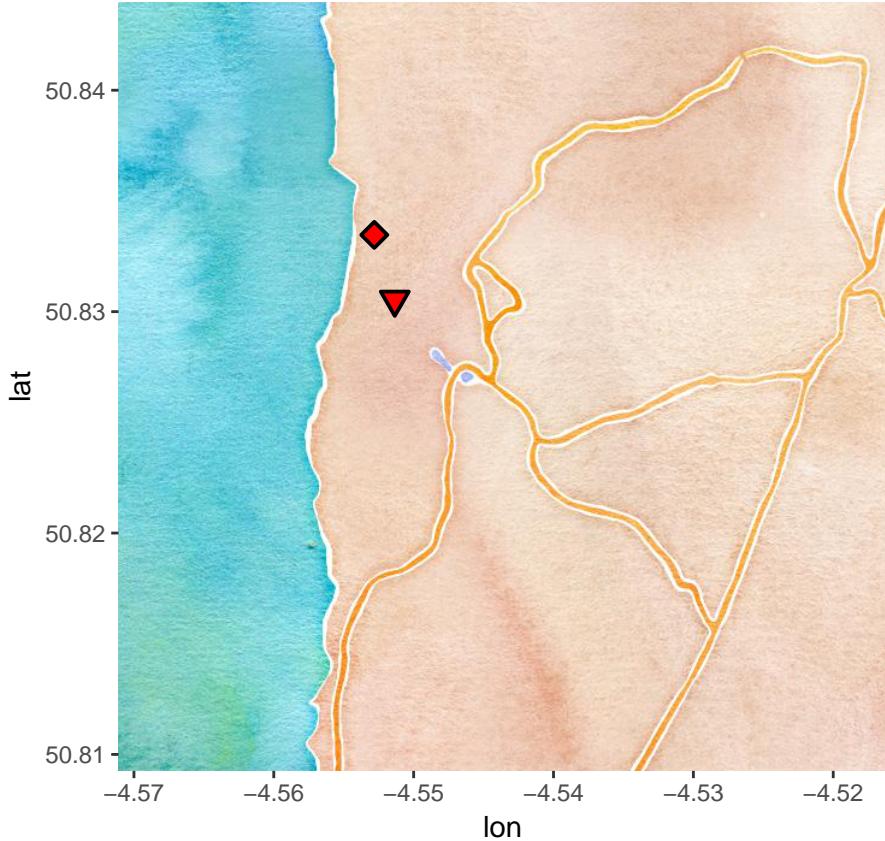
## Warning: Removed 1 rows containing missing values (geom_point).
```



```
#cricket ground
cricket <- geocode("Cricket Club Bude ,UK")

## Information from URL : http://maps.googleapis.com/maps/api/geocode/json?address=Cricket%20Club%20Bude
ggmap(budemap1)+geom_point(
  aes(x=lon,y=lat),data=beach,fill="red",size=3,stroke=1)+geom_point(
  aes(x=lon,y=lat),data=cricket,fill="red",size=3,stroke=1)

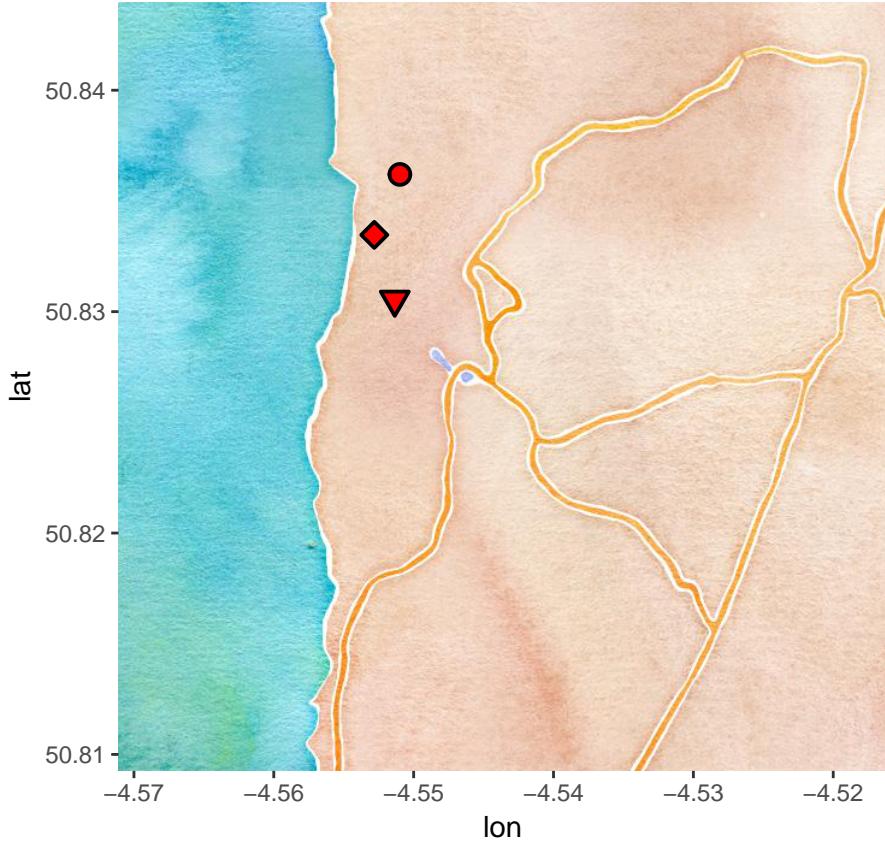
## Warning: Removed 1 rows containing missing values (geom_point).
```



