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North of England
Commissioning Support

Rothbury Travel Impact Analysis

July 2017

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Introduction

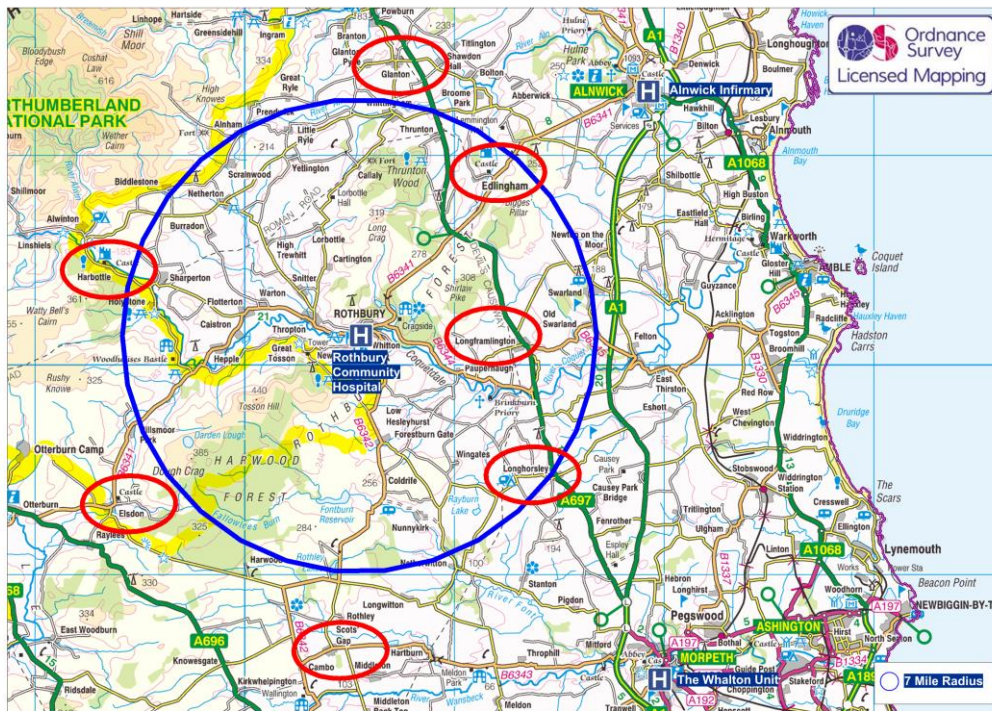
This paper will explore the travel impact (journey costs and times) for residents having to travel to Alnwick Infirmary or The Whalton Unit, Morpeth as a result of the closure of the inpatient ward at the Rothbury Community Hospital.

The map below shows where these three hospitals are located across Northumberland. The areas circled in **red** have been selected as most affected areas. The **blue** circle represents the average distance travelled for patients attending Rothbury Community Hospital (7 miles) during April 2014 to October 2016.

The modes of transport being explored in this paper include bus routes, fastest and shortest car journeys and taxi services.

Travel distances and costs by car, bus and taxi have been identified from Rothbury to Alnwick & Morpeth and from the settlements circled on the map to Rothbury, Alnwick & Morpeth, using Northumberland.gov.uk (links to Traveline North East & Arriva) for the bus routes, google maps for the car journeys and Blue line taxis for the taxi services.

Rothbury Community Hospital - Inpatient Ward Closure Travel Impact



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Population Statistics

The areas which are being considered for where patients are traveling from are:

Area	Population	Area (Hectares)	Population density
North East	2,596,886	857,317	3.0
Northumberland	316,028	501,302	0.5



Area	Parish	Population	Area (hectares)	Density
Central	Rothbury	2107	393	5.6
North	Glanton	239	514	0.6
North	Edlingham	191	4,237	0
West	Harbottle	256	4,145	0.1
West	Elsdon	242	4,969	0
South	Scots Gap*	369	2,837	0.1
East	Longhorsley	887	2,513	0.3
East	Longframlington	1,032	2,063	0.5
Total		5,323	21,671	0.2
Value derived by aggregating data supplied using the Neighbourhood Statistics Geography Hierarchy – Parish boundaries*Scot Gap is within the Parish of Wallington Demesne – Northumberland				

With the exception of central Rothbury the population density is relatively small total population of these areas are 5,323, within an area of 21,671 hectares population density of 0.24 people per hectare.

