

Assessing the impacts of changes to midwifery care services on travel and access.

Shropshire and Telford & Wrekin

June 2019

Contents

Background	3	Other midwifery care services	22
Proposed changes	4	Location of women using other midwifery care services	23
Methods: MLU Birth services	6	Patient flows for midwifery care services	24
Methods: Other midwifery services	7	Other midwifery services: Comparison of travel times	25
Datasets	8	Other midwifery services scenarios: travel times	26
Summary impacts of proposed changes	9		
 		Appendices:	40
Births	12	Demographic impact of scenarios	41
Location of all women giving birth	13	Locality impacts of scenarios	47
Patient flows for all birth episodes	14	List of proxy locations for hubs	48
All births: Comparison of travel times for scenarios	15	List of HRG codes for identifying delivery episodes	49
All births scenarios: travel times	16	Location of mothers giving birth at MLU, 2016/17	50
Patient flows for MLU birth episodes	18		
MLU births: Comparison of travel times for scenarios	19	Contact details	51
MLU births scenarios: travel times	20		

Background

As part of continued plans to reconfigure healthcare services across the Shropshire and Telford & Wrekin footprint, changes to midwifery care are being considered by the Local Maternity System (LMS).

The plans and proposals will require wide engagement with clinicians, patients, the public and other stakeholders as well as central assurance before a decision can be made on the best arrangement of services.

Arriving at an agreement will require assessments of the economic, quality, equality, environmental and travel and access impacts of potential changes, as well as other factors.

The programme team have access to previous impact assessment work from the Future Fit programme and recent access analysis at GP practice-level, however it was felt that up-to-date and more robust analysis are needed.

This report seeks to address the travel and access impacts with the use of recent maternity activity data and population data alongside road speeds data and travel modelling software in order to support feasibility study, options appraisal, impact assessment and other assurance processes for families accessing midwifery care in the area.

Proposed changes to midwifery care services

The current commissioned model of midwifery care includes five Midwife-Led Units (MLU) that are open 24/7. A review of midwifery care has found that the configuration of the current model is not in line with demand.

A new model is being proposed that includes community midwives working across Shropshire and Telford & Wrekin, supported by five or six hubs offering a range of services (including antenatal scans) which will be open for 12 hours a day. **Routine antenatal and postnatal care will continue to be offered at GP practices and other locations across the county (map opposite).**

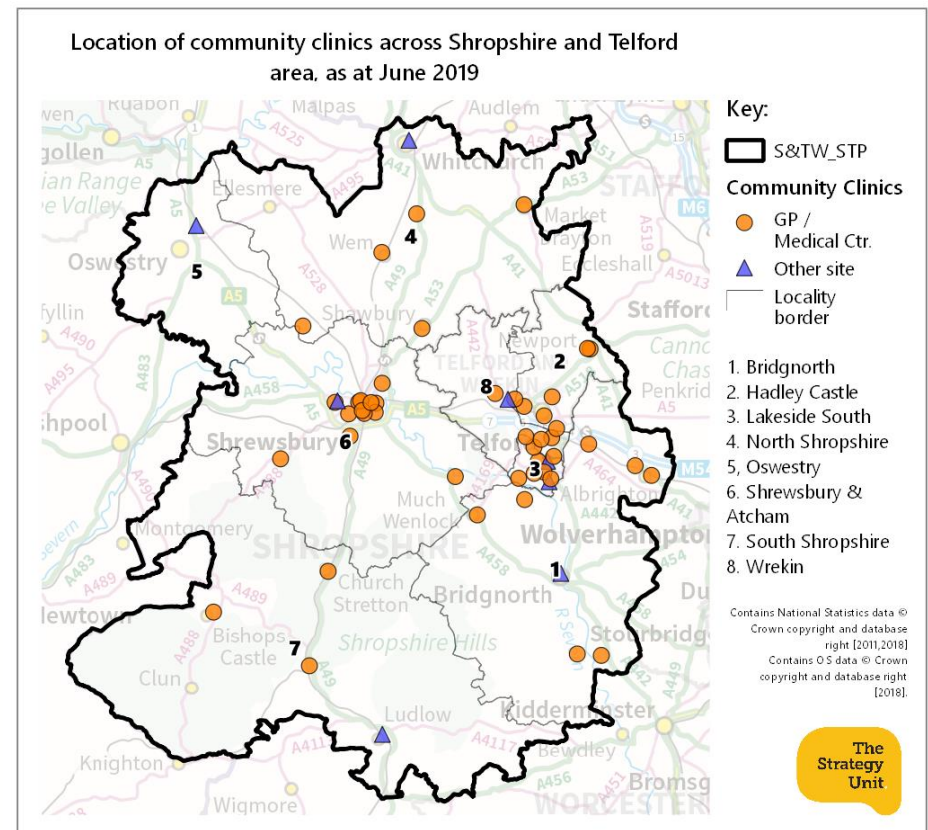
Two 24/7 MLUs based at Princess Royal and Royal Shrewsbury hospital sites will also be available as well as support for home births across the county.

The maternity hub locations being considered are central sites* in:

- Hadley castle
- Lakeside South
- North Shropshire (Whitchurch **OR** Market Drayton)
- South Shropshire (Ludlow)
- Oswestry
- Bridgnorth

* It should be noted that there are no fixed and agreed hub sites within these locations at this time - this analysis is intended to be indicative of access to those areas and to enable comparison of a range of options. However; in order to calculate road and public transport journeys, we have had to specify central locations. A full list of these can be found in Appendix 3.

Community clinics across the region provide many antenatal and postnatal services, and this will continue to be provided in the new model.

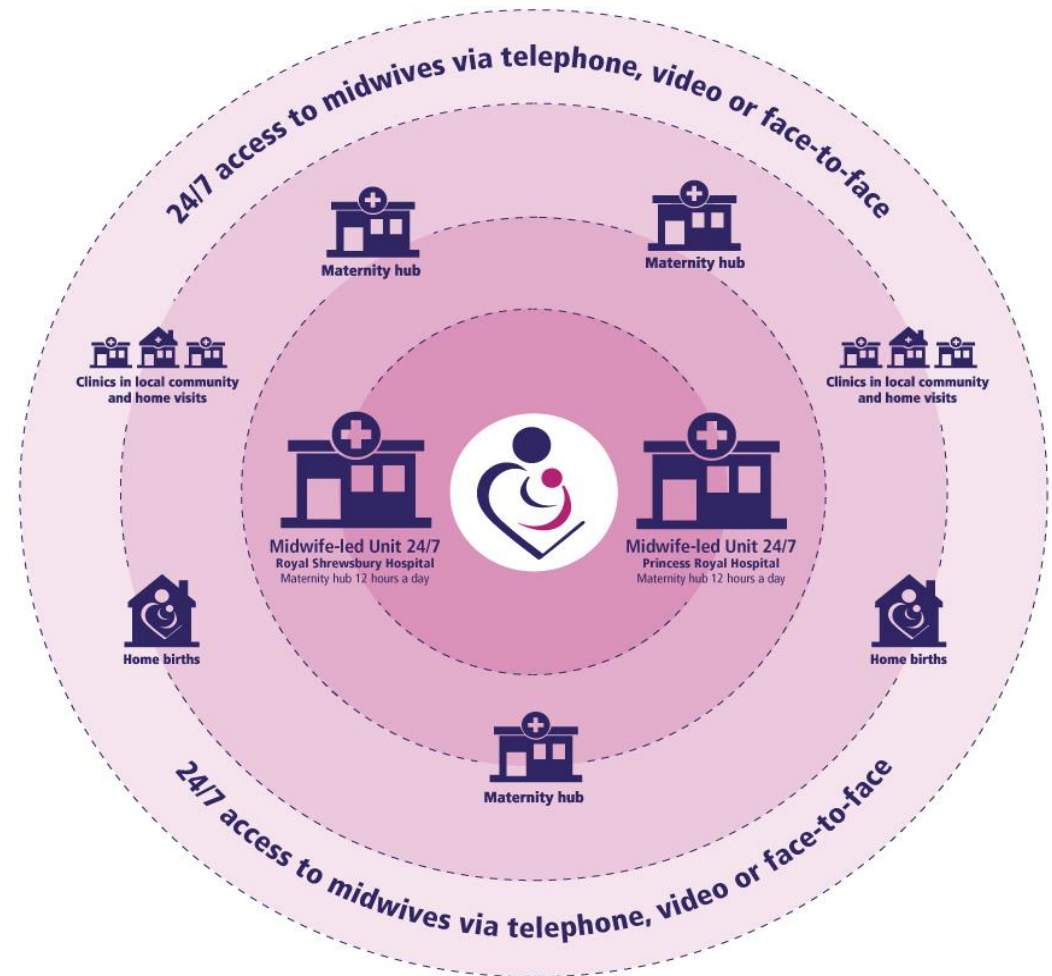


The proposed commissioning model for maternity care

"We (the LMS) are proposing to transform the way that midwifery care is currently delivered across Shropshire, Telford and Wrekin to provide all women with safe, high quality and personalised care throughout their pregnancy (antenatal care), during the birth and following the birth of their baby (postnatal care).

We would do this by creating a network of midwife-led units, maternity hubs, clinics in the local community and home visits. Midwives and maternity support workers (previously known as women's support assistants) would work flexibly across this network, providing high quality, personalised care to women throughout all stages of their pregnancy, birth and beyond."

Proposed model of midwifery care



Source: Transforming midwifery care programme, Shropshire and Telford & Wrekin LMS.

Methods: MLU Birth services

The last full operational year of the current commissioned model where there was a genuine choice of Midwife-led Units (MLU) for giving birth across the Shropshire and Telford & Wrekin area was 2016/17.

We extracted all the hospital episodes for that year where there was a record of a birth based on spell-level Health Resource Groups (HRG, full list in Appendix 4), making sure only the maternal record was retained i.e. excluding the infant record.

Using the output area* of mothers home address, we ascertained the 'actual' travel times by private vehicle to the birth destination.

For birth episodes at the 3 rural MLU sites (Oswestry, Ludlow and Bridgnorth) we ascertained the 'modelled' journey time to the nearest (in terms of time) of PRH and RSH birth units to facilitate comparison.

We calculated journey times using the TRACC software (Basemap, <https://www.basemap.co.uk/tracc/>) and integrated road networks alongside both off-peak and peak road speeds data.

Note that while for comprehensiveness we have included public transport travel times for births we recognised that this not a feasible choice in the overwhelming majority of cases.

* Output areas (OAs) are a static statistical geography covering on average 300 to 400 people of all ages. As unit postcodes are no longer retained in routine commissioner datasets, this is the lowest level of positional accuracy we have for patients accessing acute services. We will use the population-weighted centre of each OA as the assumed journey start point and where there is marginal difference to multiple destinations we will pro-rata patients accordingly to account for large area (rural) OAs.

Methods: Other midwifery care services

We utilised comprehensive records of antenatal scans in hospital and community sites across Shrewsbury and Telford & Wrekin for the 2018/19 financial year. This formed our proxy baseline of midwifery care for comparison of access.

We extracted all the outpatient attendances during the period where there was a record of a routine antenatal scan, based on OPCS-4 procedure code R361 (dating scan).

Using the output area of mothers home address, we ascertained the 'actual' travel times by private vehicle to the outpatient site of attendance. Where multiple scans were undertaken on the same date we assumed only one journey was made.

For all relevant activity we produced a 'modelled' journey time to the nearest (in terms of time) maternity hubs for each of the 13 alternative scenarios to facilitate comparison. We made the assumption that all women chose their nearest available hub. Note that, in reality, some may have a preference for the 24/7 MLU or consultant-led sites if they are booked to birth there.

We calculated journey times using the TRACC software and integrated road networks alongside both weekday and weekend road speeds data. Additionally we calculated Public Transport journeys assuming a midweek daytime travel window.

To aid comparison, we provided average journey times (mean) and time-banded break-downs of the population affected across the 8 locality areas in Shropshire, Telford & Wrekin.

In order to assess the impact of the potential configurations, for each we have reported the difference in average journey times for the 2 or 3 modes/times of day compared to the baseline (actual) journeys. We have done this for:

- the Shropshire and Telford & Wrekin footprint
- the 8 sub-localities
- different age groups, socio-economic and ethnic groups (to support separate but parallel impact assessment work). This breakdown is available in the appendices.

Datasets

Due to time constraints, the sharing of trust data to the project team featuring full unit postcodes was not feasible. The current (and hypothetical) access to services was therefore determined using Secondary Uses Service (SUS) data already held within the CSU data warehouse.

Whilst this data will sacrifice some geographical granularity (using output area instead of postcode) it is available for instant extraction and analysis and will also enable the inclusion of patients travelling to external sites for their scans which would not be possible using SATH shared data.

Informatics staff at SATH provided episode IDs for women who used Sutton Hill Community Centres services which could then be linked to SUS data sets.

Summary of impacts

Impact of changes to MLU birth centres

- Around 85% of women gave birth in the centralised consultant-led unit under the current service model.
- There is only one proposed alternative service model, with the consolidation of 5 MLU to 2 central MLU in Telford and Shrewsbury therefore the impacts are only likely to affect a relatively small number of women and only in some areas - 160 (around 5%) of total births occur at one of the 3 rural MLU.
- The access impact of the proposed change on the **total maternal population** of the area is minimal for access - 1-3 minutes additional on average and the majority are still within 30 minutes travel of an MLU.
- The impacts, as expected, are slightly more marked for those women who would have given birth in one of the **three rural MLU's** with on average an extra 5-10 minutes of travel to their nearest site dependent on mode of transport. There is a corresponding drop in the 30 minute population catchment of MLU by 10-20% depending on mode of transport and time of travel.
- Mothers in Bridgnorth and Oswestry would have to travel on average around 15 minutes further by car or 40 minutes by public transport to their nearest MLU.
- Mothers in South Shropshire would have to travel on average around 20-25 minutes further to their nearest MLU by car or public transport.

Impact of changes to other midwifery services

- Access to dating scans (as a proxy for the care offered in proposed midwifery hubs) is currently worst in North Shropshire and South Shropshire where there is no existing facility.
- The largest proportion of mothers requiring midwifery care live in the Telford & Wrekin area and central Shrewsbury.
- As most women, even some in more rural areas already travel to either Shrewsbury or Telford for antenatal scans, the proposed changes are only likely to adversely affect a relatively small number of women - between 100 and 250 depending on the placement of maternity hubs - and many more may choose closer services.
- All of the potential configurations slightly improve travel times (for the population as a whole) compared to the current configuration of services although only the 2+4 hub options improve access by public transport.
- On balance of all the travel time information, the 2+4 hub option with sites in Oswestry, Ludlow, Whitchurch and Lakeside South is best from a whole population access perspective, although only marginally.
- All of the 2+4 hub configurations result in slightly better access than the best 2+3 hub configuration, although only by very small margins.
- There is little to differentiate the 2+3 hub scenarios from each other on the whole population-level, although impacts in certain localities may need to be considered alongside other measures of needs.
- In both the 2+3 and 2+4 hub configurations, having hubs in both Hadley and Lakeside results in sub-maximal access coverage across the county area as a whole although slightly improves access times by Public Transport. This is due to their close proximity to each other.
- Options where the North Shropshire hub is located in Market Drayton are marginally better for access times but result in slightly lower population coverage than if based in Whitchurch.