```
#a nearby pub
pub <- geocode("Crooklets Inn Bude ,UK")

## Information from URL : http://maps.googleapis.com/maps/api/geocode/json?address=Crooklets%20Inn%20Bude
ggmap(budemap1)+geom_point(
  aes(x=lon,y=lat),data=beach,fill="red",size=3,stroke=1)+geom_point(
    aes(x=lon,y=lat),data=cricket,fill="red",size=3,stroke=1)+geom_point(
      aes(x=lon,y=lat),data=pub,fill="red",size=3,stroke=1)

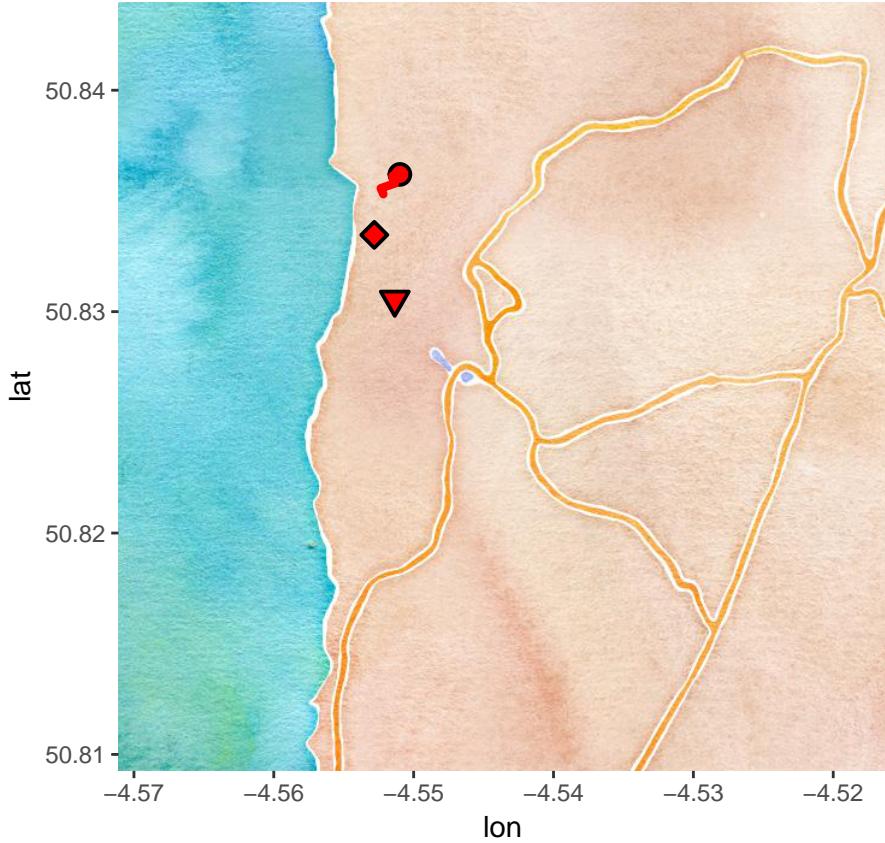
## Warning: Removed 1 rows containing missing values (geom_point).
```



```
#route from cricket ground to the pub
from <- "Cricket Club Bude ,UK"
to <- "Crooklets Inn Bude ,UK"
route <- route(from,to,structure="route")

## Information from URL : http://maps.googleapis.com/maps/api/directions/json?origin=Cricket+Club+Bude+
ggmap(budemap1)+geom_point(
  aes(x=lon,y=lat),data=beach,fill="red",size=25,stroke=1)+geom_point(
    aes(x=lon,y=lat),data=cricket,fill="red",size=3,shape=23,stroke=1)+geom_point(
      aes(x=lon,y=lat),data=pub,fill="red",size=3,shape=21,stroke=1)+geom_path(
        aes(x = lon, y = lat), colour = "red", size = 1.5,
        data = route, lineend = "round"
      )

## Warning: Removed 1 rows containing missing values (geom_point).
```



```
ggmap(budemap1)+geom_point(  
  aes(x=lon,y=lat),data=beach,fill="red",size=3,shape=25,stroke=1)+geom_point(  
  aes(x=lon,y=lat),data=cricket,fill="red",size=3,shape=23,stroke=1)+geom_point(  
  aes(x=lon,y=lat),data=pub,fill="red",size=3,shape=21,stroke=1)+geom_path(  
  aes(x = lon, y = lat), colour = "red", size = 1.5,  
  data = route, lineend = "round"  
)  
  
## Warning: Removed 1 rows containing missing values (geom_point).
```

