

# Case Study

## Torbay Workforce Heatmapping



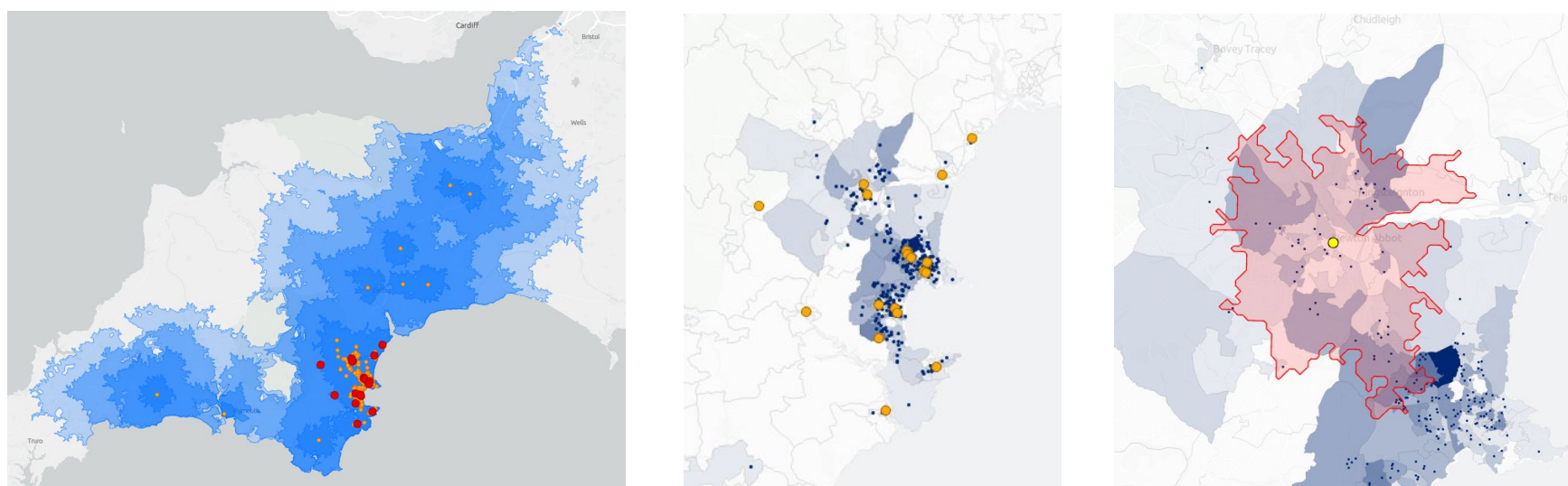
**Client:** Torbay and South Devon NHS Foundation Trust  
**Project:** Torbay Workforce Heatmapping  
**Services Provided:** Travel heatmaps / Maps and Isochrones describing workforce addresses and travel catchments from workplaces.  
**Timescales:** Analysis was delivered within 2 weeks of receiving the anonymised list of staff home postcodes



**The brief for the project was to provide detailed analysis and visual maps demonstrating the locations of workforce members who had been identified as possibly shifting to hybrid working, nearby workplaces, and the journeys between. This was to support the Trust's workforce and capital development planning.**

Working with SDHIP, the gbp consult team were given a list of postcodes and unique identifiers pertaining to workforce members, and the postcodes of the 20 sites.

The output of the analysis was a visual 'heatmap' clearly showing the most appropriate clusters of matched home locations and workplace sites, as well as a library of maps visualising this heatmap data.



### Activities undertaken by gbp partnerships:

- The postcodes were converted to longitude and latitude points and imported into ArcGIS Pro (specialist mapping software).
- Distances and times taken to travel were then calculated by every permutation of staff member and worksite, via driving and public transport separately.
- The acquired data was then structured and formatted into four heatmap displays (*see following pages*), categorised by mode of transport and the distance and duration of each journey.
- Using ArcGIS and the TravelTime plugin several maps were produced to demonstrate:
  - The location of workforce members and the density of workforce per Lower Super Output Area (LSOA)\*, alongside the locations of the worksites.
  - Isochrone maps of distances from each workforce postcode, in 15-minute bands.
  - Isochrone maps for each site indicating the 15-minute drive catchment and each workforce member in the nearby area.