Rothbury Community Hospital

Rothbury Community Hospital is located in the south side of the village. With effect from Friday 2 September 2016, the 12-bed inpatient ward has been temporarily closed to admissions. All other services that operate from the hospital will continue as normal, such as physiotherapy, occupational therapy, outpatient, child health clinics and community paramedic services.

This paper will be looking at the inpatient activity at Rothbury Community Hospital for the 30 month period April 2014 to September 2016. During this period:

Inpatient Activity

- 203 patients, with a total of 367 admissions.

This is based on patients admitted to Rothbury for the complete consultant episode only. A small number of additional patients were transferred to Rothbury from another site during their hospital episode, and although these do not form part of the work described here, analysis shows that inclusion of these patients would have had no impact on the findings.

Admissions

- Average number of admissions per patient was 1.8
- 69% (140/203) of the patients having only one stay

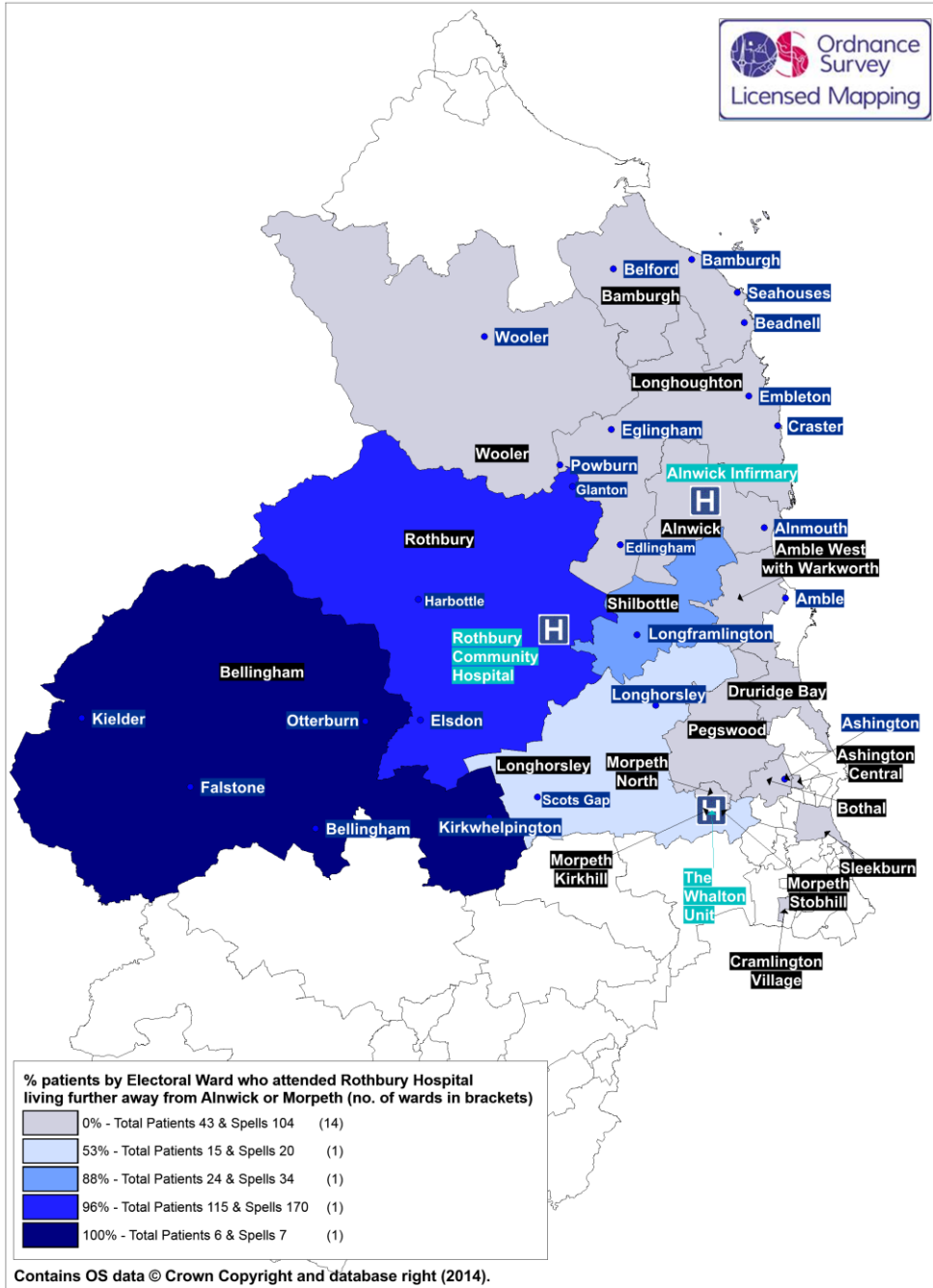
Length of stay – hospital duration

- Longest length of stay 89 days
- Average (mean) length of stay 12 days
- 3.2% (12/367) of admissions were completed on the same day, as day cases