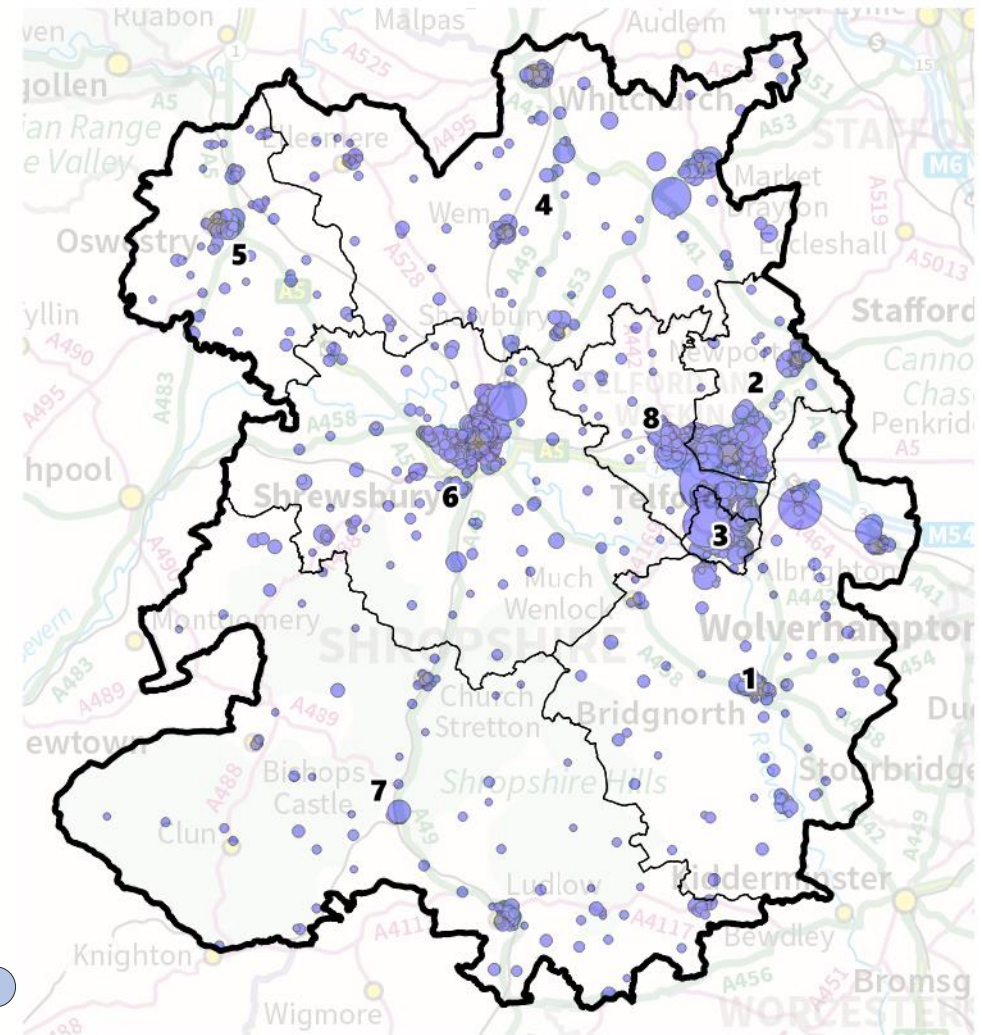
Births: detailed analysis

Location of all women giving birth

This map should be used in conjunction with the scenario maps to put into context the travel times from various areas. The size of each point represents the number of women coming from an output area. The range of births per output area was 1 to 35+.

While there may be regions where the journey time is relatively high, these are often areas with low populations of women in the age groups concerned e.g. South Shropshire.

Location and density of mothers giving BIRTH by output area, 2016/17 baseline



Area code	Locality	Mothers giving birth in baseline year
1	Bridgnorth	427
2	Hadley Castle	767
3	Lakeside South	604
4	North Shropshire	464
5	Oswestry	223
6	Shrewsbury & Atcham	1,008
7	South Shropshire	238
8	The Wrekin	582

Patient flows for all birth episodes

Number and % of women registered with GPs within the Local Maternity System (LMS) using sites *within* Shropshire, Telford and Wrekin at these sites:

Site name	n women	%
The Princess Royal (Maternity)*	4071	90.6
Royal Shrewsbury (Maternity)	144	3.2
Bridgnorth (Maternity)	69	1.5
Oswestry (Robert Jones & Agnes Hunt Orthopaedic & District)	51	1.1
<u>Ludlow</u>	<u>32</u>	<u>0.7</u>
Subtotal	4367	97.1

Number and % of women registered with GPs within the Local Maternity System (LMS) giving birth *outside* Shropshire, Telford and Wrekin at these consultant-led sites^.

Site name	n women	%
Worcestershire Royal	39	0.9
Hereford County	34	0.8
Royal Stoke University	25	0.6
New Cross	15	0.3
Leighton	10	0.2
<u>Russells Hall</u>	<u>3</u>	<u>0.1</u>
Subtotal	158	2.9

^ SUS data do not cover activity presenting outside of England. As such, this activity and subsequent scenario modelling does not account for births at Wrexham hospital - likely to be exclusively mothers from Oswestry area. During the equivalent period, according to NHS Wales, there were 106 births at Wrexham to mothers from Shropshire and Telford & Wrekin area, some of whom may choose to deliver babies in Shrewsbury when acute services move there under the Future Fit programme.

All births: Comparison of travel times for two scenarios

For the alternative scenario, across the whole population, the mean travel time rises by just 40 seconds for off-peak car journeys both during the week and at the weekend. For public transport during the week the mean travel time rises by 90 seconds.

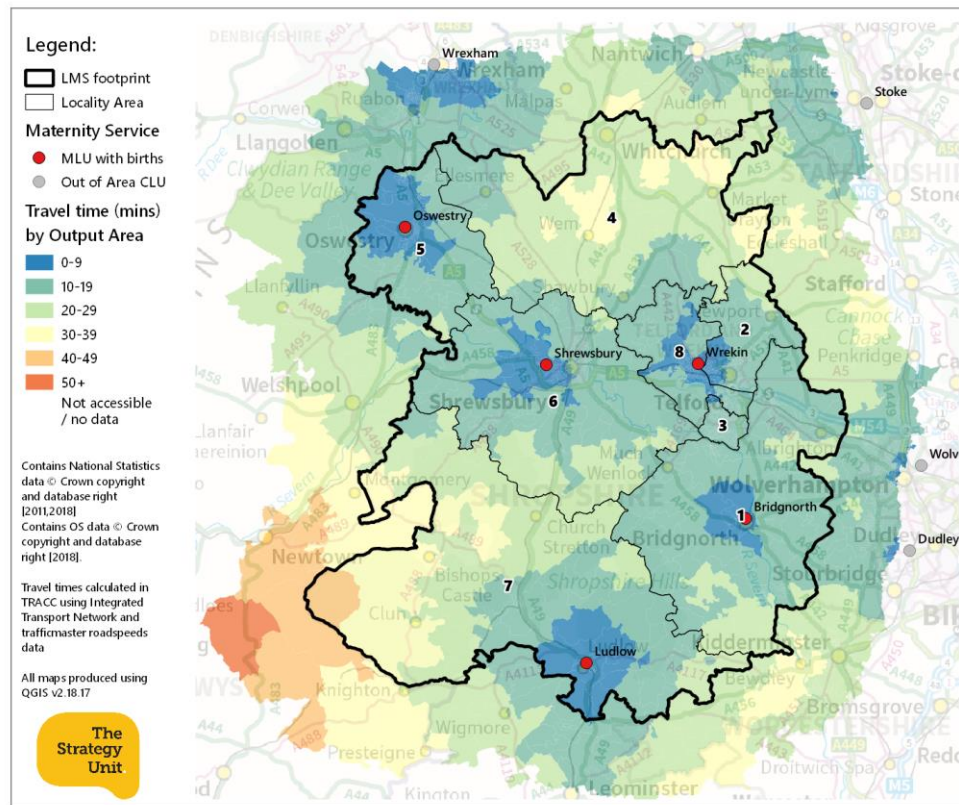
To aid comparison, we provide average journey times (mean) and time-banded break-downs of the population affected across the 8 locality areas in Shropshire and Telford on the following pages. The effect of the scenarios on different ages, socio-economic backgrounds and ethnic groups is included in appendix 1.

	Scenario	
	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Oswestry	●	
Bridgnorth	●	
S. Shropshire (Ludlow)	●	

Travel type	Current	Proposed	Diff (mins)
wday mean journey time (mins)	22.0	22.7	+ 0.7
wend mean journey time (mins)	20.6	21.3	+ 0.7
ptrans mean journey time (mins)	53.5	55.0	+ 1.5

		Current	Proposed
% of all women within 30 mins of service:	w/day	79.3	77.2
	w/end	82.7	81.5
	P/trans	24.4	22.1

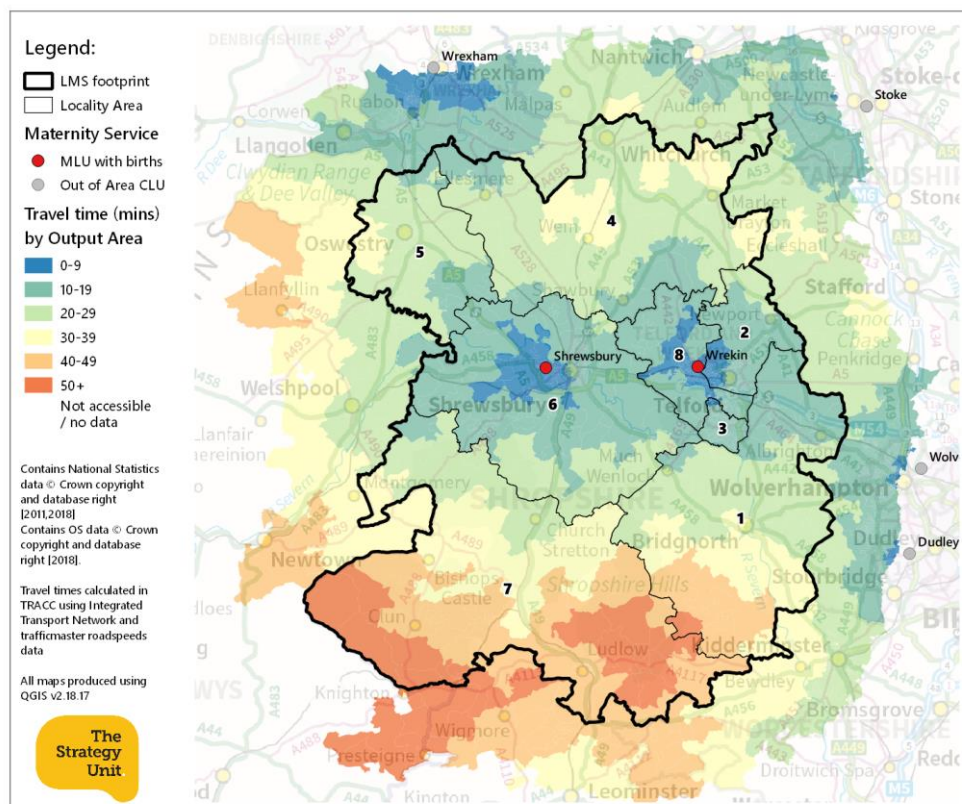
All births: Baseline travel times - actual sites used for delivery



		Travel time (mins)					
type	stat	NA	0-14	15-29	30-44	45-59	60+
wday	n women	134	1,745	1,839	489	396	53
wend	n women	134	1,935	1,804	470	280	33
ptrans	n women	134	467	638	737	1,006	1,674
wday	% women	2.9	37.5	39.5	10.5	8.5	1.1
wend	% women	2.9	41.6	38.7	10.1	6.0	0.7
ptrans	% women	2.9	10.0	13.7	15.8	21.6	36.0

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	427	767	604	464	223	1,008	238	582	423
wday	mean travel time (mins)	22.8	11.6	14.5	29.6	40.1	24.4	43.7	9.1	43.9
wend	mean travel time (mins)	21.3	10.5	13.3	27.5	38.0	22.9	41.5	8.2	42.1
ptrans	mean travel time (mins)	62.0	38.9	49.9	78.2	76.3	54.2	67.3	23.1	85.4

All births: Alternative scenario travel times



type	stat	Travel time (mins)					
		NA	0-14	15-29	30-44	45-59	60+
wday	n women	130	1,651	1,841	552	425	53
wend	n women	130	1,834	1,851	503	301	33
pttrans	n women	130	412	587	731	1,018	1,774
wday	% women	2.8	35.5	39.6	11.9	9.1	1.1
wend	% women	2.8	39.4	39.8	10.8	6.5	0.7
pttrans	% women	2.8	8.9	12.6	15.7	21.9	38.1

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	427	767	604	464	223	1,008	238	582	423
wday	mean travel time (mins)	25.8	11.5	14.5	29.8	43.3	24.4	48.2	9.1	44.7
wend	mean travel time (mins)	24.0	10.5	13.3	27.7	41.1	22.9	45.7	8.2	42.9
pttrans	mean travel time (mins)	70.7	38.9	49.9	78.8	84.3	54.1	72.5	23.1	85.8

Patient flows for birth episodes at MLUs

Number of women registered with the STP giving birth at an MLU *within* Shropshire, Telford and Wrekin, and percentage of all STP registered women giving birth at these sites*.

<u>Site name</u>	<u>n women</u>
The Princess Royal (Maternity)	337
Royal Shrewsbury (Maternity)	144
Bridgnorth (Maternity)	69
Oswestry (Robert Jones & Agnes Hunt Orthopaedic & District)	51
<u>Ludlow</u>	<u>32</u>
Subtotal	633

* Current coding practice and SUS data protocols prohibit definitive attribution of births at PRH to the Wrekin MLU; all episodes are assigned to the same provider site code as the acute site (RXWMT). We obtained MLU births for Wrekin (n=337) based on consultant code H9999998 - 'Other Healthcare Professional' at the PRH site, validated against trust reported figures of 334.

