

Active Travel Links to Dumfries New Hospital

Follow Up Monitoring Report

Places for Everyone (DGC-PFE-2819)



08 April 2025

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Executive summary

The Active Travel Links to Dumfries New Hospital project has transformed what was previously the busy New Abbey Road with no active travel facilities or crossing points, into a high-quality, safe active travel link, improving connections for local journeys to the shops, school, and workplaces. Changes included a new **336-metre segregated path**, **six new crossing points**, a new **public placemaking area** (which includes benches, bike racks and green planting), and the introduction of new filter lanes for turning traffic.

The project was led by Dumfries & Galloway Council and was primarily funded through Transport Scotland's Places for Everyone fund (via Sustrans). Construction took place from November 2022 to June 2023. Baseline monitoring was conducted in 2020; follow-up monitoring was conducted in 2023 and 2024.

Outcome: Levels of active travel

How many trips?



The number of people who are using New Abbey Road per year has increased following the changes to an estimated **500,000** trips per year, representing an additional **56,000** annual journeys.

The number of people using other monitoring sites in Dumfries which did not receive a direct infrastructure intervention has either remained the same or decreased, suggesting that the **infrastructure changes have facilitated more active travel journeys**.

For what purpose?



Most people are visiting the area for **leisure** purposes: **71%** of those interviewed were using the area for recreation (such as exercise and dog walking). **29%** of those interviewed used the area for an everyday journey, including accessing shops, family or friends, and workplaces.



The project has **supported active journeys to Troqueer Primary School**. Levels of active travel to the school has increased to **56%** from 53%. Cycling journeys have increased from 4% to **11%**, and scooting/skating journeys have increased from 4% to **7%**. These figures are higher than both regional and national averages.



How are people travelling in the area?

Following the changes, pedestrians still make up most route users: **76%** of trips in 2020 and **81%** in 2024 were made by pedestrians.



Outcome: Quality of place

What do people think of the area?

The changes have created an **improved public space** – people now view the quality of the area more favourably than they did before:

- **50%** of survey respondents now spend more time on the route.
- **91%** agreed that they used this route because they like the surroundings.
- **90%** agreed this route enhances the area.



Outcome: Safety

Positive perceptions of safety

The project has **improved safety** for users of New Abbey Road by creating **336 metres** of new segregated active travel facilities, as well as **six** new crossings.

- **84%** of survey respondents agreed the route feels safe with regard to motor traffic (48% before).
- After the changes, the number of people crossing the road has increased – this suggests that the new crossings have enabled people to cross where they need to, **creating a more desirable and safer route**.
- Focus group participants observed that new infrastructure was **comfortable and easy to use** and had **improved safety**:

‘I used it for years, before there was the new crossing. As you say, it has made a big difference in terms of it’s safer...it was a bit harem scarem before and it does feel a lot safer.’

Outcome: Accessibility



The project has **improved accessibility**: **96%** of survey respondents agreed ‘this path is easily accessible’, and wheelchair usage on New Abbey Road has increased by **120%**.



Focus group participants perceived the route to be accessible for children, elderly people, and for people with disabilities, and had observed people with prams, children with bikes, and a user with a recumbent trike using the new path.

1. About the project

1.1 Story of the infrastructure changes

1.1.1 The need for active travel infrastructure

Regional and local context

Dumfries is a historic market town and the largest town in the Dumfries & Galloway Council area. It is noted for its association with the Scottish poet Robert Burns, as well as its connections to the Galloway Forest Park and Mabie Forest, both of which offer walking and biking routes.

The region is rural and is mainly connected via A roads, though a railway links Dumfries in the east to Stranraer, the second largest town in the region, in the west. Rail links also connect Dumfries & Galloway to Ayrshire and Glasgow in the north, and Carlisle and England in the south.