Travel Impact

Based on the patients' ward of residence, 21% (43 of 203) would be closer to Alnwick Infirmary or The Whalton Unit, Morpeth than Rothbury Community Hospital. The map below shows the areas which would have been most affected if patients had to travel to Alnwick Infirmary or The Whalton Unit, Morpeth.

Rothbury Community Hospital - Inpatient Ward Closure Travel Impact
Admissions to Rothbury Inpatient Ward - April 2014 to October 2016



All of the patients living in the Bellingham ward, 96% of the patients living in the Rothbury ward, 87% of the patients living in Shilbottle ward and 53% of patients living in Longhorsley ward who had attended Rothbury Community Hospital would have had to travel further to Alnwick Infirmary or The Whalton Unit Morpeth.

Distance travelled

Patients on average travelled 7 miles from their usual place of residence to Rothbury Community Hospital for the time period covered in this analysis. This would have been a total of 1,416 miles one way if each patient attended only once. Due to multiple attendances by 29% of patients this journey distance increased to 2,489 miles for the total admissions.

From the 203 patients, 145 would have to travel further if they were either admitted to Alnwick Infirmary or The Whalton Unit, Morpeth and all lived in the following wards

- Bellingham
- Rothbury
- Shilbottle
- Longhorsley

These 145 patients on average travelled 3.8 miles with the closest patient only travelling 0.4 miles from the site and the furthest had a 15 mile journey. The overall distance travelled by these patients was 841 (average 5.8) miles for the 214 admissions from the 145 patients living nearer to Rothbury. If they were to go to the next nearest site this would increase by 1,994 miles with the average journey increasing by 13.8 miles.

The remaining 58 patients admitted to Rothbury Community Hospital would have to travel less if they were either admitted to Alnwick Infirmary or The Whalton Unit, Morpeth. These patient on average travelled 15 miles, with the closest patient only 8.8 miles from the site and the furthest 27 miles away. The overall distance travelled by these patients was 1,648 (average 28.4) miles for the 121 admissions. If they were to go to the next nearest site this would reduce by 823 miles, with the average journey being 14.2 miles less.

Mode of transport

The information used in this analysis does not contain the mode of transport each patient used. It has been assumed that one of the following has been used: bus, car, taxi or patient transport. NECS does receive information about the use of the patient transport system, but it is not detailed enough to show which patient used it to either convey them to Rothbury Community Hospital as an inpatient or their return journey. Appendix I details direction and transport to each site.

Travel Impact

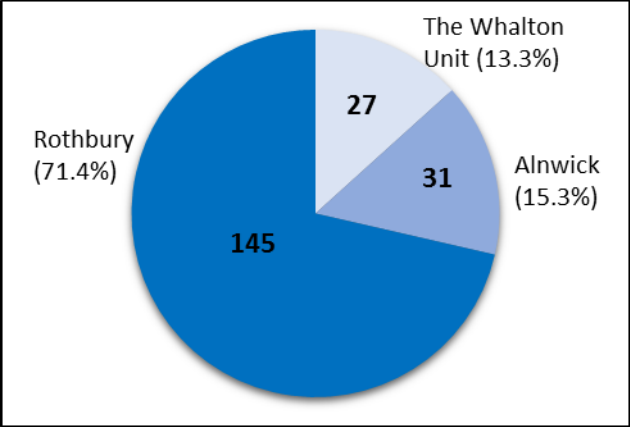
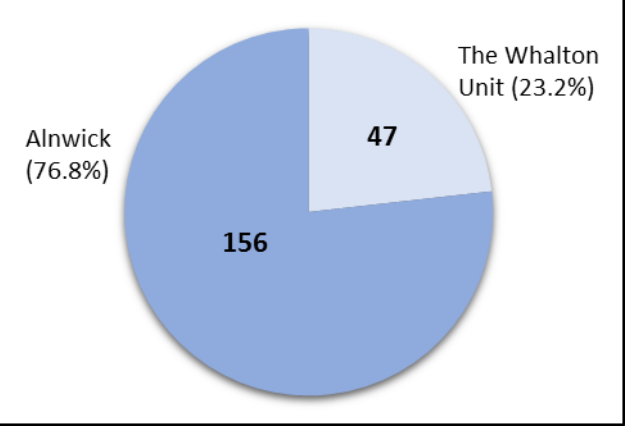
This section looks at bus journeys between selected areas and the hospital sites and excludes any further commute from the closest bus stop to the final destination.