### Our Impact:

**gbp's work provided the Trust with detailed data and analysis to support the development of an hybrid working strategy for non-clinical and clinical administrative functions across 20 sites.** We utilised comprehensive tools and understanding to create descriptive tools for the Trust to be better informed for future decision-making.



### Sustainability:

- Reduced need for non-clinical space on acute sites, overall reduction in estate requirements when analysed at a system level.
- Reduced pressure on car parking in high traffic areas surrounding acute sites.
- Reduced travel time for staff, increased likelihood of staff using green travel options.
- Improved staff wellbeing due to reduced commuting requirements.

\* **Super Output Areas** are geographic areas designed to improve the reporting of small area statistics in England and Wales. There is a hierarchy of areas, with the Lower (LSOA) being the smallest possible.

### Information on each employer, including:

- Location information (LSOA\* Code, District, LSOA\*, Postcode)
- Unique identifier (anonymised code per person – provided by the client),
- Extra information to the behest of the client (“On Site?”)

### The 20 locations we were tasked to evaluate:

- Grouped via colours by their proximity to each other, ensuring patterns (‘blocks’ of colour) were easier to identify.

LSOA Code	District	LSOA	RAND	Postcode	On Site?	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6	Location 7	Location 8	Location 9	Location 10	Location 11	Location 12	Location 13	Location 14	Location 15	Location 16	Location 17	Location 18	Location 19	Location 20
E01018759	Cornwall	Cornwall 028A	ABC1	AB12 CDE	No	54.01	57.74	49.09	49.26	48.34	48.75	49.25	48.79	49.53	48.83	49.08	49.35	46.55	46.21	46.98	45.94	41.75	50.23	47.24	40.82
E01019893	East Devon	East Devon 006C	ABC2	AB12 CDF	No	19.82	18.26	22.73	21.77	21.74	25.58	26.07	25.61	27.36	27.76	27.67	26.17	29.09	28.41	29.40	30.86	25.45	34.10	41.31	31.16
E01019944	East Devon	East Devon 008E	ABC3	AB12 CDG	No	24.23	22.67	27.13	26.18	26.15	29.98	30.47	30.02	31.76	32.16	32.07	30.58	33.49	32.81	33.81	35.26	29.86	38.51	45.71	35.56
E01033233	Exeter	Exeter 001F	ABC4	AB12 CDH	No	16.00	14.44	18.90	17.95	17.92	21.75	22.24	21.78	23.53	23.93	23.84	22.35	25.26	24.58	25.58	27.03	21.62	30.27	37.48	27.33
E01020057	Mid Devon	Mid Devon 007C	ABC5	AB12 CDI	Yes	26.92	25.36	29.82	28.87	28.84	32.67	33.16	32.70	34.45	34.85	34.76	33.27	36.18	35.50	36.50	37.95	32.54	41.20	48.40	38.25
E01015047	Plymouth	Plymouth 026D	ABC6	AB12 CDJ	No	39.06	42.79	34.14	34.31	33.39	33.81	34.30	33.84	34.58	33.89	34.13	34.40	31.60	31.26	32.03	30.99	26.80	35.28	32.29	25.87
E01020153	South Hams	South Hams 004A	ABC7	AB12 CDK	No	18.86	21.30	14.48	15.41	14.55	11.39	11.88	11.42	12.16	11.46	11.71	11.98	6.70	7.04	6.75	5.63	18.85	3.31	19.48	10.27
E01020170	South Hams	South Hams 004C	ABC8	AB12 CDL	No	10.92	13.36	6.53	7.46	6.61	3.44	3.93	3.48	4.22	3.72	3.96	4.04	2.43	1.74	2.74	4.20	9.99	7.44	14.28	5.67
E01020170	South Hams	South Hams 004C	ABC9	AB12 CDM	Yes	11.04	13.48	6.66	7.58	6.73	3.56	4.06	3.60	4.34	3.64	3.89	4.16	1.98	1.30	2.30	3.75	10.04	6.99	14.00	4.79
E01020170	South Hams	South Hams 004C	ABC10	AB12 CDN	Yes	10.93	13.37	6.55	7.48	6.62	3.46	3.95	3.49	4.23	3.68	3.93	4.05	2.39	1.71	2.71	4.16	10.31	7.41	14.43	5.22
E01020170	South Hams	South Hams 004C	ABC11	AB12 CDO	No	11.20	13.64	6.82	7.74	6.89	3.72	4.22	3.76	4.50	3.89	4.13	4.32	2.22	1.54	2.54	3.99	10.09	7.24	14.25	5.04
E01020170	South Hams	South Hams 004C	ABC12	AB12 CDP	No	10.95	13.40	6.57	7.50	6.64	3.48	3.97	3.51	4.25	3.56	3.80	4.07	1.89	1.21	2.21	3.66	10.07	6.91	13.91	4.71