The region has high levels of car usage, with modal share for public transport and active travel correspondingly low: 60% of car journeys are for less than 3 miles (5 km), whilst only 8% of travel to work is taken on foot and 4% by bus. These figures are below the national level of 12% and 9.6%, respectively.¹

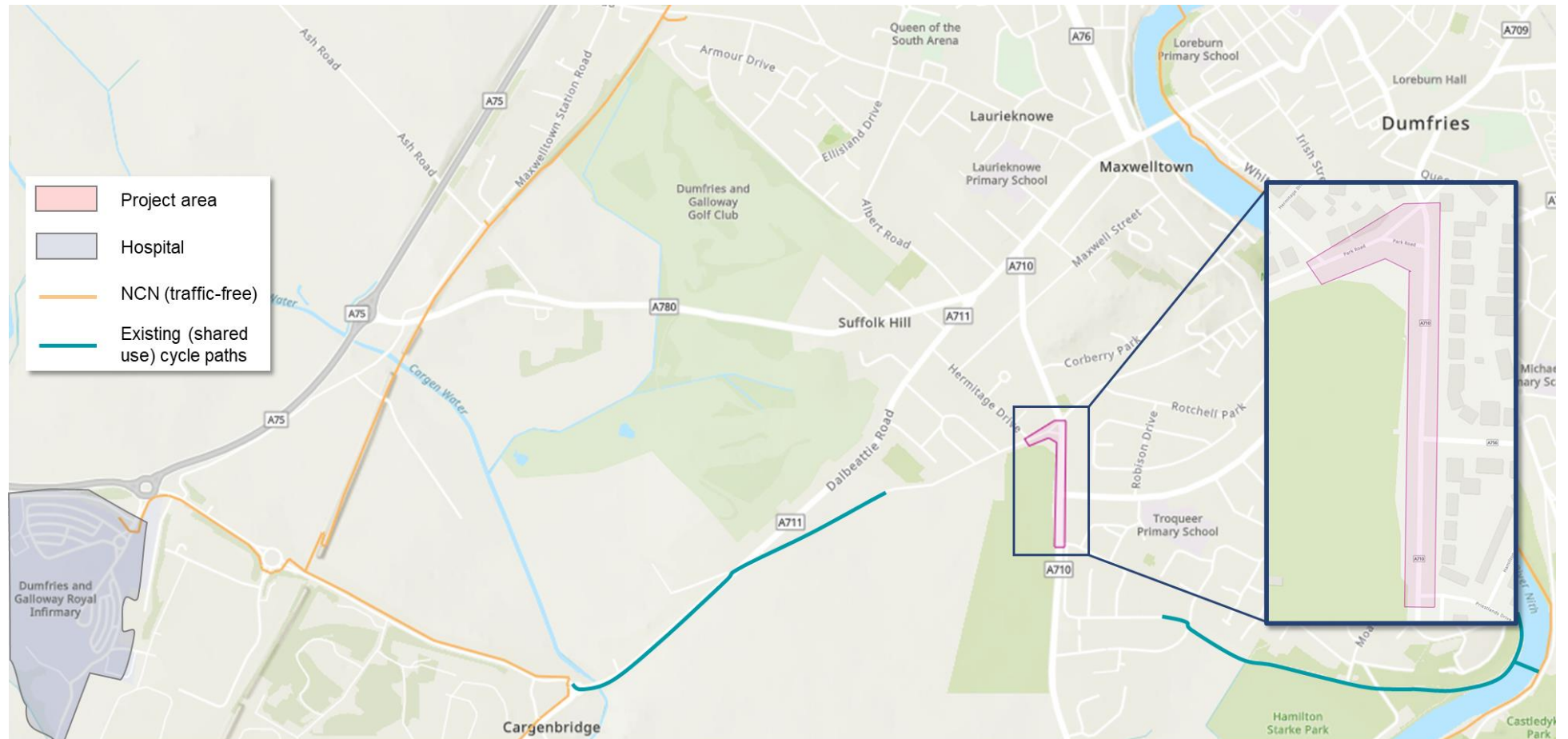
Project context

The new Dumfries & Galloway Royal Infirmary (DGRI) hospital opened in December 2017, and is located approximately three miles west of central Dumfries, near the village of Cargenbridge. The hospital is connected to National Cycle Network (NCN) route 7, which runs along the Maxwelltown path, giving access to north Dumfries, before turning south through the town centre and along the River Nith (see Figure 1). There are also shared active travel facilities between Cargenbridge and Troqueer in southwest Dumfries, which also connect to NCN7 via the Kirkpatrick Macmillan bridge.

Before the changes, however, New Abbey Road, a key junction which lies on the route between southwest Dumfries and the hospital, did not have suitable active travel infrastructure.