The journey time from Rothbury to Alnwick Infirmary is 25 minutes, this would have added an extra 68 hours to travel times if all the 165 admissions (110 patients resident in the Rothbury Ward) attended Alnwick Infirmary and used public transport. The journey time from Rothbury to The Whalton Unit, Morpeth is 36 minutes adding an extra 99 hours travelling times for the same cohort of patients.

Patients travelling from Edlingham or Glanton would have a shorter journey and travelling time to Alnwick Infirmary. Patients in Longhorsley would see little change if they need to commute to The Whalton Unit.

If a patient travelled to Alnwick Infirmary from the various locations identified in Appendix III the patient journey times would increase on average by 7 miles adding an extra 9.5 minutes and if Blueline Taxis were used this would equate to £10.55 per journey. Similarly if patient were to travel to The Whalton Unit the impact would on average increase the commute to 5.5 miles, 9.5 minutes and £8.48 if a taxi was used.

Closest site for patient

<p>The site which would be closest for the 203 patients with Rothbury Community Hospital open</p>													
 <table border="1"> <caption>Data for Closest site for patient (Hospital Open)</caption> <thead> <tr> <th>Site</th> <th>Number of Patients</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Rothbury</td> <td>145</td> <td>71.4%</td> </tr> <tr> <td>Alnwick</td> <td>31</td> <td>15.3%</td> </tr> <tr> <td>The Whalton Unit</td> <td>27</td> <td>13.3%</td> </tr> </tbody> </table>	Site	Number of Patients	Percentage	Rothbury	145	71.4%	Alnwick	31	15.3%	The Whalton Unit	27	13.3%	<p>This illustration shows the proportion of which site would be closest if the hospital remained open for the 203 patients who attended Rothbury Community Hospital during April 2014 to September 2016:</p> <ul style="list-style-type: none"> • 71.4% (145 patients) - Rothbury was their closest site • 15.3% (31 patients) - Alnwick Infirmary was their closest site • 13.3% (27 patients) - The Whalton Unit, Morpeth was their closest site
Site	Number of Patients	Percentage											
Rothbury	145	71.4%											
Alnwick	31	15.3%											
The Whalton Unit	27	13.3%											
<p>The site which would be closest for the 203 patients with Rothbury Community Hospital closed</p>													
<p>This illustration shows the proportion of which site would be closest with the hospital closed for the 203 patients who attended Rothbury Community Hospital during April 2014 to September 2016:</p> <ul style="list-style-type: none"> • 76.8% (156 patients of 203) – Alnwick Infirmary would be the closest site <ul style="list-style-type: none"> - with 31 of the 156 patients living closer to Alnwick than Rothbury • 23.2% (47 patients of 203) – The Whalton Unit, Morpeth would be the closest site <ul style="list-style-type: none"> - with 27 of the 47 patients living closer to Morpeth than Rothbury 	 <table border="1"> <caption>Data for Closest site for patient (Hospital Closed)</caption> <thead> <tr> <th>Site</th> <th>Number of Patients</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Alnwick</td> <td>156</td> <td>76.8%</td> </tr> <tr> <td>The Whalton Unit</td> <td>47</td> <td>23.2%</td> </tr> </tbody> </table>	Site	Number of Patients	Percentage	Alnwick	156	76.8%	The Whalton Unit	47	23.2%			
Site	Number of Patients	Percentage											
Alnwick	156	76.8%											
The Whalton Unit	47	23.2%											

Summary

Over a 30 month period from April 2014 to September 2016, 203 patients were admitted to Rothbury Community Hospital, 59% were discharged on the same day.

From the 203 patients admitted 31 lived closer to Alnwick Infirmary and 27 closer to The Whalton Unit. If these 58 patients attended their closest site on average the patient commute to hospital would be 14.2 miles less per admission.