MLU births: Comparison of travel times for two scenarios

As the current MLU model manage 15% (in our representative baseline) of all births in Shropshire, the effect on the travel times of removing them in a future centralised configuration would be larger than for an all births cohort demonstrated in the previous section. This 15% of mothers would therefore be those that would be 'directly affected' or 'displaced' under the new arrangement - **some figures throughout the rest of the report refer to the displaced population in order to describe those who would be directly affected by proposed changes** as well as the overall impacts on the total maternal cohort.

For the alternative scenario, the mean travel time rises by 5 minutes for off-peak car journeys during the week and by a similar amount at the weekends. For public transport during the week the mean travel time rises by approximately 11 minutes.

To aid comparison, we provide average journey times (mean) and time-banded break-downs of the population affected across the 8 locality areas in Shropshire and Telford on the following pages. The effect of the scenarios on different ages, socio-economic backgrounds and ethnic groups is included in the appendix.

Appendix 5 shows the location of mothers who give birth at rural MLU's as well as those who give birth at the Royal Shrewsbury and Princess Royal MLU's.

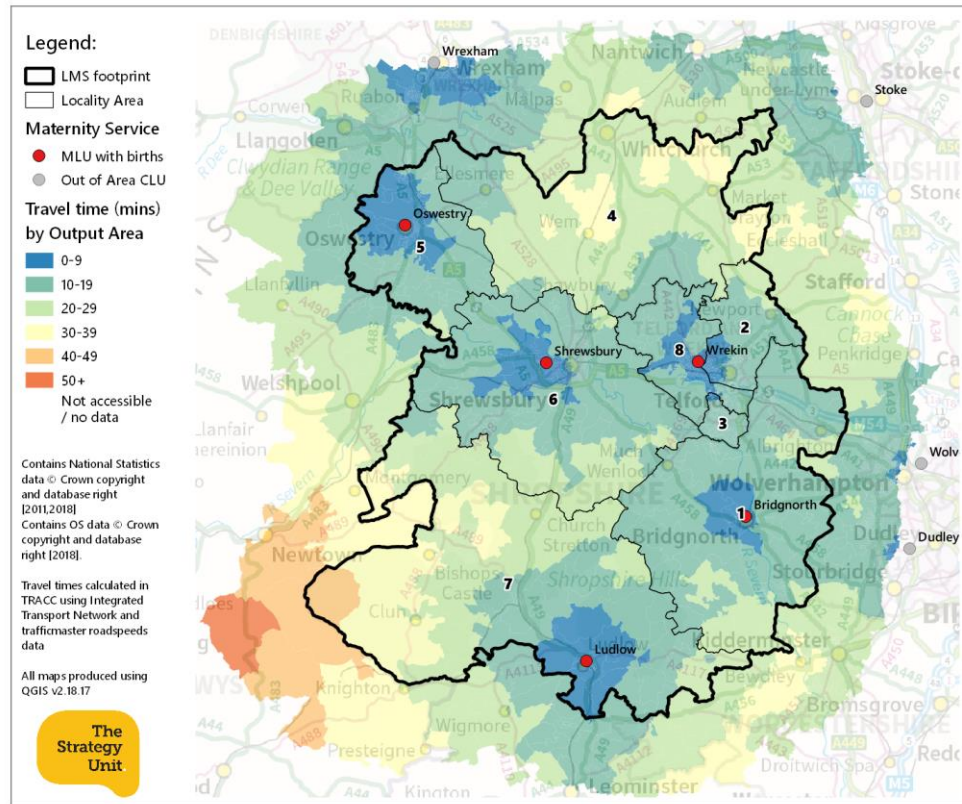
	Scenario	
	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Oswestry	●	
Bridgnorth	●	
S. Shropshire (Ludlow)	●	

Travel type	Current	Proposed	Diff (mins)
wday mean journey time (mins)	15.9	21.0	+ 5.1
wend mean journey time (mins)	14.7	19.5	+ 4.8
ptrans mean journey time (mins)	40.8	51.6	+ 10.8

	Current	Proposed
w/day	92.7	78.4
w/end	95.0	86.6
P/trans	42.4	25.9

% of women (MLU births) within 30 mins of service:

MLU births: Baseline travel times

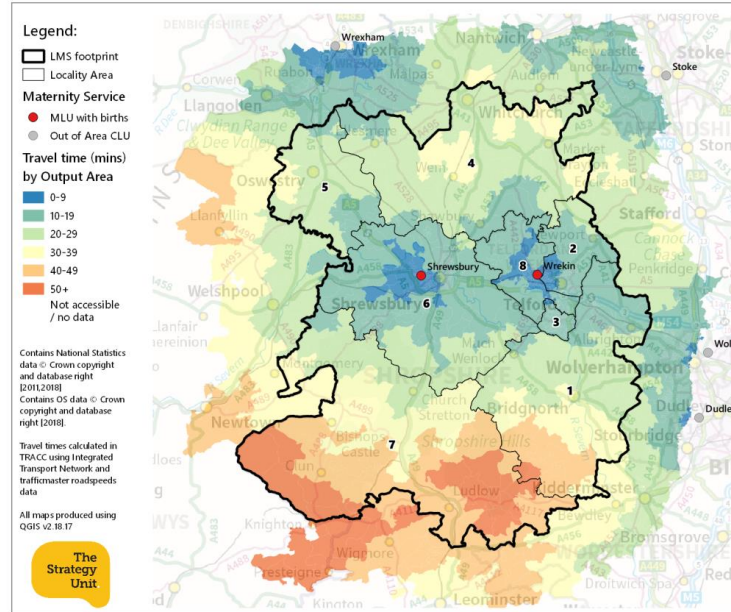


		Travel time (mins)				
type	stat	0-14	15-29	30-44	45-59	60+
wday	n women	337	260	41	6	-
wend	n women	374	238	28	4	-
pttrans	n women	136	137	138	104	129
wday	% women	51.8	39.9	6.3	0.9	-
wend	% women	57.5	36.6	4.3	0.6	-
pttrans	% women	20.9	21.0	21.2	16.0	19.8

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	90	84	66	86	45	161	47	56	17
wday	mean travel time (mins)	15.0	11.8	13.9	27.0	12.4	15.8	18.9	8.9	18.4
wend	mean travel time (mins)	14.0	10.8	12.8	25.1	11.5	14.6	17.8	8.1	17.5
pttrans	mean travel time (mins)	30.0	39.1	47.9	73.0	27.9	38.7	34.5	21.5	58.1

MLU births: Alternative scenario travel times

	Scenario	
	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Oswestry	●	
Bridgnorth	●	
S. Shropshire (Ludlow)	●	



type	stat	Travel time (mins)				
		0-14	15-29	30-44	45-59	60+
wday	n women	243	262	104	35	-
wend	n women	273	285	61	25	-
pttrans	n women	81	86	132	116	229
wday	% women	37.6	40.6	16.1	5.4	-
wend	% women	42.3	44.1	9.4	3.9	-
pttrans	% women	12.5	13.3	20.4	18.0	35.4
'Displaced' women	wday n women	2	59	70	29	-
	wend n women	2	98	39	21	-
	pttrans n women	18	1	8	16	117
	wday % women	1.2	36.9	43.8	18.1	-
	wend % women	1.2	61.3	24.4	13.1	-
	pttrans % women	11.2	0.6	5.0	10.0	73.1

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	90	84	66	86	45	161	47	56	17
wday	mean travel time (mins)	28.9	11.7	13.9	28.4	28.5	15.6	41.8	8.9	37.4
wend	mean travel time (mins)	26.9	10.6	12.8	26.4	26.8	14.4	39.1	8.1	35.1
pttrans	mean travel time (mins)	71.0	38.7	47.9	76.2	67.3	38.4	60.5	21.5	65.9

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	65	1	-	11	37	5	35	-	6
wday	mean travel time (mins)	31.3	10.3	-	31.4	26.9	17.8	45.5	-	44.2
wend	mean travel time (mins)	29.2	9.6	-	29.6	25.2	16.8	42.5	-	41.5
pttrans	mean travel time (mins)	75.3	41.9	-	68.4	66.1	30.4	63.2	-	74.6

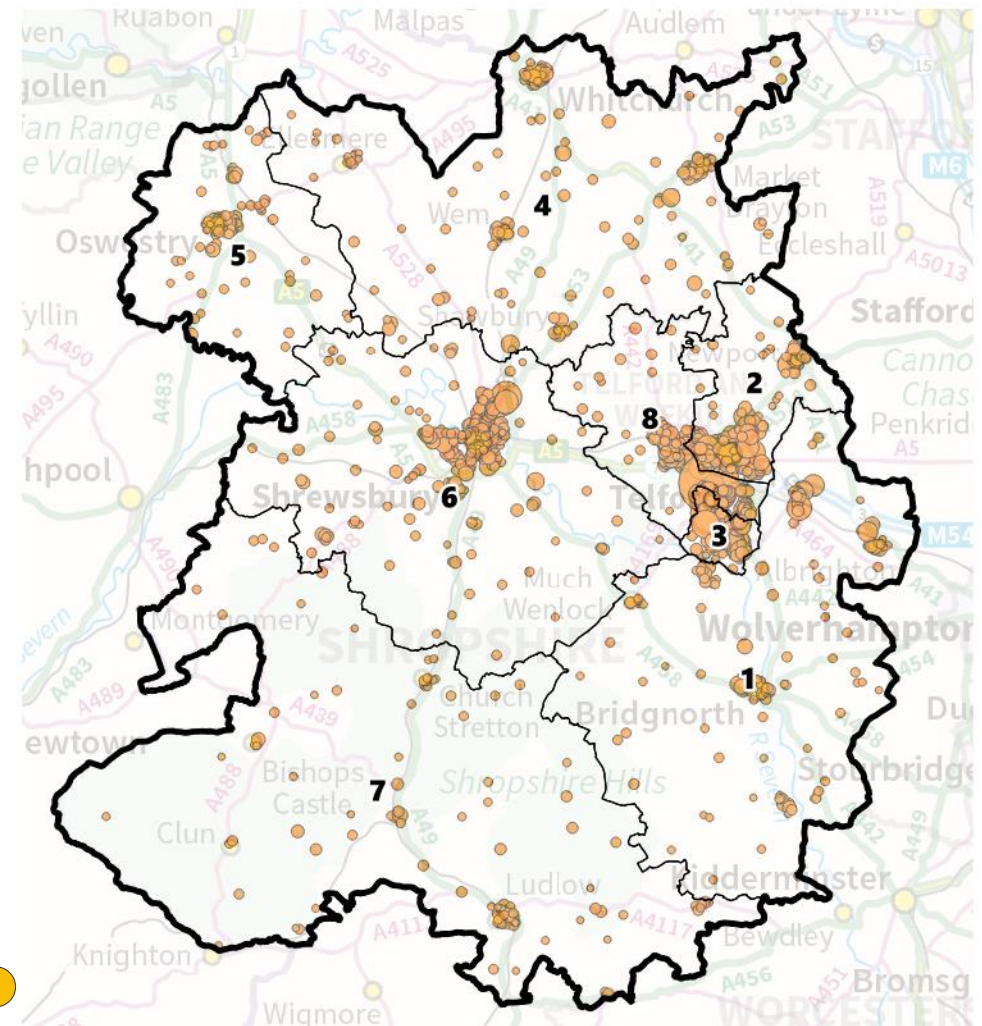
Other midwifery care services: detailed analysis

Location of women using other midwifery care services

This map should be used in conjunction with the scenario maps to put into context the travel times from various areas. The size of each point represents the amount of activity coming from an output area. The range of other midwifery activity (dating scans) per output area was 1 to 120+.

While there may be regions where the journey time is relatively high, these are often areas with low populations of women in the age groups concerned e.g. South Shropshire.

Location and density of mothers' DATING SCANS by output area, 2018/19 baseline



Area code	Locality	Mothers having a dating scan in baseline year
1	Bridgnorth	407
2	Hadley Castle	747
3	Lakeside South	590
4	North Shropshire	434
5	Oswestry	226
6	Shrewsbury & Atcham	936
7	South Shropshire	196
8	The Wrekin	600

Patient flows for other midwifery care services

Number and % of women registered with GPs within the Local Maternity System (LMS) with a dating scan* *within* Shropshire, Telford and Wrekin at these sites:

Site name	n women	%
The Princess Royal (Maternity)	2300	55.6
Royal Shrewsbury (Maternity)	1456	35.2
Oswestry (Robert Jones & Agnes Hunt Orthopaedic & District)	146	3.5
Sutton Hill	117	2.8
Bridgnorth (Maternity)	91	2.2
Subtotal	4110	99.3

We wouldn't expect to be able to reconcile the numbers of women receiving scans, above, with the "all birth" numbers due to the different years under study. However, the gap may be large enough to consider explanations beyond changes in fertility rates. It could be that:

- Not all routine dating scans are coded as such
- A greater number of Oswestry residents receive dating scans at Wrexham
- Women may choose private clinics for scans

Number and % of women registered with GPs within the Local Maternity System (LMS) with a dating scan *outside* Shropshire, Telford and Wrekin at these sites:

Site name	n women	%
Kidderminster	20	0.5
Leighton	4	0.1
Worcestershire Royal	1	< 0.1
Subtotal	25	< 0.7

* Based on count of first recorded dating scan.