¹ Dumfries & Galloway Council, [Active Travel Strategy 2022-2032](#) (2022). Note these figures refer to the whole Dumfries & Galloway area, not just Dumfries.

Figure 1: Location of project area, hospital, and existing active travel infrastructure



Map credit: Esri, Intermap, NASA, NGA, USGS | Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS | Sustrans National Cycle Network data contains Ordnance Survey data (© Crown copyright and database rights (2018)). The dataset contains © OpenStreetMap contributions in Northern Ireland which is available under the Open Data Commons Open Database License (ODbL).

This lack of suitable active travel infrastructure was a barrier to active travel journeys to the hospital, but also for local journeys to school and shops. For example, the westerly side of New Abbey Road (the side of the Dumfries show ground field) had no footway, despite clear desire lines on the grass verge (see Figure 2). Moreover, there were no crossing facilities along the busy New Abbey Road, or at the Pleasance Avenue, Park Road, and Priestlands Drive junctions.

Figure 2: Previous desire lines on New Abbey Road grass verge (west side)



Credit: Google Maps

The project delivered **improvement works to two road junctions** (Park Road and Pleasance Avenue) and created **dedicated walking and cycling infrastructure** (including **crossing facilities**) on New Abbey Road, enhancing connections between existing active travel facilities at the hospital (NCN route 7) with existing facilities in southwest Dumfries. This joins places along the route that people travel to daily with large residential parts of west and south Dumfries, including Cargenbridge, Troqueer, Maxwelltown, Calside, and Georgetown.

The project also reallocated carriageway space on New Abbey Road to accommodate a **new place-making area** at the Park Road junction.

1.1.2 A Places for Everyone project

Places for Everyone (PfE) is an infrastructure fund that aims to create safe, attractive, healthier places by increasing the number of trips made by walking, cycling, and wheeling² for everyday journeys.³ The programme is funded by the Scottish Government through Transport Scotland and is administered by Sustrans. The main partner for this project was Dumfries & Galloway Council, who delivered

² Wheeling refers to using a wheelchair or mobility scooter, here and throughout the report.

³ Everyday journeys are defined as those which are short, regular trips made in day-to-day life, such as when you travel to work, school, or the shops.

the project in collaboration with Sustrans. NHS Dumfries & Galloway were a key stakeholder given the project's aims to improve active travel links to the hospital.

The project received approximately £887,000 from Sustrans through the PfE programme, and approximately £713,000 from Dumfries & Galloway Council. The total project cost is approximately £1.6 million. Construction started in November 2022 and finished in June 2023.

Project delivery context

In addition to DGRI, other key trip generators include:

- Employment sites: Garroch Business Park, which includes Dumfries & Galloway Council offices.
- Large residential areas: the areas of Troqueer, Maxwelltown, Summerhill, Laurieknowe, and Dockhead are directly affected by the project, whilst areas like Cargenbridge, Nithside, Calside and Georgetown will also benefit.
- Leisure and recreation: Dumfries Rugby Club, Dumfries Golf Club, and Holm Park; Dumfries Museum and Camera Obscura.
- Troqueer Primary School and local shops.