The total distance for the 203 patients from their place of residence to Rothbury Community Hospital was 1,416 miles, this would increase by 837 miles if each patient travelled to the next nearest site.

Alnwick Infirmary would be the next closest site for 86% of those patients who lived closer to Rothbury Community Hospital.

Patients living in wards west of Rothbury (Rothbury & Bellingham) would be most affected having to travel further to Alnwick Infirmary or The Whalton Unit. From Harbottle there are only 2 bus services to Rothbury on a Tuesday and Thursday and no bus services direct to Alnwick or Morpeth. By car there would be an additional 12 miles (20 minutes) to Alnwick Infirmary. From Elsdon there are no direct bus services to Rothbury, Alnwick or Morpeth. By car there would be an additional 6 miles (7 minutes) to The Whalton Unit, Morpeth.

The additional travelling distance, both by care and bus would clearly also result in increased travelling time for those concerned.

Appendix I

Directions & Transport

Rothbury Community Hospital

Location

Rothbury Cottage Hospital is located in the village on south side of the River Coquet.

By road

From the A1 turn left onto A697 signposted Rothbury/Coldstream. Turn left onto B6344 signposted for Rothbury. Continue straight ahead onto B6341 (Town Foot). Once you have reached Rothbury follow the signs to turn left at the Jubilee Hall onto Bridge Street, and then turn right onto Whitton Bank Road with the hospital is on the right.

By bus

There are a number of services which stop directly in the centre of Rothbury. The community hospital is a ten minute walk from the bus stop. Up-to-date bus information is available from the Traveline service (<http://www.traveline.info/>).

By rail

Rothbury is not accessible by rail.

Alnwick Infirmary

Location

Alnwick Infirmary is located on the outskirts of the town of Alnwick Infirmary, Northumberland.

By road

From the north: From the A1 take the second exit for Alnwick Infirmary. At the first roundabout turn right, then turn left at second roundabout. Continue for about 400 metres with the hospital on the right. From the south: From the A1 take the first exit for Alnwick Infirmary. At the first roundabout go straight on, then turn left at second roundabout. Continue for about 400 metres with the hospital on the right.

By bus

Up-to-date bus information is available from the Traveline service (<http://www.traveline.info/>).

By rail

Closest railway station is Alnmouth (for Alnwick Infirmary) Station. Timetables of all services are available from The Trainline (www.thetrainline.com).



Whalton Unit, Morpeth

Location

The Whalton Unit is situated, off the A1, on the approach road into the town of Morpeth.

By road

From the A1 South: Take the first exit for Morpeth, continue along A197 for 1.5 miles with the hospital on your right.

From the A1 North: Take the first exit for Morpeth continue along A192. Turn left at roundabout, continue along the A192. Turn right at roundabout, continue along the A192, Turn right at roundabout continue for 0.5 miles with the unit on your left.

By bus

Up-to-date bus information is available from the Traveline service (<http://www.traveline.info/>).

By rail

The Whalton Unit is a 10 - 15 minute walk from Morpeth railway station. Timetables of all services are available from The Trainline (www.thetrainline.com).

Appendix II

Rothbury Community Hospital - Inpatient Ward Closure Travel Impact

Bus Routes and Travelling Times (Week Days)

Harbottle - The number 16 (PCL Travel), runs only two services to Rothbury, Queens Head on a Tuesday and Thursday. There is no bus services direct to Morpeth or Alnwick.

Elsdon - There is no bus services direct to Rothbury, Morpeth or Alnwick.

Scots Gap						
Rothbury Community Hospital						
	Depart	Arrive	Changes	Duration (bus & Walking)	Services	Comments
Scots Gap	11:18	14:34	1	03:16	M1 (PCL Travel) to Morpeth & X14 to Thropton (Arriva Northumbria)	No Return from Scots Gap to Rothbury in the same day
	15:03	15:47	0	00:44	M1 to Thropton (PCL Travel)	
Return	10:50	11:24	0	00:34	M1 to Morpeth (PCL Travel)	
	12:51	15:09	1	02:18	X14 to Newcastle (Arriva Northumbria), M1 to Thropton (PCL Travel)	
The Whalton Unit, Morpeth						
Scots Gap	11:18	11:58	1	00:40	M1 to Morpeth (PCL Travel) & X15 to Newcastle (Arriva Northumbria)	1 return bus on the same day
	15:03	16:46	2	01:43	M1 to Thropton (PCL Travel), M1 to Morpeth (PCL Travel), X14 Newcastle (Arriva Northumbria)	
Return	09:39	11:24	2	01:45	X14 to Morpeth (Arriva Northumbria), M1 to Thropton (PCL Travel), M1 to Morpeth (PCL Travel)	
	14:24	15:09	1	00:45	X18 to Berwick (Arriva Northumbria), M1 to Thropton (PCL Travel)	