\* Super Output Areas are geographic areas designed to improve the reporting of small area statistics in England and Wales. There is a hierarchy of areas, with the Lower (LSOA) being the smallest possible.

### Values describing the time or distance to travel from employer to site:

- Colour-coded from red to yellow to green, depending on the value relative to the lowest and highest values present.
- Separated into four sheets categorised by mode of transport, time and distance for each journey.

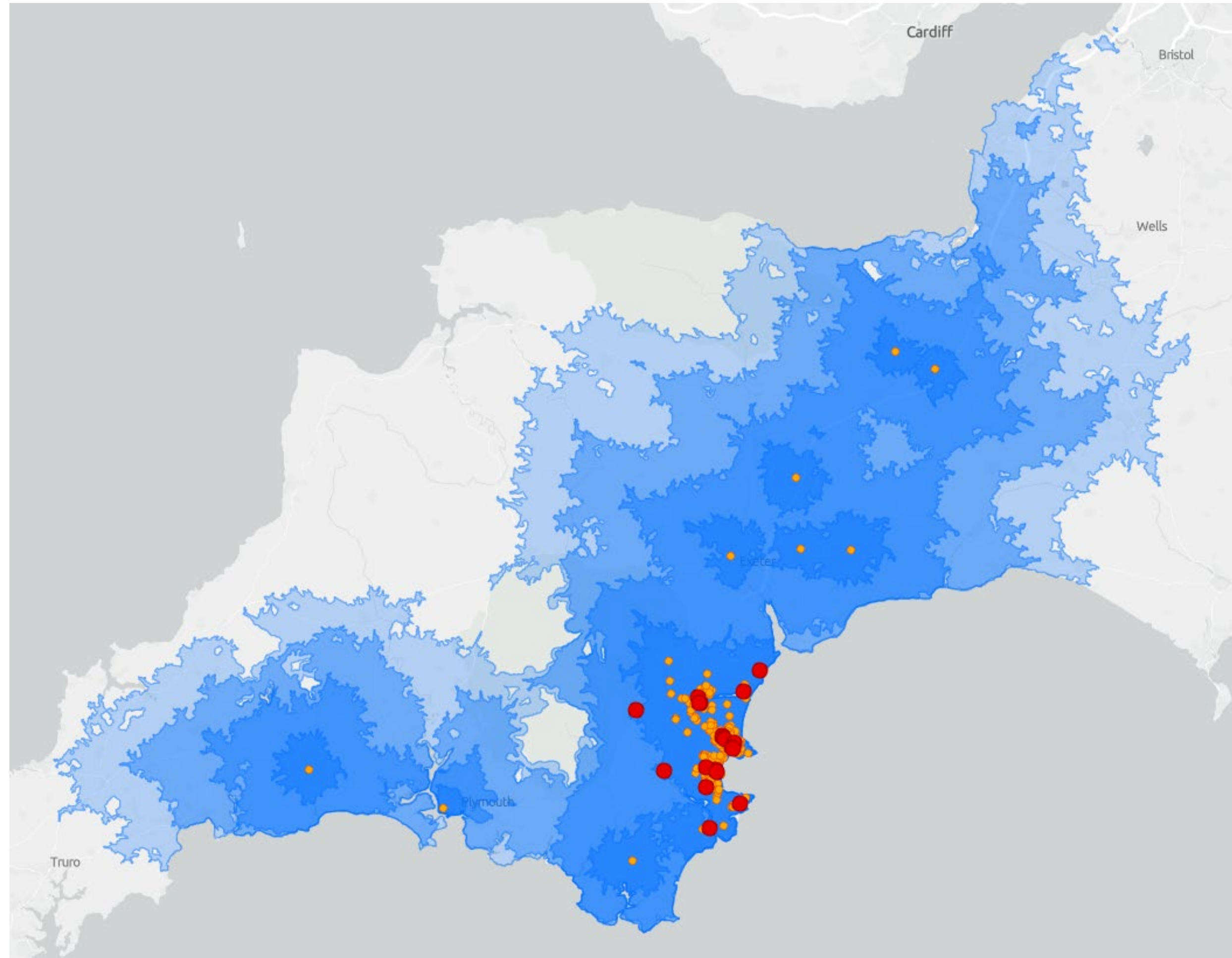
# Case Study

## Torbay Workforce Heatmapping: Isochrone Maps



Torbay and South Devon  
NHS Foundation Trust

Key	
●	Workforce
●	Work Place
■	15-minute drive catchment
■	30-minute drive catchment
■	45-minute drive catchment
■	60-minute drive catchment