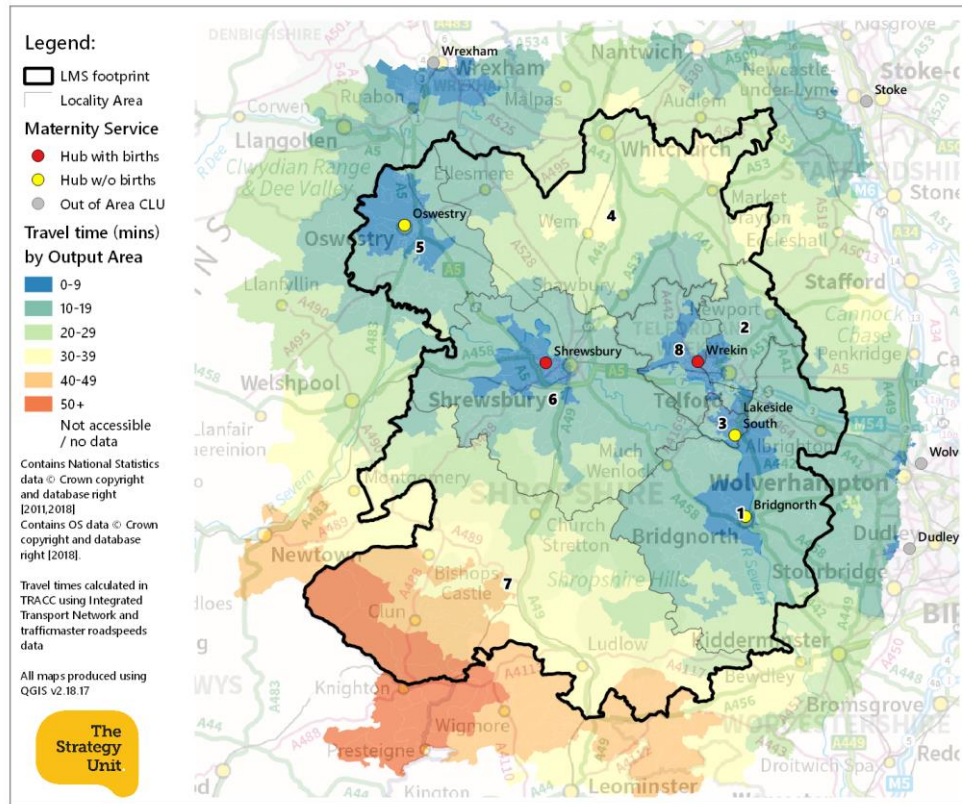
Other midwifery services: Comparison of travel times, all mothers

	Other midwifery care													
	Current	2 + 3 hubs							2 + 4 hubs					
		1	2	3	4	5	6	7	8	9	10	11	12	13
Shrewsbury (RSH)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Wrekin (PRH)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Lakeside South	●	●	●			●	●	●	●	●	●	●	●	●
Hadley Castle				●	●	●	●	●	●	●				
Oswestry	●										●	●		
Bridgnorth	●												●	●
N. Shropshire (Whitchurch)		●		●		●			●		●		●	
N. Shropshire (Mkt Drayton)			●		●		●			●		●		●
S. Shropshire (Ludlow)		●	●	●	●			●	●	●	●	●	●	●

type		Current	1	2	3	4	5	6	7	8	9	10	11	12	13
w/day	mean travel time (mins)	13.5	13.2	13.1	13.1	13.0	13.3	13.2	13.1	12.1	12.1	12.1	11.9	12.7	12.6
w/end	mean travel time (mins)	12.4	12.2	12.1	12.3	12.2	12.3	12.2	12.2	11.3	11.2	11.1	11.0	11.8	11.7
P/trans	mean travel time (mins)	33.8	36.6	36.0	37.2	36.6	35.3	34.7	35.2	33.8	33.2	33.8	33.2	33.8	33.1

		Current	1	2	3	4	5	6	7	8	9	10	11	12	13
w/day		92.8	98.6	97.9	97.8	97.1	94.8	94.1	94.7	98.6	97.9	99.2	99.2	98.7	98.0
% of women within 30 mins of service: w/end		93.9	99.4	98.8	98.5	9.08	95.5	95.0	96.4	99.4	98.8	99.7	99.7	99.4	98.8
P/trans		51	46.2	46.6	42.1	42.5	50.3	50.7	50.5	52.8	53.2	50.9	51.3	50.9	51.3

Other midwifery services: Baseline travel times

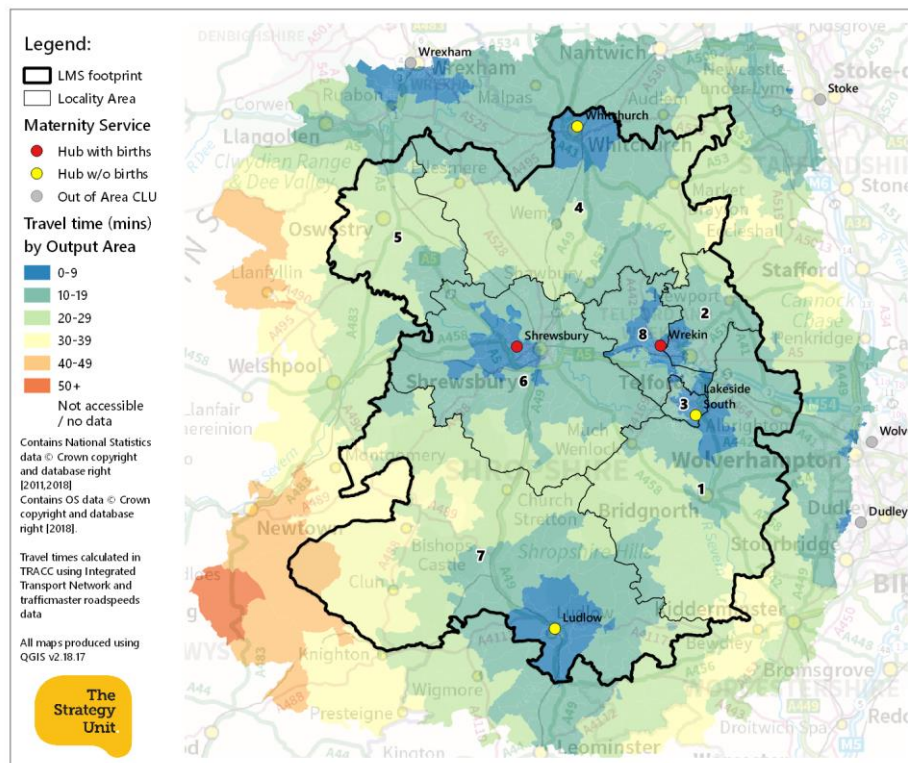


type	stat	Travel time (mins)				
		0-14	15-29	30-44	45-59	60+
wday	n women	2,960	945	287	18	-
wend	n women	3,080	872	250	8	-
ptrans	n women	807	1,341	1,065	482	515
wday	% women	70.3	22.4	6.8	0.4	-
wend	% women	73.2	20.7	5.9	0.2	-
ptrans	% women	19.2	31.9	25.3	11.4	12.2

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	12.1	11.4	8.0	26.9	7.0	12.5	34.4	8.4	26.0
wend	mean travel time (mins)	11.2	10.4	7.2	25.1	6.4	11.5	32.8	7.5	24.5
ptrans	mean travel time (mins)	29.1	39.5	23.1	56.7	16.2	34.8	49.1	22.1	48.8

Other midwifery services: Scenario 1 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		
Oswestry	●	
Bridgnorth	●	
N. Shropshire (Whitchurch)		●
N. Shropshire (Mkt Drayton)		
S. Shropshire (Ludlow)		●



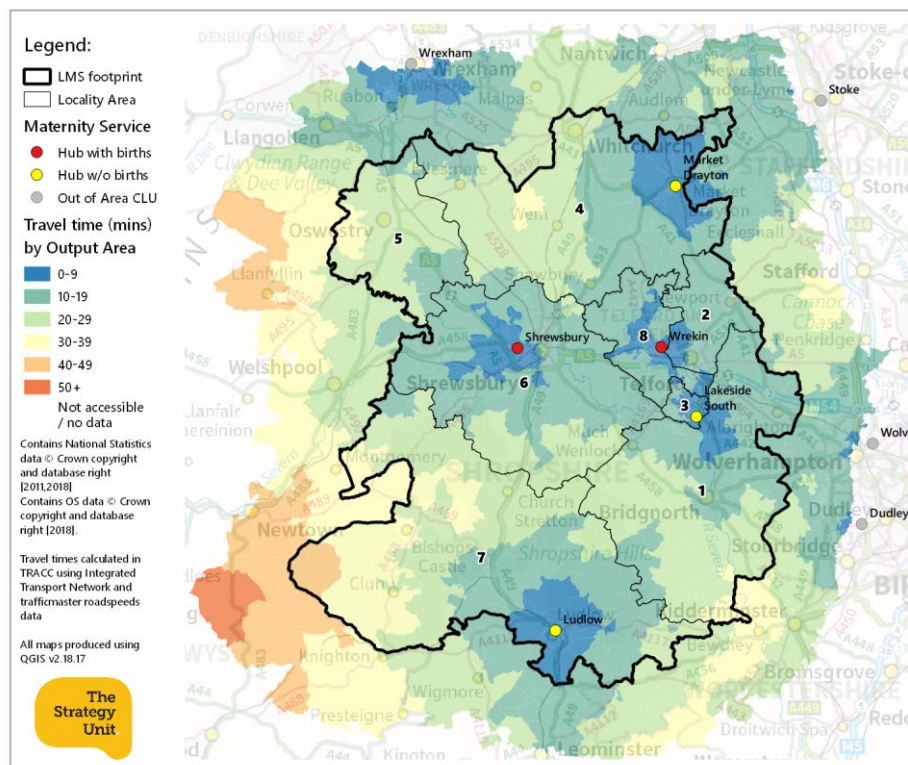
		Travel time (mins)					
type	stat	0-14	15-29	30-44	45-59	60+	
wday	n women	2,844	1,305	61	-	-	
wend	n women	2,964	1,221	25	-	-	
ptrans	n women	682	1,262	1,062	520	684	
wday	% women	67.6	31.0	1.4	-	-	
wend	% women	70.4	29.0	0.6	-	-	
ptrans	% women	16.2	30.0	25.2	12.4	16.2	
'Displaced' women	wday	n women	21	207	20	-	-
	wend	n women	32	209	7	-	-
	ptrans	n women	15	11	7	45	170
	wday	% women	8.5	83.5	8.1	-	-
	wend	% women	12.9	84.3	2.8	-	-
	ptrans	% women	6.0	4.4	2.8	18.1	68.5

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	16.7	11.4	8.0	17.9	26.1	12.5	16.2	8.4	25.4
wend	mean travel time (mins)	15.4	10.4	7.2	17.2	24.6	11.5	15.3	7.5	24.0
ptrans	mean travel time (mins)	57.6	39.5	23.1	45.5	63.3	35.1	18.7	22.1	50.8
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	15	123	6	1	-	11
wday	mean travel time (mins)	19.2	-	9.2	25.3	26.3	15.7	15.0	-	24.6
wend	mean travel time (mins)	17.9	-	8.2	24.7	24.7	14.7	15.0	-	23.4
ptrans	mean travel time (mins)	67.9	-	27.7	68.6	63.8	35.5	0.0	-	59.0

For description of the 'displaced' population in grey boxes please refer to page 19.

Other midwifery services: Scenario 2 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		
Oswestry	●	
Bridgnorth	●	
N. Shropshire (Whitchurch)		
N. Shropshire (Mkt Drayton)		●
S. Shropshire (Ludlow)		●

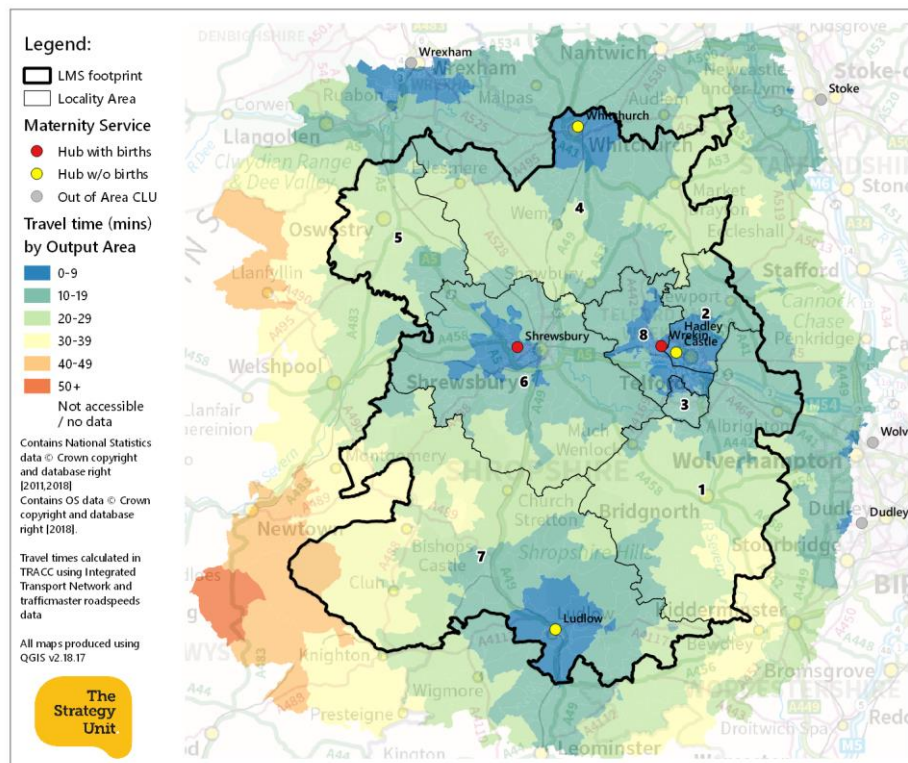


			Travel time (mins)				
	type	stat	0-14	15-29	30-44	45-59	60+
	wday	n women	2,883	1,238	89	-	-
	wend	n women	3,013	1,148	49	-	-
	ptrans	n women	744	1,217	1,029	562	658
	wday	% women	68.5	29.4	2.1	-	-
	wend	% women	71.6	27.3	1.2	-	-
	ptrans	% women	17.7	28.9	24.4	13.3	15.6
‘Displaced’ women	wday	n women	21	194	33	-	-
	wend	n women	32	198	18	-	-
	ptrans	n women	15	11	8	44	170
	wday	% women	8.5	78.2	13.3	-	-
	wend	% women	12.9	79.8	7.3	-	-
	ptrans	% women	6.0	4.4	3.2	17.7	68.5

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	16.7	11.4	8.0	17.2	26.2	12.5	16.2	8.4	25.1
wend	mean travel time (mins)	15.4	10.3	7.2	16.2	24.6	11.5	15.3	7.5	23.8
ptrans	mean travel time (mins)	57.6	39.5	23.1	39.7	63.3	35.0	18.1	22.1	51.5
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	15	123	6	1	-	11
wday	mean travel time (mins)	19.2	-	9.2	31.5	26.4	15.7	15.0	-	24.6
wend	mean travel time (mins)	17.9	-	8.2	29.7	24.8	14.7	15.0	-	23.4
ptrans	mean travel time (mins)	67.9	-	27.7	67.6	63.8	35.5	0.0	-	59.0

Other midwifery services: Scenario 3 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	
Hadley Castle		●
Oswestry	●	
Bridgnorth	●	
N. Shropshire (Whitchurch)		●
N. Shropshire (Mkt Drayton)		
S. Shropshire (Ludlow)		●