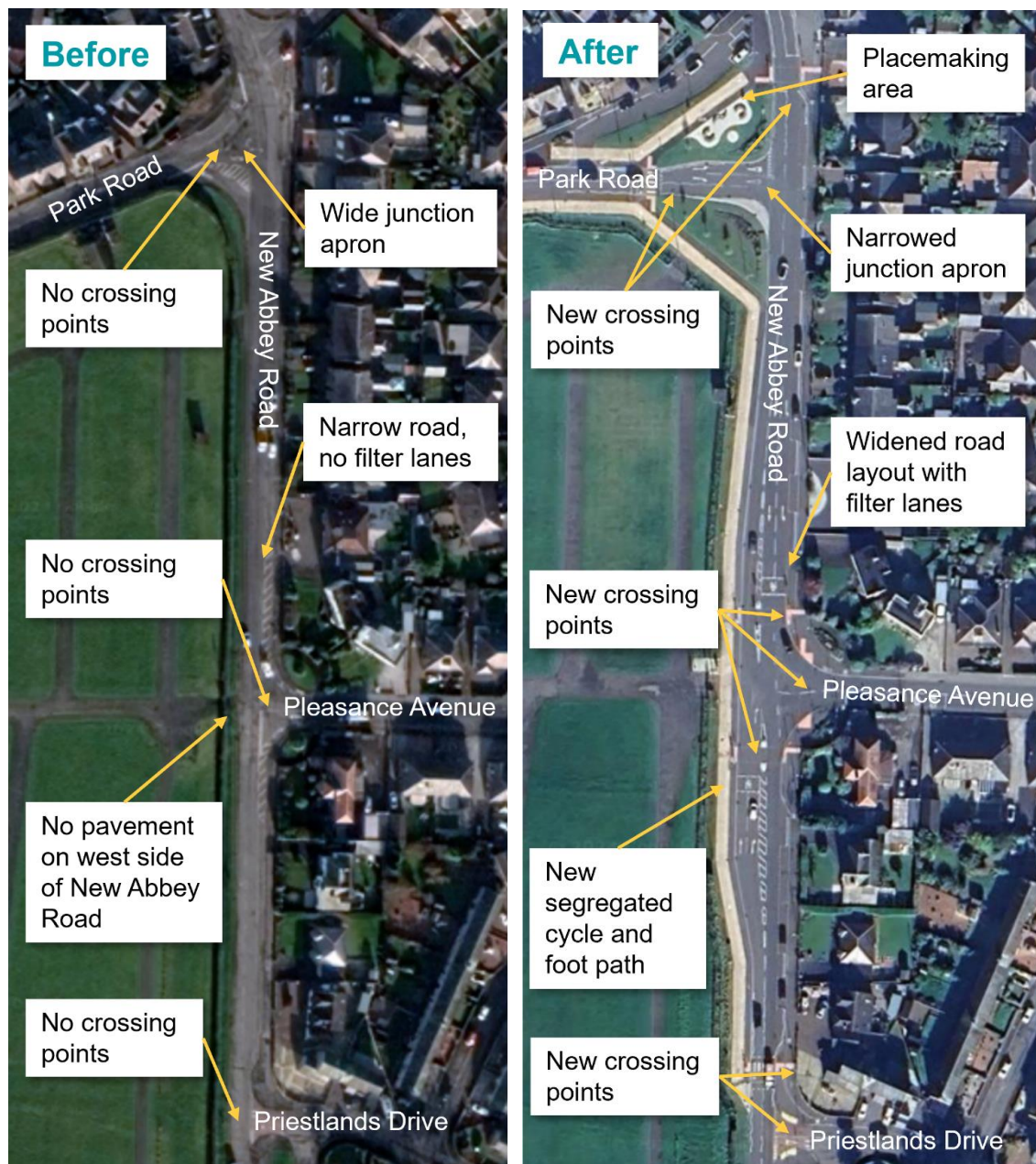
1.1.3 The changes: infrastructure project description

The project has delivered a continuous, segregated, and signed active travel path which provides an attractive route suitable for cyclists and pedestrians of all abilities. The changes to New Abbey Road included:

- A segregated cycle and foot path on the west side of New Abbey Road (previously a grass verge, see Figure 3 and Figure 8).
- A new traffic signalled junction installed at the Pleasance Avenue junction, with crossing facilities for active travellers on New Abbey Road and Pleasance Avenue (see Figure 4 and Figure 6).
- Uncontrolled crossing facilities for active travellers on Park Road and at the Priestlands Drive junctions (see Figure 4 and Figure 7).
- Junction re-design at the Park Road junction, including creating segregated walk and cycle ways turning off at a lower angle than the carriageway (see Figure 3 and Figure 5).

- Placemaking features, landscaping and a new toucan crossing facility at the junction of New Abbey Road and Park Road (see Figure 3 and Figure 5).
- Build-outs of the pedestrian curb at junctions to redistribute space to pedestrians and reduce the speed of turning vehicles.

Figure 3: Overview of New Abbey Road showing before (left) and after (right) the infrastructure changes



Credits: Google Earth

Figure 4: New crossings on New Abbey Road



Photo credits: George Dibblebrowne / Sustrans.
Background map credit: Esri, Intermap, NASA, NGA, USGS | Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS | Sustrans National Cycle Network data contains Ordnance Survey data (© Crown copyright and database rights (2018)). The dataset contains © OpenStreetMap contributions in Northern Ireland which is available under the Open Data Commons Open Database License (ODbL).