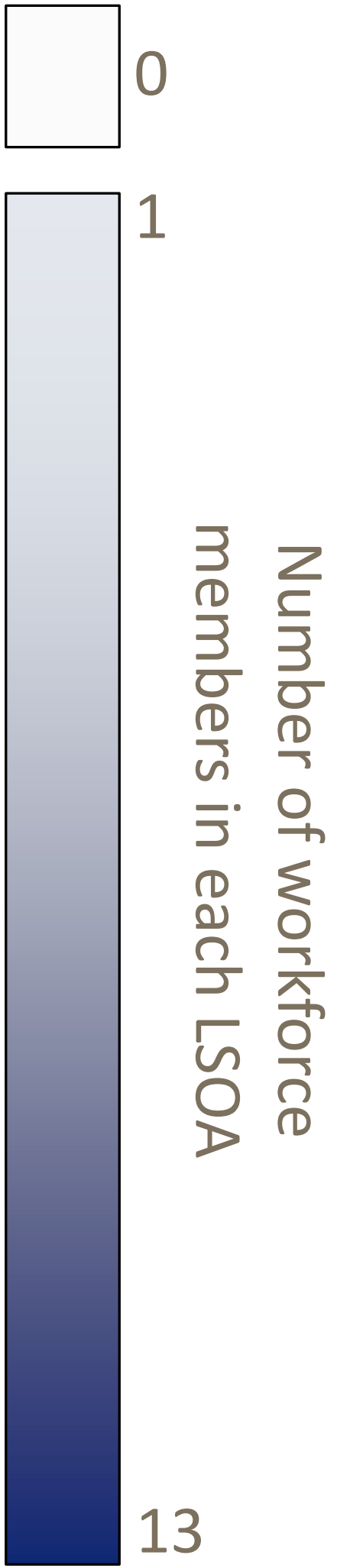
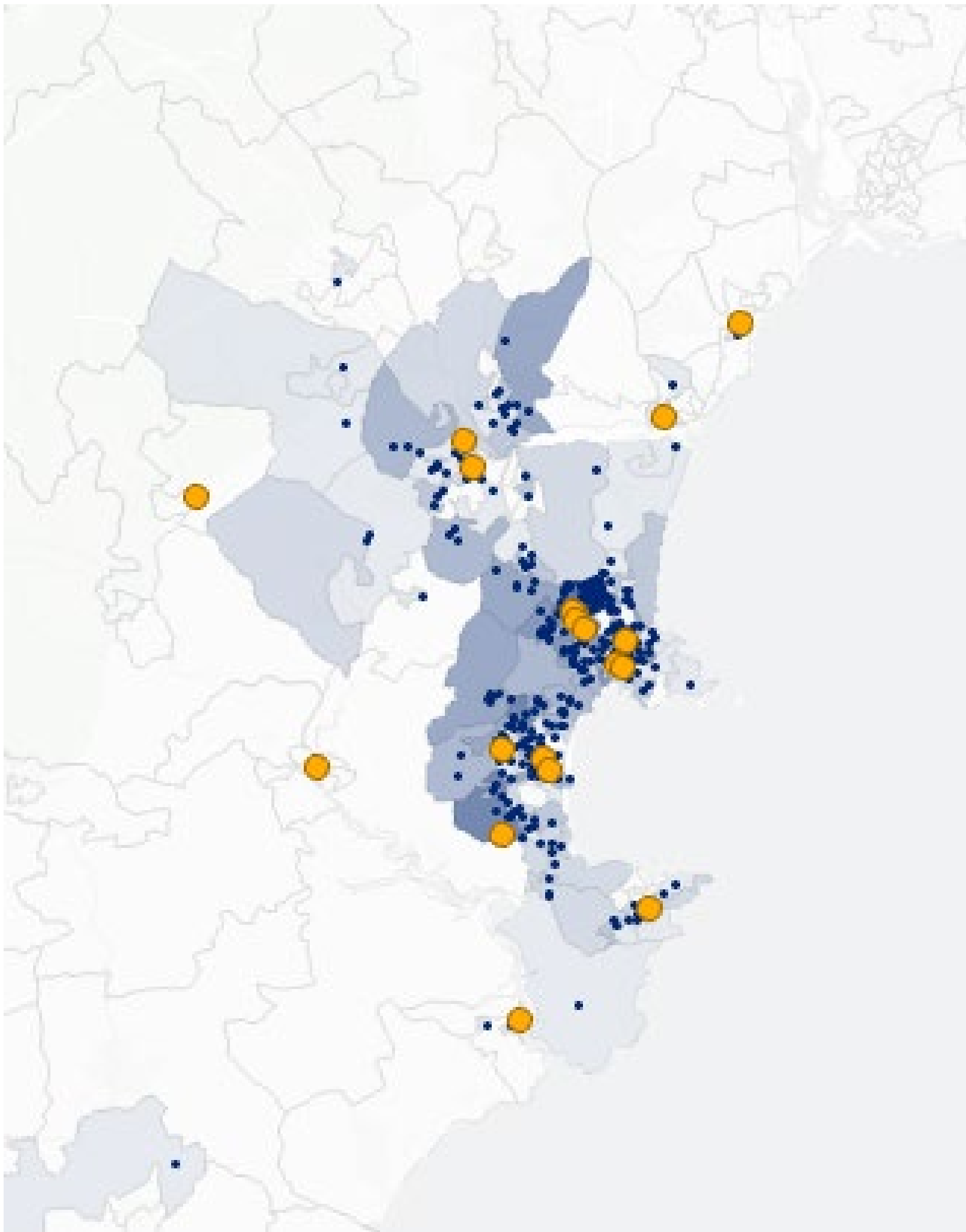


An isochrone map is a map which depicts the area accessible from a point within a certain time threshold.




The map depicted here shows the collective area accessible by the Trust's current workforce (based on home postcode), overlaid with the locations of Trust assets i.e. potential work places.