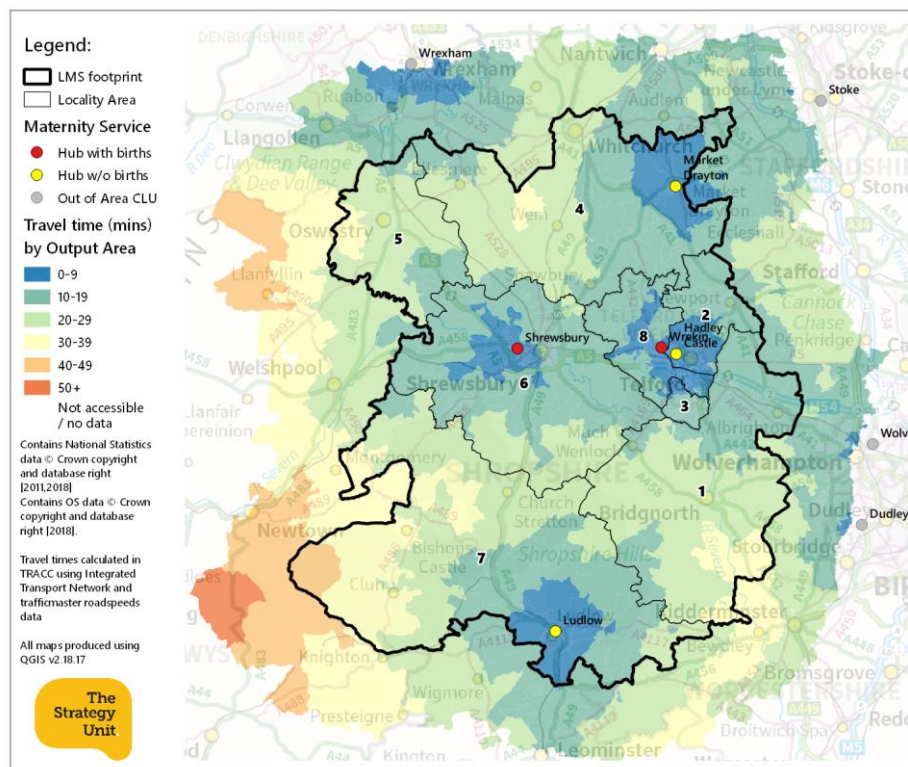
		Travel time (mins)				
type	stat	0-14	15-29	30-44	45-59	60+
wday	n women	2,868	1,251	91	-	-
wend	n women	2,997	1,151	62	-	-
ptrans	n women	809	964	1,057	742	638
wday	% women	68.1	29.7	2.2	-	-
wend	% women	71.2	27.3	1.5	-	-
ptrans	% women	19.2	22.9	25.1	17.6	15.2
'Displaced' women	wday n women	9	206	33	-	-
	wend n women	12	215	21	-	-
	ptrans n women	15	8	3	40	182
	wday % women	3.6	83.1	13.3	-	-
	wend % women	4.8	86.7	8.5	-	-
	ptrans % women	6.0	3.2	1.2	16.1	73.4

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	20.6	7.1	11.1	17.8	26.1	12.5	16.2	7.3	24.5
wend	mean travel time (mins)	19.6	6.6	10.5	17.1	24.6	11.5	15.3	6.8	23.4
ptrans	mean travel time (mins)	62.3	26.1	42.7	45.5	63.3	35.2	18.7	20.7	48.2
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	15	123	6	1	-	11
wday	mean travel time (mins)	24.0	-	12.9	25.3	26.3	15.5	15.0	-	27.5
wend	mean travel time (mins)	22.9	-	12.2	24.7	24.7	14.7	15.0	-	26.4
ptrans	mean travel time (mins)	72.5	-	57.9	68.6	63.8	35.5	0.0	-	59.0

For description of the 'displaced' population in grey boxes please refer to page 19.

Other midwifery services: Scenario 4 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	
Hadley Castle		●
Oswestry	●	
Bridgnorth	●	
N. Shropshire (Whitchurch)		
N. Shropshire (Mkt Drayton)		●
S. Shropshire (Ludlow)		●

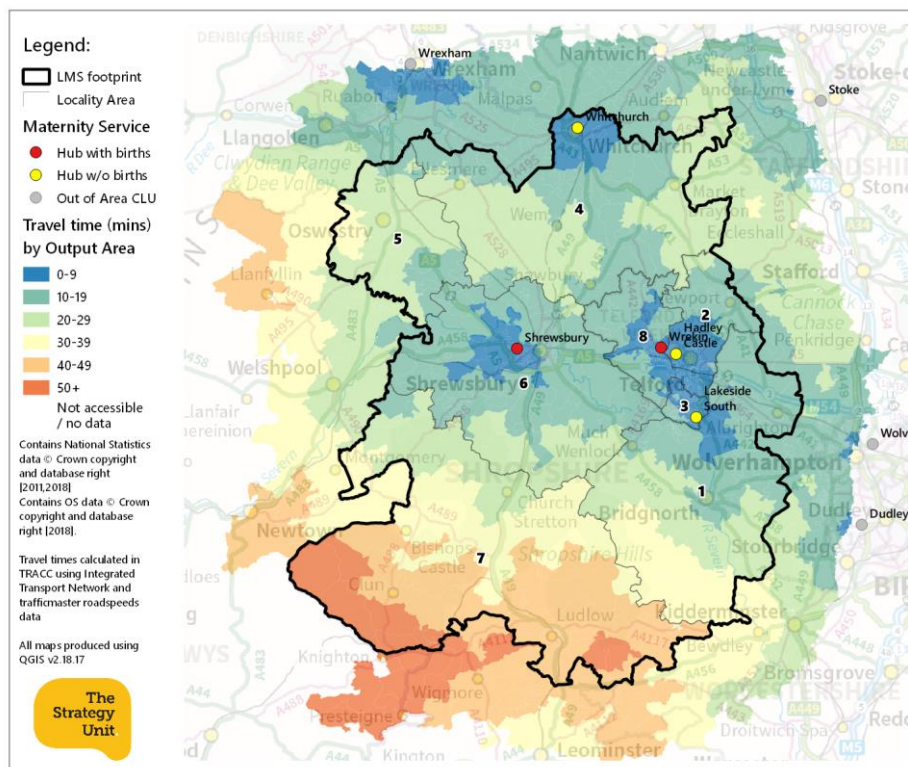


		Travel time (mins)					
type	stat	0-14	15-29	30-44	45-59	60+	
wday	n women	2,907	1,181	122	-	-	
wend	n women	3,046	1,078	86	-	-	
ptrans	n women	871	919	1,024	784	612	
wday	% women	69.0	28.1	2.9	-	-	
wend	% women	72.4	25.6	2.0	-	-	
ptrans	% women	20.7	21.8	24.3	18.6	14.5	
'Displaced' women	wday	n women	9	193	46	-	-
	wend	n women	12	204	32	-	-
	ptrans	n women	15	8	4	39	182
	wday	% women	3.6	77.8	18.5	-	-
	wend	% women	4.8	82.3	12.9	-	-
	ptrans	% women	6.0	3.2	1.6	15.7	73.4

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	20.6	7.1	11.1	17.2	26.2	12.5	16.2	7.3	24.6
wend	mean travel time (mins)	19.6	6.6	10.5	16.2	24.6	11.5	15.3	6.8	23.5
ptrans	mean travel time (mins)	62.3	26.1	42.7	39.7	63.3	35.1	18.1	20.7	48.9
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	15	123	6	1	-	11
wday	mean travel time (mins)	24.0	-	12.9	31.5	26.4	15.5	15.0	-	27.5
wend	mean travel time (mins)	22.9	-	12.2	29.7	24.8	14.7	15.0	-	26.4
ptrans	mean travel time (mins)	72.5	-	57.9	67.6	63.8	35.5	0.0	-	59.0

Other midwifery services: Scenario 5 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		●
Oswestry	●	
Bridgnorth	●	
N. Shropshire (Whitchurch)		●
N. Shropshire (Mkt Drayton)		
S. Shropshire (Ludlow)		



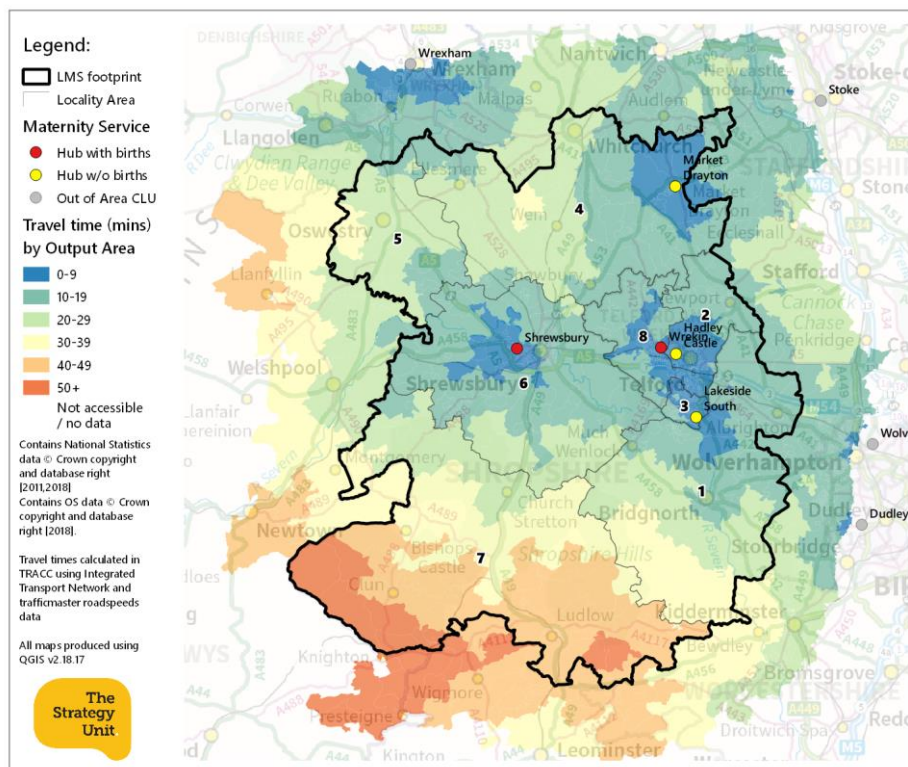
type	stat	Travel time (mins)				
		0-14	15-29	30-44	45-59	60+
wday	n women	2,829	1,162	127	90	2
wend	n women	2,990	1,032	143	45	-
ptrans	n women	872	1,245	868	560	665
wday	% women	67.2	27.6	3.0	2.1	0.0
wend	% women	71.0	24.5	3.4	1.1	-
ptrans	% women	20.7	29.6	20.6	13.3	15.8
'Displaced' women	wday n women	20	204	24	-	-
	wend n women	36	201	11	-	-
	ptrans n women	14	8	8	48	170
	wday % women	8.1	82.3	9.7	-	-
	wend % women	14.5	81.0	4.4	-	-
	ptrans % women	5.6	3.2	3.2	19.4	68.5

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	16.9	7.1	7.6	17.8	26.1	12.5	40.0	7.2	25.7
wend	mean travel time (mins)	15.6	6.6	6.9	17.1	24.6	11.5	37.7	6.6	24.4
ptrans	mean travel time (mins)	58.2	26.1	22.9	45.5	63.8	35.2	48.7	20.1	48.7
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	15	123	6	1	-	11
wday	mean travel time (mins)	19.4	-	9.2	25.3	26.3	15.5	37.6	-	24.6
wend	mean travel time (mins)	18.1	-	8.2	24.7	24.7	14.7	35.4	-	23.4
ptrans	mean travel time (mins)	69.7	-	27.7	68.6	64.3	35.5	0.0	-	59.0

For description of the 'displaced' population in grey boxes please refer to page 19.

Other midwifery services: Scenario 6 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		●
Oswestry	●	
Bridgnorth	●	
N. Shropshire (Whitchurch)		
N. Shropshire (Mkt Drayton)		●
S. Shropshire (Ludlow)		

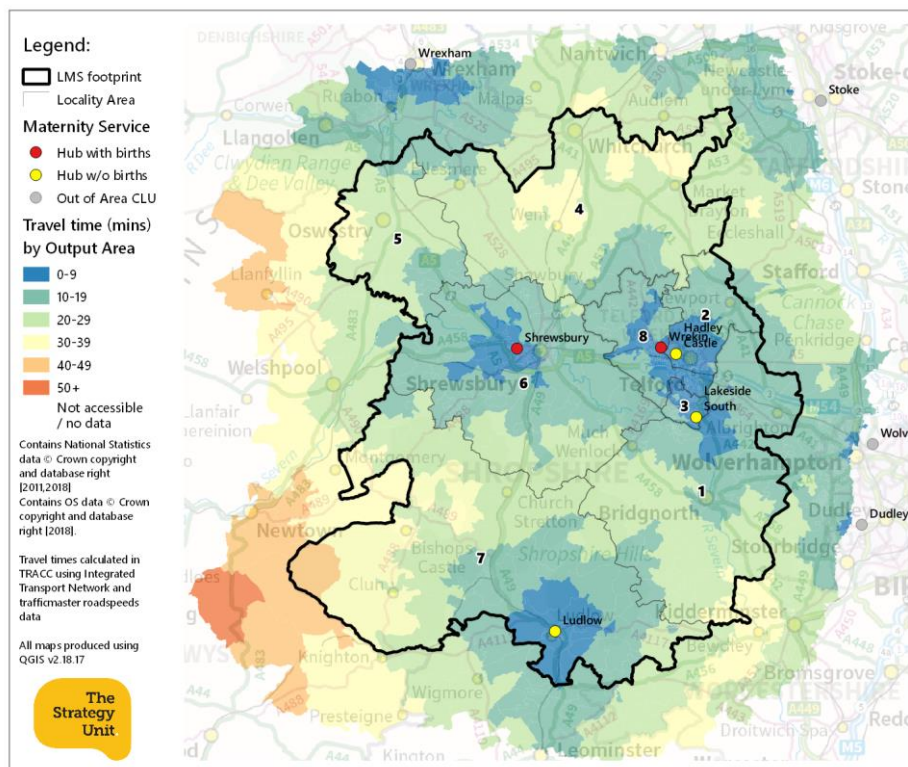


		Travel time (mins)					
type	stat	0-14	15-29	30-44	45-59	60+	
wday	n women	2,868	1,092	158	90	2	
wend	n women	3,039	959	167	45	-	
ptrans	n women	934	1,200	835	597	644	
wday	% women	68.1	25.9	3.8	2.1	0.0	
wend	% women	72.2	22.8	4.0	1.1	-	
ptrans	% women	22.2	28.5	19.8	14.2	15.3	
'Displaced' women	wday	n women	20	191	37	-	-
	wend	n women	36	190	22	-	-
	ptrans	n women	14	8	9	47	170
	wday	% women	8.1	77.0	14.9	-	-
	wend	% women	14.5	76.6	8.9	-	-
	ptrans	% women	5.6	3.2	3.6	19.0	68.5

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	16.9	7.1	7.6	17.2	26.2	12.5	40.0	7.2	25.7
wend	mean travel time (mins)	15.6	6.6	6.9	16.2	24.6	11.5	37.7	6.6	24.5
ptrans	mean travel time (mins)	58.2	26.1	22.9	39.7	63.8	35.1	48.5	20.1	49.4
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	15	123	6	1	-	11
wday	mean travel time (mins)	19.4	-	9.2	31.5	26.4	15.5	37.6	-	24.6
wend	mean travel time (mins)	18.1	-	8.2	29.7	24.8	14.7	35.4	-	23.4
ptrans	mean travel time (mins)	69.7	-	27.7	67.6	64.3	35.5	0.0	-	59.0