Longhorsley						
Rothbury Community Hospital						
	Depart	Arrive	Changes	Duration (bus & Walking)	Services	Comments
Longhorsley			0	00:35	X14 to Thropton (Arriva Northumbria)	Sevices run from 6:53 am until 19:13 pm
			0	00:29	M1 to Thropton (PCL Travel)	
Return			0	00:36	X14 to Newcastle (Arriva Northumbria)	Sevices run from 6:32 am until 18:57 pm
			0	00:23	M1 to Thropton (PCL Travel)	
The Whalton Unit, Morpeth						
Longhorsley			0	00:26	X14 to Newcastle (Arriva Northumbria)	Sevices run from 7:00 am until 17:25 pm 19:25 is the last bus, travelling on the X14 and changing to the X18 at Morpeth Bus Station. Duration 1 hour 11 minutes.
			0	00:32	X14 to Thropton (Arriva Northumbria)	
Return			0	00:32	X14 to Thropton (Arriva Northumbria)	Services run from 8:34 am until 18:49 pm

Longframlington						
Rothbury Community Hospital						
	Depart	Arrive	Changes	Duration (bus & Walking)	Services	Comments
Longframlington			0	00:29	X14 to Thropton (Arriva Northumbria)	Services run from 6:59 am until 19:19 pm
Return			0	00:30	X14 to Newcastle (Arriva Northumbria)	Services run from 6:32 am until 18:57 pm
The Whalton Unit, Morpeth						
Longframlington			0	00:34	X14 to Newcastle (Arriva Northumbria)	Services run from 6:52 am until 17:17 pm 19:17 is the last bus, travelling on the X14 and changing to the X18 at Morpeth Bus Station. Duration 1 hour 19 minutes.
			0	00:40	X14 to Thropton (Arriva Northumbria)	
Return			0	00:40	X14 to Thropton (Arriva Northumbria)	Services run from 8:34 am until 18:49 pm
Alnwick Infirmary						
Longframlington			1	Various times from 57 mins to 2 hours 20 mins (Majority 1 hour 48 mins)	X14 to Thropton (Arriva Northumbria) & 15 (PCL Travel) from Rothbury	Services run from 6:59 am until 19:17 pm
			1		X14 to Morpeth (Arriva Northumbria) & X15 to Alnwick (Arriva Northumbria)	
			1		X14 to Newcastle (Arriva Northumbria) & X18 (Arriva Northumbria) from Morpeth	
			1		15 (PCL Travel) & X14 (Arriva Northumbria)	
Return			1	Various times from 59 mins to 2 hours 3 mins (Majority 1 hour 22 mins)	X15 (Arriva Northumbria) & X14 (Arriva Northumbria)	Services run from 7:42 am until 18:07 pm
			1		X18 (Arriva Northumbria) & X14 (Arriva Northumbria)	
			1		X18 (Arriva Northumbria) & X14 (Arriva Northumbria)	

Rothbury Community Hospital						
Alnwick Infirmary						
	Depart	Arrive	Changes	Duration (bus & Walking)	Services	Comments
Rothbury Hospital			0	00:39	15 (PCL Travel)	Services run from 7:45 am until 11:45 am and a bus at 15:50. Other Services with a change take 2 hours (Last bus is 19:01 with a duration of 2 hours 4 minutes)
Return			0	00:39	15 to Thropton (PCL Travel)	Services run from 8:48 am until 17:28 pm. Other services with a change take around 1 hour 37 mins (Last bus is 18:07 with a duration of 1 hour 37 minutes)
The Whalton Unit, Morpeth						
Rothbury Hospital			0	00:50	X14 to Newcastle (Arriva Northumbria)	Services run from 6:36 am until 17:01 pm. Other services with a change take around 1 to 2 hours. 19:01 is the last bus, travelling on the X14 and changing to the X18 at Morpeth Bus Station. Duration 1 hour 35 minutes.
Return			0	00:55	X14 to Thropton (Arriva Northumbria)	Services run from 8:34 am until 18:49 pm. Other services with a change take around 1 to 1 hour 45 mins