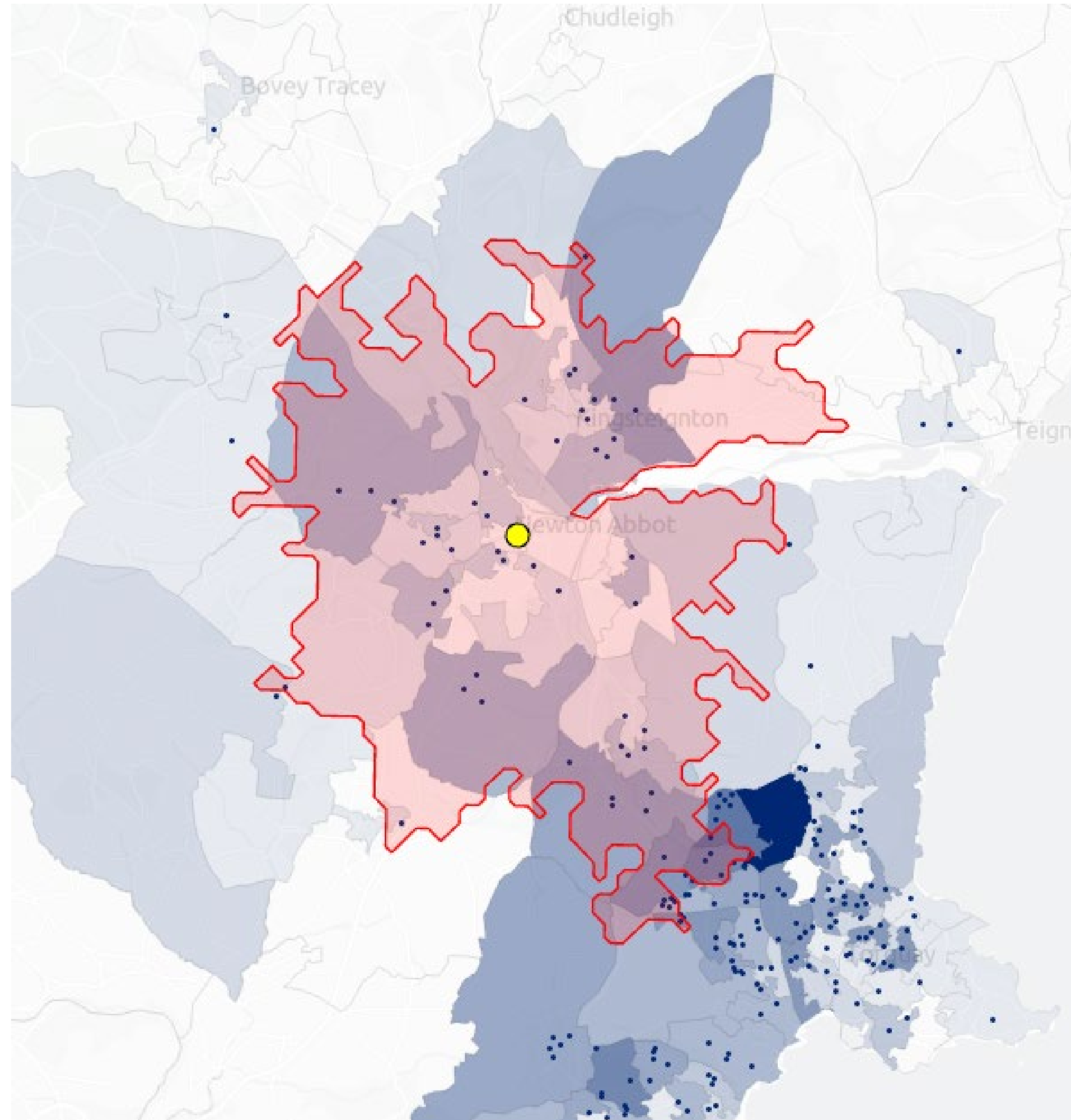


Key	
•	Workforce
●	Work Place



The map depicted here shows density of staff living in each LSOA , with potential places of work overlaid.

Key	
	Work Place
	Workforce member
	15 minute drive from Work Place



The map depicted here shows density of staff living in each LSOA, with an isochrone map of the area accessible within a 15 minute drive from a specific Trust location.



## The Power of Partnership

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Unlike other consultancy companies who only provide advisory services, gbpartnerships consult - as part of the gbpartnerships group - are able to apply the group's operational delivery experience in managed services, asset management, property development, and long-term partnerships with 14 local community and healthcare systems across England, to deliver grounded, end to end service transformation, change management and asset management services to clients.



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If you'd like to find out more or arrange an informal chat about our work contact:  
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