Other midwifery services: Scenario 7 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		●
Oswestry	●	
Bridgnorth	●	
N. Shropshire (Whitchurch)		
N. Shropshire (Mkt Drayton)		
S. Shropshire (Ludlow)		●



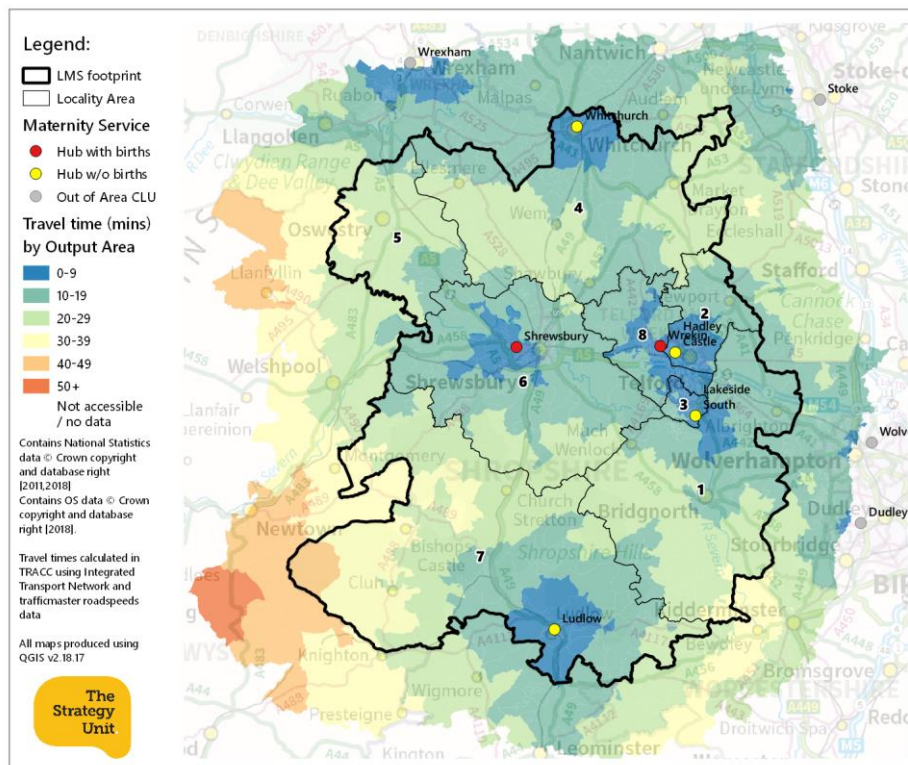
		Travel time (mins)					
type	stat	0-14	15-29	30-44	45-59	60+	
wday	n women	2,816	1,171	222	1	-	
wend	n women	2,975	1,084	151	-	-	
ptrans	n women	880	1,247	833	573	677	
wday	% women	66.9	27.8	5.3	0.0	-	
wend	% women	70.7	25.7	3.6	-	-	
ptrans	% women	20.9	29.6	19.8	13.6	16.1	
'Displaced' women	wday	n women	21	194	33	-	-
	wend	n women	36	194	18	-	-
	ptrans	n women	15	11	7	45	170
	wday	% women	8.5	78.2	13.3	-	-
	wend	% women	14.5	78.2	7.3	-	-
	ptrans	% women	6.0	4.4	2.8	18.1	68.5

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	16.6	7.1	7.6	27.8	26.2	12.5	16.2	7.2	24.9
wend	mean travel time (mins)	15.3	6.6	6.9	26.0	24.6	11.5	15.3	6.6	23.7
ptrans	mean travel time (mins)	57.2	26.1	22.9	59.1	63.3	35.1	18.7	20.2	49.8
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	15	123	6	1	-	11
wday	mean travel time (mins)	19.0	-	9.2	31.5	26.4	15.5	15.0	-	24.6
wend	mean travel time (mins)	17.8	-	8.2	29.7	24.8	14.7	15.0	-	23.4
ptrans	mean travel time (mins)	67.2	-	27.7	68.6	63.8	35.5	0.0	-	59.0

For description of the 'displaced' population in grey boxes please refer to page 19.

Other midwifery services: Scenario 8 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		●
Oswestry	●	
Bridgnorth	●	
N. Shropshire (Whitchurch)		●
N. Shropshire (Mkt Drayton)		
S. Shropshire (Ludlow)		●



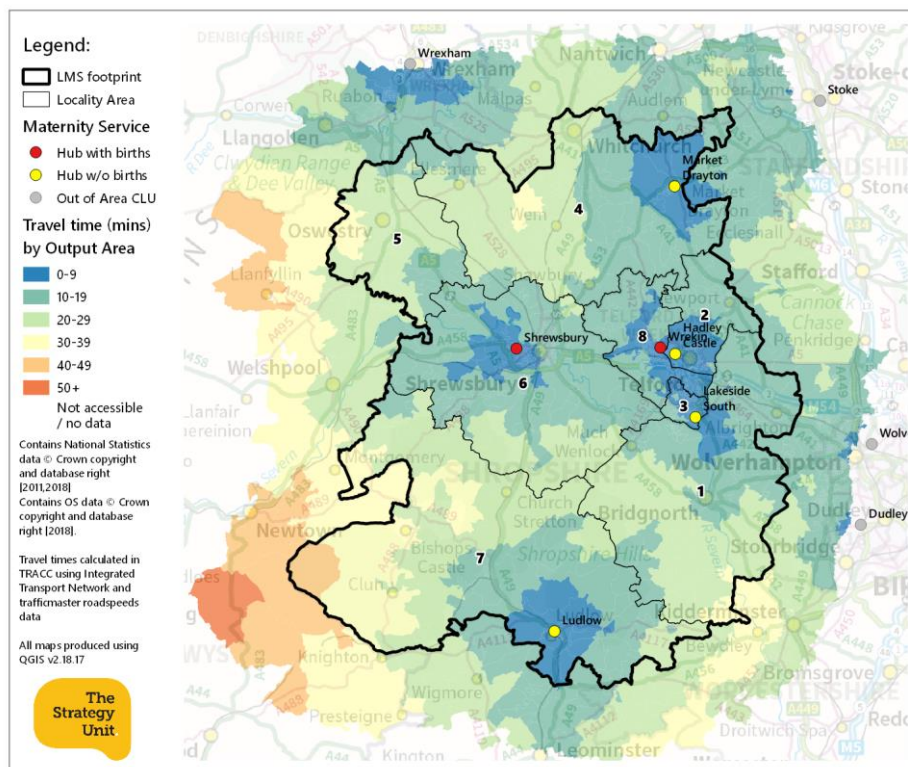
		Travel time (mins)					
type	stat	0-14	15-29	30-44	45-59	60+	
wday	n women	2,933	1,219	58	-	-	
wend	n women	3,092	1,093	25	-	-	
ptrans	n women	919	1,302	876	535	578	
wday	% women	69.7	29.0	1.4	-	-	
wend	% women	73.4	26.0	0.6	-	-	
ptrans	% women	21.8	30.9	20.8	12.7	13.7	
‘Displaced’ women	wday	n women	21	207	20	-	-
	wend	n women	36	205	7	-	-
	ptrans	n women	15	11	7	45	170
	wday	% women	8.5	83.5	8.1	-	-
	wend	% women	14.5	82.7	2.8	-	-
	ptrans	% women	6.0	4.4	2.8	18.1	68.5

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	16.6	7.1	7.6	17.8	26.1	12.5	16.2	7.2	23.7
wend	mean travel time (mins)	15.3	6.6	6.9	17.1	24.6	11.5	15.3	6.6	22.6
ptrans	mean travel time (mins)	57.2	26.1	22.9	45.5	63.3	35.1	18.7	20.1	48.2
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	15	123	6	1	-	11
wday	mean travel time (mins)	19.0	-	9.2	25.3	26.3	15.5	15.0	-	24.6
wend	mean travel time (mins)	17.8	-	8.2	24.7	24.7	14.7	15.0	-	23.4
ptrans	mean travel time (mins)	67.2	-	27.7	68.6	63.8	35.5	0.0	-	59.0

For description of the 'displaced' population in grey boxes please refer to page 19.

Other midwifery services: Scenario 9 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		●
Oswestry	●	
Bridgnorth	●	
N. Shropshire (Whitchurch)		
N. Shropshire (Mkt Drayton)		●
S. Shropshire (Ludlow)		●



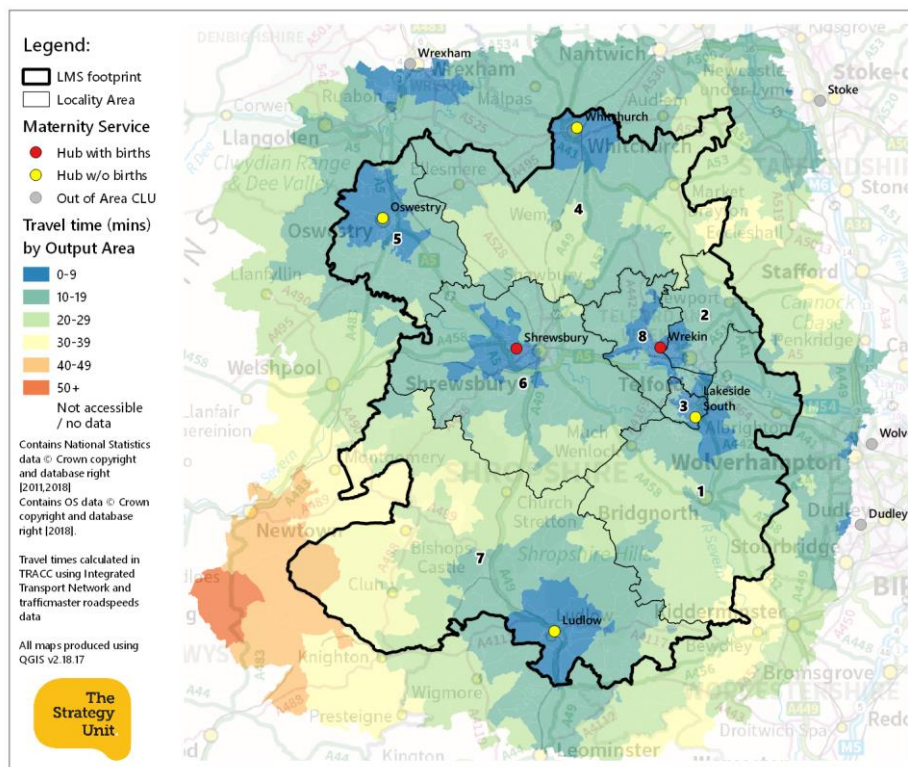
		Travel time (mins)					
type	stat	0-14	15-29	30-44	45-59	60+	
wday	n women	2,972	1,149	89	-	-	
wend	n women	3,141	1,020	49	-	-	
ptrans	n women	981	1,257	843	577	552	
wday	% women	70.6	27.3	2.1	-	-	
wend	% women	74.6	24.2	1.2	-	-	
ptrans	% women	23.3	29.9	20.0	13.7	13.1	
'Displaced' women	wday	n women	21	194	33	-	-
	wend	n women	36	194	18	-	-
	ptrans	n women	15	11	8	44	170
	wday	% women	8.5	78.2	13.3	-	-
	wend	% women	14.5	78.2	7.3	-	-
	ptrans	% women	6.0	4.4	3.2	17.7	68.5

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	16.6	7.1	7.6	17.2	26.2	12.5	16.2	7.2	23.8
wend	mean travel time (mins)	15.3	6.6	6.9	16.2	24.6	11.5	15.3	6.6	22.6
ptrans	mean travel time (mins)	57.2	26.1	22.9	39.7	63.3	35.0	18.1	20.1	48.9
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	15	123	6	1	-	11
wday	mean travel time (mins)	19.0	-	9.2	31.5	26.4	15.5	15.0	-	24.6
wend	mean travel time (mins)	17.8	-	8.2	29.7	24.8	14.7	15.0	-	23.4
ptrans	mean travel time (mins)	67.2	-	27.7	67.6	63.8	35.5	0.0	-	59.0

For description of the 'displaced' population in grey boxes please refer to page 19.

Other midwifery services: Scenario 10 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		
Oswestry	●	●
Bridgnorth	●	
N. Shropshire (Whitchurch)		●
N. Shropshire (Mkt Drayton)		
S. Shropshire (Ludlow)		●



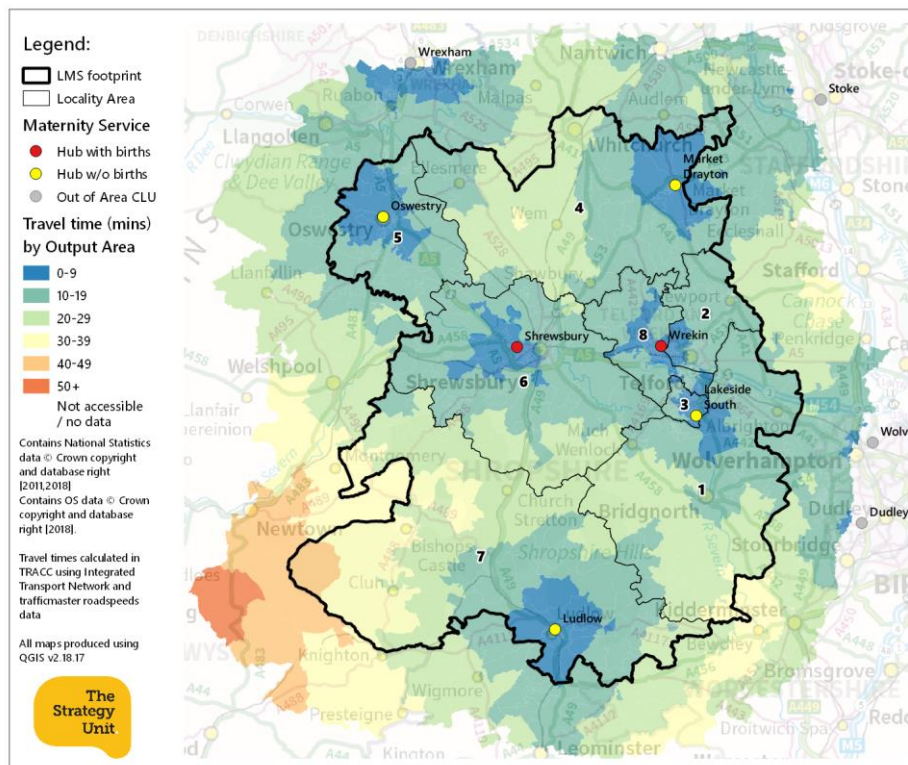
		Travel time (mins)					
type	stat	0-14	15-29	30-44	45-59	60+	
wday	n women	3,059	1,117	34	-	-	
wend	n women	3,190	1,008	12	-	-	
ptrans	n women	803	1,338	1,100	477	492	
wday	% women	72.7	26.5	0.8	-	-	
wend	% women	75.8	23.9	0.3	-	-	
ptrans	% women	19.1	31.8	26.1	11.3	11.7	
‘Displaced’ women	wday	n women	17	83	2	-	-
	wend	n women	28	74	-	-	-
	ptrans	n women	8	3	6	20	65
	wday	% women	16.7	81.4	2.0	-	-
	wend	% women	27.5	72.5	-	-	-
	ptrans	% women	7.8	2.9	5.9	19.6	63.7

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	16.7	11.4	8.0	17.4	7.0	12.5	16.2	8.4	23.5
wend	mean travel time (mins)	15.4	10.4	7.2	16.6	6.4	11.5	15.3	7.5	22.1
ptrans	mean travel time (mins)	57.6	39.5	23.1	43.1	16.2	35.1	18.7	22.1	49.6
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	-	-	2	1	-	7
wday	mean travel time (mins)	19.2	-	9.2	-	-	19.6	15.0	-	19.3
wend	mean travel time (mins)	17.9	-	8.2	-	-	18.5	15.0	-	18.2
ptrans	mean travel time (mins)	67.9	-	27.7	-	-	60.6	0.0	-	76.0

For description of the 'displaced' population in grey boxes please refer to page 19.

Other midwifery services: Scenario 11 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		
Oswestry	●	●
Bridgnorth	●	
N. Shropshire (Whitchurch)		
N. Shropshire (Mkt Drayton)		●
S. Shropshire (Ludlow)		●



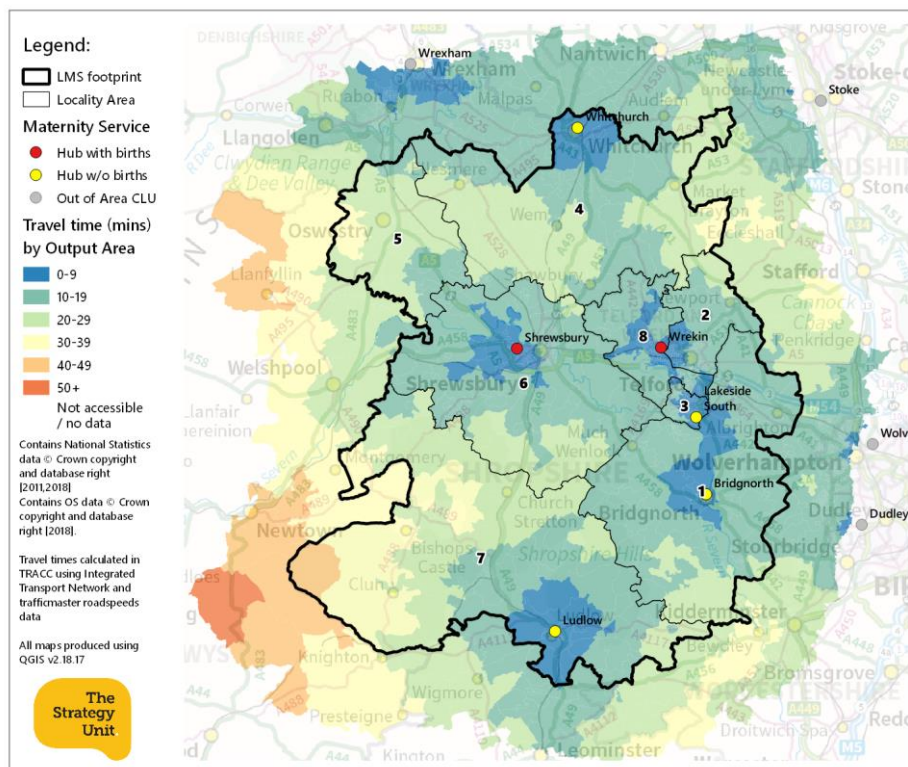
		Travel time (mins)					
type	stat	0-14	15-29	30-44	45-59	60+	
wday	n women	3,098	1,079	33	-	-	
wend	n women	3,239	959	12	-	-	
ptrans	n women	865	1,293	1,067	519	466	
wday	% women	73.6	25.6	0.8	-	-	
wend	% women	76.9	22.8	0.3	-	-	
ptrans	% women	20.5	30.7	25.3	12.3	11.1	
'Displaced' women	wday	n women	17	83	2	-	-
	wend	n women	28	74	-	-	-
	ptrans	n women	8	3	6	20	65
	wday	% women	16.7	81.4	2.0	-	-
	wend	% women	27.5	72.5	-	-	-
	ptrans	% women	7.8	2.9	5.9	19.6	63.7

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	16.7	11.4	8.0	16.3	7.0	12.5	16.2	8.4	23.2
wend	mean travel time (mins)	15.4	10.3	7.2	15.2	6.4	11.5	15.3	7.5	21.9
ptrans	mean travel time (mins)	57.6	39.5	23.1	37.3	16.2	35.0	18.1	22.1	50.3
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	88	-	4	-	-	2	1	-	7
wday	mean travel time (mins)	19.2	-	9.2	-	-	19.6	15.0	-	19.3
wend	mean travel time (mins)	17.9	-	8.2	-	-	18.5	15.0	-	18.2
ptrans	mean travel time (mins)	67.9	-	27.7	-	-	60.6	0.0	-	76.0

For description of the 'displaced' population in grey boxes please refer to page 19.

Other midwifery services: Scenario 12 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		
Oswestry	●	
Bridgnorth	●	●
N. Shropshire (Whitchurch)		●
N. Shropshire (Mkt Drayton)		
S. Shropshire (Ludlow)		●



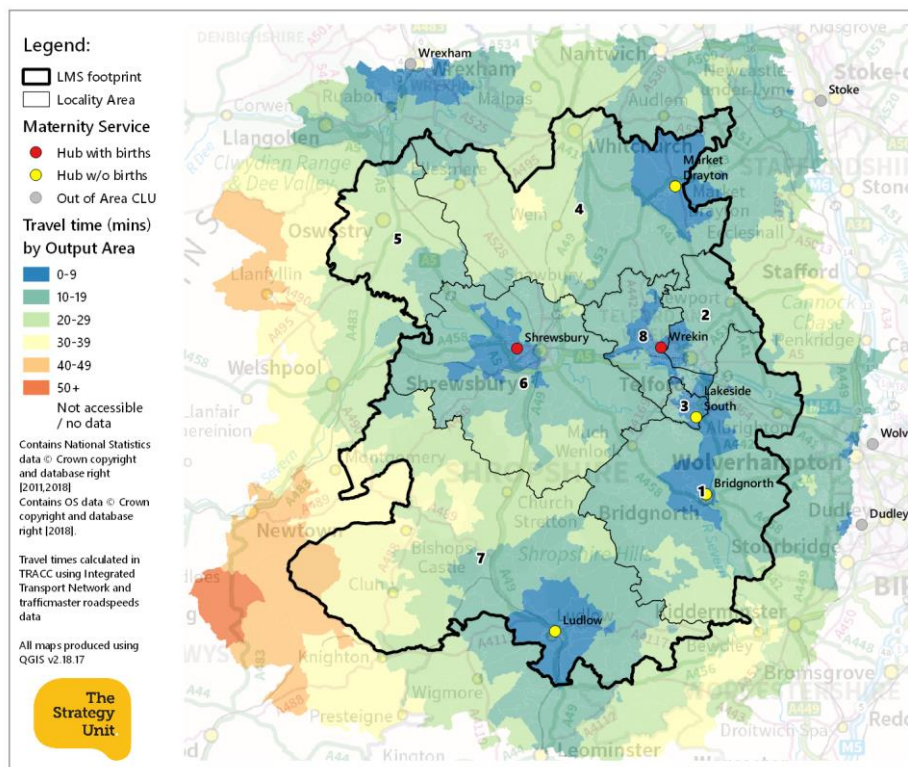
type	stat	Travel time (mins)				
		0-14	15-29	30-44	45-59	60+
wday	n women	2,966	1,188	56	-	-
wend	n women	3,073	1,112	25	-	-
ptrans	n women	768	1,376	1,078	472	516
wday	% women	70.5	28.2	1.3	-	-
wend	% women	73.0	26.4	0.6	-	-
ptrans	% women	18.2	32.7	25.6	11.2	12.3
'Displaced' women	wday n women	4	124	18	-	-
	wend n women	4	135	7	-	-
	ptrans n women	7	8	1	25	105
	wday % women	2.7	84.9	12.3	-	-
	wend % women	2.7	92.5	4.8	-	-
	ptrans % women	4.8	5.5	0.7	17.1	71.9

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	12.0	11.4	8.0	17.9	26.1	12.5	16.1	8.4	25.2
wend	mean travel time (mins)	11.1	10.4	7.2	17.2	24.6	11.5	15.3	7.5	23.9
ptrans	mean travel time (mins)	29.0	39.5	23.1	45.5	63.3	34.8	18.7	22.1	47.9
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	-	-	-	15	123	4	-	-	4
wday	mean travel time (mins)	-	-	-	25.3	26.3	13.7	-	-	33.7
wend	mean travel time (mins)	-	-	-	24.7	24.7	12.7	-	-	32.3
ptrans	mean travel time (mins)	-	-	-	68.6	63.8	22.9	-	-	29.2

For description of the 'displaced' population in grey boxes please refer to page 19.

Other midwifery services: Scenario 13 travel times

	Current	Proposed
Shrewsbury (RSH)	●	●
Wrekin (PRH)	●	●
Lakeside South	●	●
Hadley Castle		
Oswestry	●	
Bridgnorth	●	●
N. Shropshire (Whitchurch)		
N. Shropshire (Mkt Drayton)		●
S. Shropshire (Ludlow)		●



		Travel time (mins)				
type	stat	0-14	15-29	30-44	45-59	60+
wday	n women	3,005	1,121	84	-	-
wend	n women	3,122	1,039	49	-	-
ptrans	n women	830	1,331	1,045	514	490
wday	% women	71.4	26.6	2.0	-	-
wend	% women	74.2	24.7	1.2	-	-
ptrans	% women	19.7	26.9	24.8	12.2	11.6
'Displaced' women	wday n women	4	111	31	-	-
	wend n women	4	124	18	-	-
	ptrans n women	7	8	2	24	105
	wday % women	2.7	76.0	21.2	-	-
	wend % women	2.7	84.9	12.3	-	-
	ptrans % women	4.8	5.5	1.4	16.4	71.9

type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	407	747	590	434	226	936	196	600	74
wday	mean travel time (mins)	12.0	11.4	8.0	17.2	26.2	12.5	16.1	8.4	25.0
wend	mean travel time (mins)	11.1	10.3	7.2	16.2	24.6	11.5	15.3	7.5	23.7
ptrans	mean travel time (mins)	29.0	39.5	23.1	39.7	63.3	34.7	18.1	22.1	48.5
type	stat	[1] Bridgnorth	[2] Hadley Castle	[3] Lakeside South	[4] North Shropshire	[5] Oswestry	[6] Shrewsbury & Atcham	[7] South Shropshire	[8] The Wrekin	OutsideLMS
	n women	-	-	-	15	123	4	-	-	4
wday	mean travel time (mins)	-	-	-	31.5	26.4	13.7	-	-	33.7
wend	mean travel time (mins)	-	-	-	29.7	24.8	12.7	-	-	32.3
ptrans	mean travel time (mins)	-	-	-	67.6	63.8	22.9	-	-	29.2

Appendices

Appendix 1: Demographic impact of scenarios on mean travel times (Births, all mothers)

Current configuration:

Current configuration:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	171	3,671	894	121	46	82	3,887	31	569	851	1,055	1,134	873	512	311
wday	mean_time	20.8	21.8	23.1	14.2	13.1	17.3	22.6	20.8	21.2	15.3	20.6	25.6	21.6	20.7	54.1
wend	mean_time	19.3	20.4	21.6	13.2	12.1	16.0	21.1	19.3	19.8	14.2	19.2	24.0	20.2	19.3	52.4
ptrans	mean_time	53.6	53.3	54.1	34.0	39.5	43.7	54.4	52.4	53.6	45.0	49.4	55.4	56.7	57.4	88.0

Proposed configuration:

Proposed configuration:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	171	3,671	894	121	46	82	3,887	31	569	851	1,055	1,134	873	512	311
wday	mean_time	20.9	22.6	23.5	14.3	13.6	17.4	23.3	20.8	22.0	15.6	21.4	26.5	22.1	21.8	54.4
wend	mean_time	19.5	21.2	22.0	13.3	12.5	16.1	21.8	19.3	20.5	14.4	20.0	24.8	20.7	20.3	52.6
ptrans	mean_time	54.0	55.0	55.3	34.4	40.2	44.2	56.1	52.4	54.9	45.5	50.9	57.0	58.5	60.3	88.5

Appendix 2: Demographic impact of scenarios (other midwifery care services , all mothers)

Current configuration:

Current configuration:

		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	13.8	13.5	13.5	9.1	9.1	9.1	13.8	10.7	13.5	9.2	14.0	16.7	13.4	12.1	28.1
wend	mean_time	12.7	12.4	12.5	8.3	8.2	8.3	12.7	9.7	12.5	8.3	13.0	15.5	12.4	11.0	26.9
ptrans	mean_time	33.6	33.9	33.5	25.3	25.6	24.8	34.2	31.4	34.8	25.6	32.0	34.2	38.6	41.8	44.8

Scenario 1:

Scenario 1:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	11.9	13.1	13.8	9.3	9.6	10.2	13.4	12.0	13.2	9.9	12.7	15.3	13.7	13.2	31.3
wend	mean_time	11.0	12.1	12.8	8.4	8.7	9.3	12.4	10.9	12.2	9.0	11.7	14.3	12.7	12.2	30.1
ptrans	mean_time	32.3	36.6	38.1	26.6	26.5	28.8	37.0	35.7	38.1	27.6	33.3	37.3	42.4	47.0	45.0

Scenario 2:

Scenario 2:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	12.7	13.0	13.7	9.4	9.6	10.1	13.4	12.0	12.8	9.6	12.5	15.7	13.3	13.3	32.0
wend	mean_time	11.6	12.0	12.6	8.6	8.7	9.2	12.3	10.9	11.7	8.7	11.6	14.6	12.3	12.2	30.7
ptrans	mean_time	33.6	35.8	37.4	27.1	26.5	28.2	36.4	35.7	36.7	26.3	32.1	38.7	39.9	47.0	47.2

Scenario 3:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	12.2	13.0	13.7	7.7	9.1	10.0	13.4	10.3	13.0	10.7	11.8	15.3	13.5	13.1	31.3
wend	mean_time	11.5	12.2	12.9	7.1	8.5	9.3	12.5	9.5	12.3	10.0	11.1	14.5	12.7	12.1	30.1
ptrans	mean_time	35.7	37.1	38.2	22.8	29.6	29.6	37.6	31.6	38.6	34.8	31.5	37.0	41.7	44.9	45.0

Scenario 4:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	13.0	12.9	13.6	7.8	9.1	9.9	13.3	10.3	12.6	10.4	11.6	15.8	13.1	13.2	32.0
wend	mean_time	12.1	12.0	12.7	7.2	8.5	9.2	12.5	9.5	11.9	9.7	10.9	14.8	12.2	12.2	30.7
ptrans	mean_time	36.9	36.4	37.4	23.3	29.6	28.9	37.1	31.6	37.2	33.5	30.4	38.4	39.3	44.9	47.2

Scenario 5:		Age			Ethnicity					Deprivation Index						
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	11.7	13.3	13.7	8.0	8.0	8.9	13.7	10.1	13.2	9.1	13.0	16.4	13.5	12.9	34.2
wend	mean_time	10.9	12.4	12.7	7.3	7.4	8.2	12.7	9.3	12.3	8.3	12.2	15.4	12.7	11.9	32.9
ptrans	mean_time	30.5	35.4	36.4	23.0	23.6	24.9	35.9	31.8	36.3	25.0	31.6	37.2	42.0	44.6	47.0

Scenario 6:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	12.4	13.2	13.6	8.2	8.0	8.8	13.7	10.1	12.8	8.8	12.9	16.9	13.1	13.0	34.9
wend	mean_time	11.5	12.3	12.6	7.5	7.4	8.1	12.7	9.3	11.9	8.0	12.0	15.7	12.2	12.0	33.5
ptrans	mean_time	31.8	34.7	35.7	23.5	23.6	24.3	35.4	31.8	35.0	23.7	30.4	38.6	39.6	44.6	49.2

Scenario 7:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	13.4	13.1	13.7	7.8	8.0	9.1	13.6	10.1	12.7	8.8	12.5	16.9	13.5	12.5	32.6
wend	mean_time	12.4	12.1	12.7	7.2	7.4	8.4	12.6	9.3	11.8	8.0	11.6	15.7	12.5	11.5	31.3
ptrans	mean_time	33.5	35.1	36.3	22.5	23.1	25.4	36.0	31.2	35.5	24.6	31.1	38.6	41.3	43.9	47.2

Scenario 8:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	11.0	12.0	12.8	7.5	8.0	8.9	12.5	10.1	11.8	8.8	11.1	14.6	12.9	12.4	31.3
wend	mean_time	10.2	11.2	11.9	6.9	7.4	8.2	11.6	9.3	11.0	8.0	10.3	13.7	12.1	11.4	30.1
ptrans	mean_time	29.9	33.7	35.3	22.0	23.1	24.9	34.4	31.2	34.4	24.6	29.1	35.3	40.6	43.9	45.0

Scenario 9:		Age			Ethnicity					Deprivation Index						
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	11.8	12.0	12.7	7.7	8.0	8.8	12.5	10.1	11.4	8.4	10.9	15.0	12.5	12.5	32.0
wend	mean_time	10.9	11.1	11.8	7.1	7.4	8.1	11.5	9.3	10.6	7.7	10.1	14.0	11.6	11.5	30.7
ptrans	mean_time	31.2	33.0	34.5	22.5	23.1	24.3	33.8	31.2	33.1	23.3	27.9	36.7	38.1	43.9	47.2

Scenario 10:		Age			Ethnicity					Deprivation Index						
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	11.3	12.0	12.5	8.5	9.1	9.4	12.2	11.1	12.3	8.9	11.7	13.8	12.9	12.4	24.6
wend	mean_time	10.4	11.1	11.6	7.7	8.2	8.6	11.3	10.1	11.3	8.1	10.7	12.8	12.0	11.3	23.5
ptrans	mean_time	31.1	33.7	34.9	24.6	25.2	27.0	34.0	33.5	35.8	25.1	30.8	33.3	40.3	44.5	40.7

Scenario 11:		Age			Ethnicity					Deprivation Index						
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	12.0	11.8	12.3	8.6	9.1	9.3	12.1	11.1	11.8	8.6	11.4	14.1	12.5	12.3	25.2
wend	mean_time	11.0	10.9	11.4	7.8	8.2	8.5	11.2	10.1	10.8	7.7	10.5	13.0	11.5	11.3	24.1
ptrans	mean_time	32.4	33.0	34.2	25.1	25.2	26.3	33.4	33.5	34.5	23.9	29.6	34.7	37.8	44.5	42.9

Scenario 12:

Scenario 12:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	11.6	12.7	13.3	9.1	9.6	9.7	13.0	11.6	12.6	9.9	12.2	14.6	13.2	12.6	31.3
wend	mean_time	10.7	11.7	12.3	8.3	8.7	8.9	12.0	10.5	11.6	9.0	11.3	13.7	12.2	11.6	30.1
ptrans	mean_time	30.6	33.7	34.7	25.9	26.4	26.5	34.1	33.6	34.2	27.6	30.4	33.0	38.8	43.5	45.0

Scenario 13:

Scenario 13:		Age			Ethnicity						Deprivation Index					
type	stat	<20	20-35	35+	Asian	Black	Mixed	White	Other	Unknown	1	2	3	4	5	NA
	n	181	3,292	737	94	47	61	3,357	28	623	829	964	1,077	829	490	21
wday	mean_time	12.4	12.5	13.2	9.3	9.6	9.6	12.9	11.6	12.2	9.6	12.1	15.0	12.8	12.7	32.0
wend	mean_time	11.3	11.5	12.2	8.4	8.7	8.8	11.9	10.5	11.2	8.7	11.2	13.9	11.8	11.6	30.7
ptrans	mean_time	31.9	33.0	33.9	26.4	26.4	25.8	33.6	33.6	32.9	26.3	29.2	34.4	36.3	43.5	47.2

Appendix 2: Impact of scenarios on mean travel times (other midwifery care services, total population, by locality)



Appendix 3: Proxy hub locations used in travel-time calculations

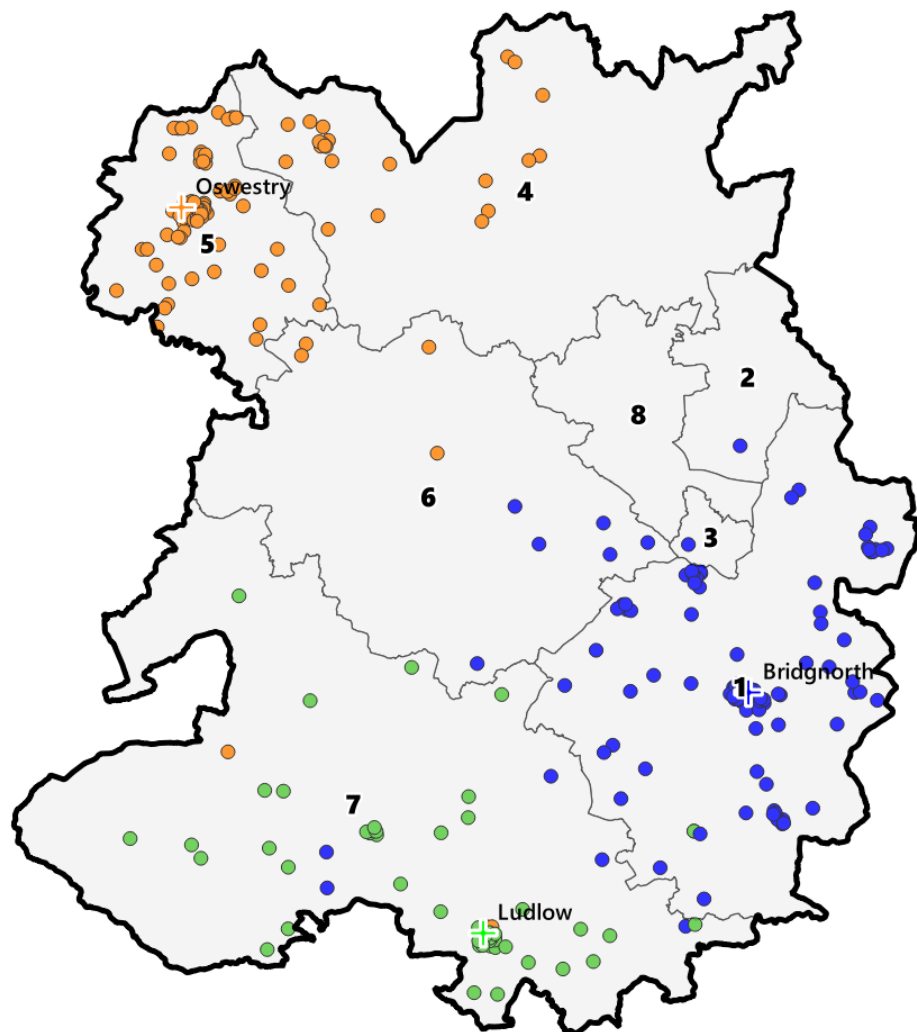
Area	Sub-area	Site used as proxy hub
Shrewsbury	-	Royal Shrewsbury Hospital
Telford & Wrekin	Wrekin	Princess Royal Hospital
Telford & Wrekin	Hadley Castle	Hadley Community Centre
Telford & Wrekin	Lakeside South	Sutton Hill Community Centre
North Shropshire	Whitchurch	Whitchurch Community Hospital
North Shropshire	Market Drayton	Festival Centre, Frogmore Rd.
South Shropshire	-	Ludlow Community Hospital
Oswestry	-	The Centre, Oak Street
Bridgnorth	-	Bridgnorth Community Hospital

Appendix 4: List of HRG codes used to identify delivery

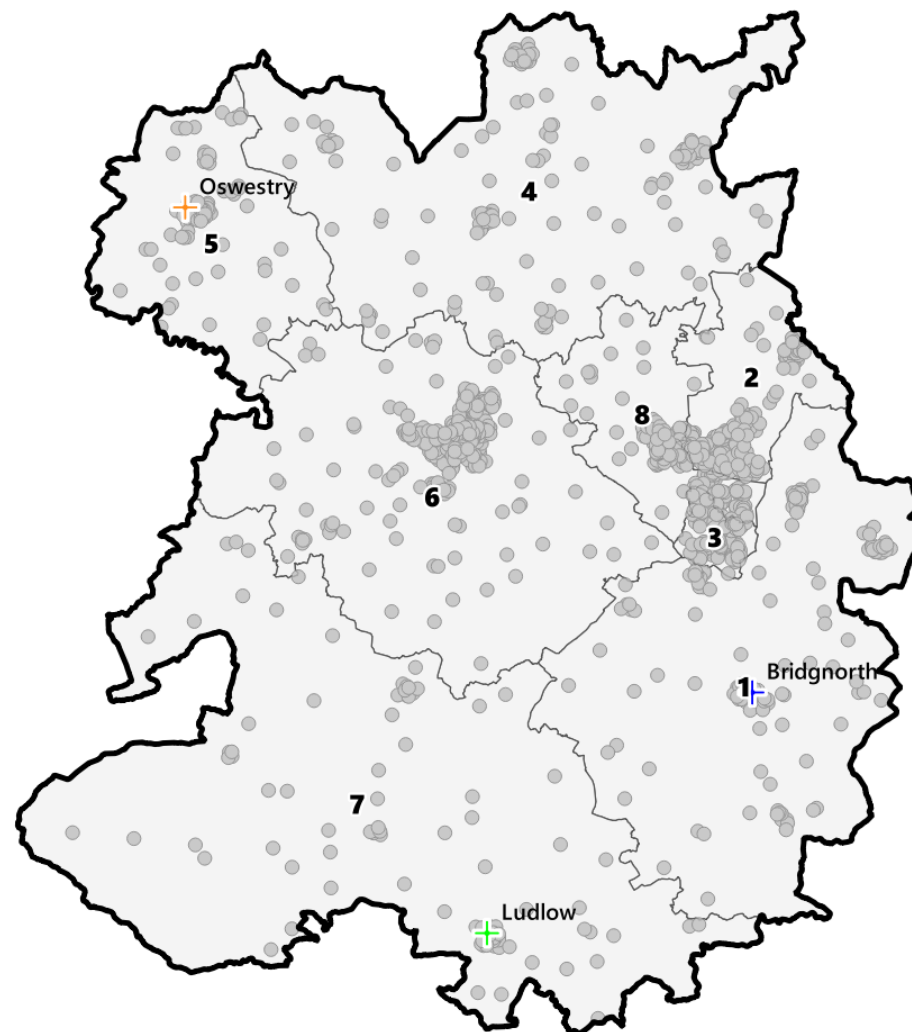
Code	Description
NZ11A	Normal Delivery with CC
NZ11B	Normal Delivery without CC
NZ11C	Normal Delivery with Epidural, with CC
NZ11D	Normal Delivery with Epidural, without CC
NZ11E	Normal Delivery with Induction, with CC
NZ11F	Normal Delivery with Induction, without CC
NZ11G	Normal Delivery with Post-partum Surgical Intervention
NZ12A	Assisted Delivery with CC
NZ12B	Assisted Delivery without CC
NZ12C	Assisted Delivery with Epidural, with CC
NZ12D	Assisted Delivery with Epidural, without CC
NZ12E	Assisted Delivery with Induction, with CC
NZ12F	Assisted Delivery with Induction, without CC
NZ12G	Assisted Delivery with Post-partum Surgical Intervention
NZ13A	Planned Lower Uterine Caesarean Section with CC
NZ13B	Planned Lower Uterine Caesarean Section without CC
NZ14A	Emergency or Upper Uterine Caesarean Section, with CC
NZ14B	Emergency or Upper Uterine Caesarean Section, without CC
NZ15Z	Caesarean Section with Eclampsia, Pre-eclampsia or Placenta Praevia

Appendix 5: Location of mothers giving birth at 3 rural MLU / Other SATH sites, 2016/17

Location of mothers giving birth at Bridgnorth, Ludlow or Oswestry MLU in 2016/17



Location of mothers giving birth at PRH or RSH in 2016/17



Contact

For any queries relating directly to this report please contact:

Andy Hood |
Analytics Manager |
andrewhood@nhs.net |
0121 612 2800 |

For queries relating to the maternity programme in Shropshire and Telford & Wrekin please contact:

Fiona Ellis |
Programme Manager |
Fiona.ellis3@nhs.net |
07773 977805 |

**The
Strategy
Unit.**

Stay connected with us!

<https://www.strategyunitwm.nhs.uk/>

@Strategy_Unit

0121 612 1538

strategy.unit@nhs.net



Midlands and Lancashire
Commissioning Support Unit