Figure 5: Park Road junction before (left) and after (right) the infrastructure changes



Credits: Google Maps (left); George Dibblebrowne / Sustrans (right)

Figure 6: Pleasance Avenue junction before (left) and after (right) the infrastructure changes



Figure 7: Priestlands Drive junction before (left) and after (right) the infrastructure changes

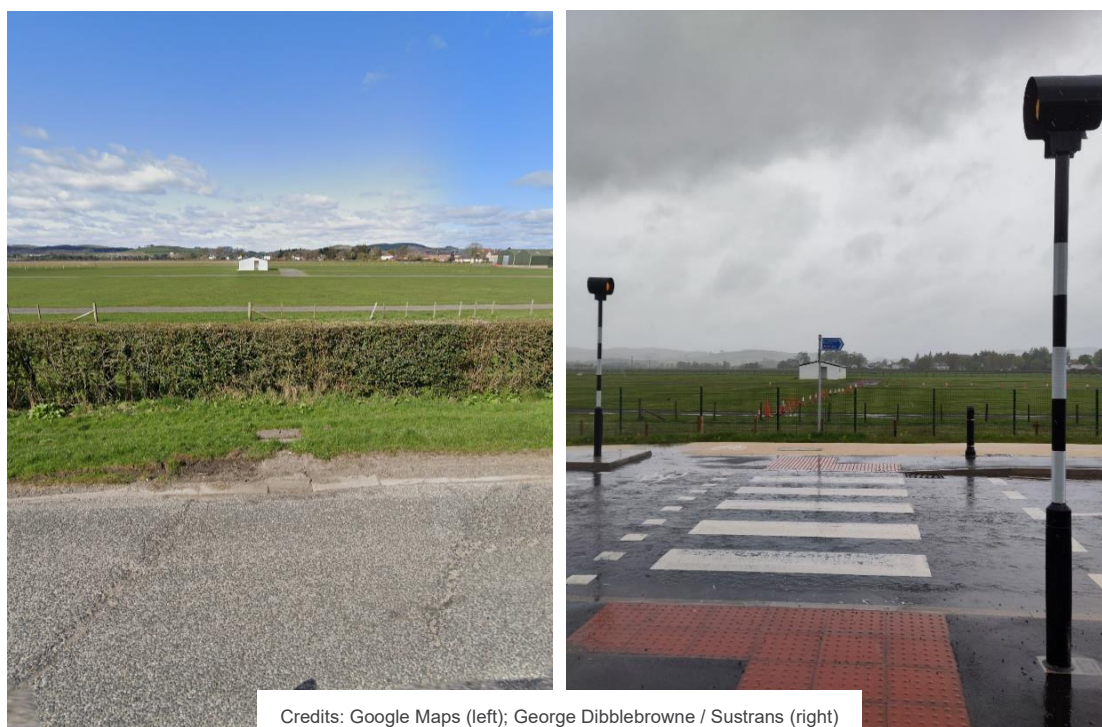


Figure 8: Grass verge before (left) and new segregated cycle/foot path after (right) the infrastructure changes



1.2 Evaluating the impacts of the project

1.2.1 Places for Everyone outcomes

The aim of Places for Everyone (PfE) is to create safer, more attractive, healthier places by increasing the number of trips made by walking, cycling, and wheeling for everyday journeys. All PfE projects should contribute towards this aim.

The PfE programme has a set of overarching outcomes. The outcomes in place during the 2018-2019 grant iteration when this project originally received funding are listed below. This project is being evaluated against four of the five objectives:

- **Increase number of people and trips** for walking, cycling, and wheeling for everyday journeys.
- **Improve the quality of place** and where possible increase the quality and quantity of green infrastructure.
- **Provide dedicated, safe spaces for people to walk, cycle and wheel**, adhering to Sustrans Scotland's Design Principles.

- **Improve accessibility** for people with protected characteristics.

The objective to ‘ensure collaborative design with the community’ is not being evaluated against in this report. This was the project partner’s responsibility to monitor.

1.2.2 Methodology summary and monitoring tools

Sustrans Research and Monitoring Unit (RMU) led on the evaluation of the project with support from Dumfries & Galloway Council. The evaluation follows a before and after construction comparison approach to enable us to assess the impact of the project against PfE outcomes.

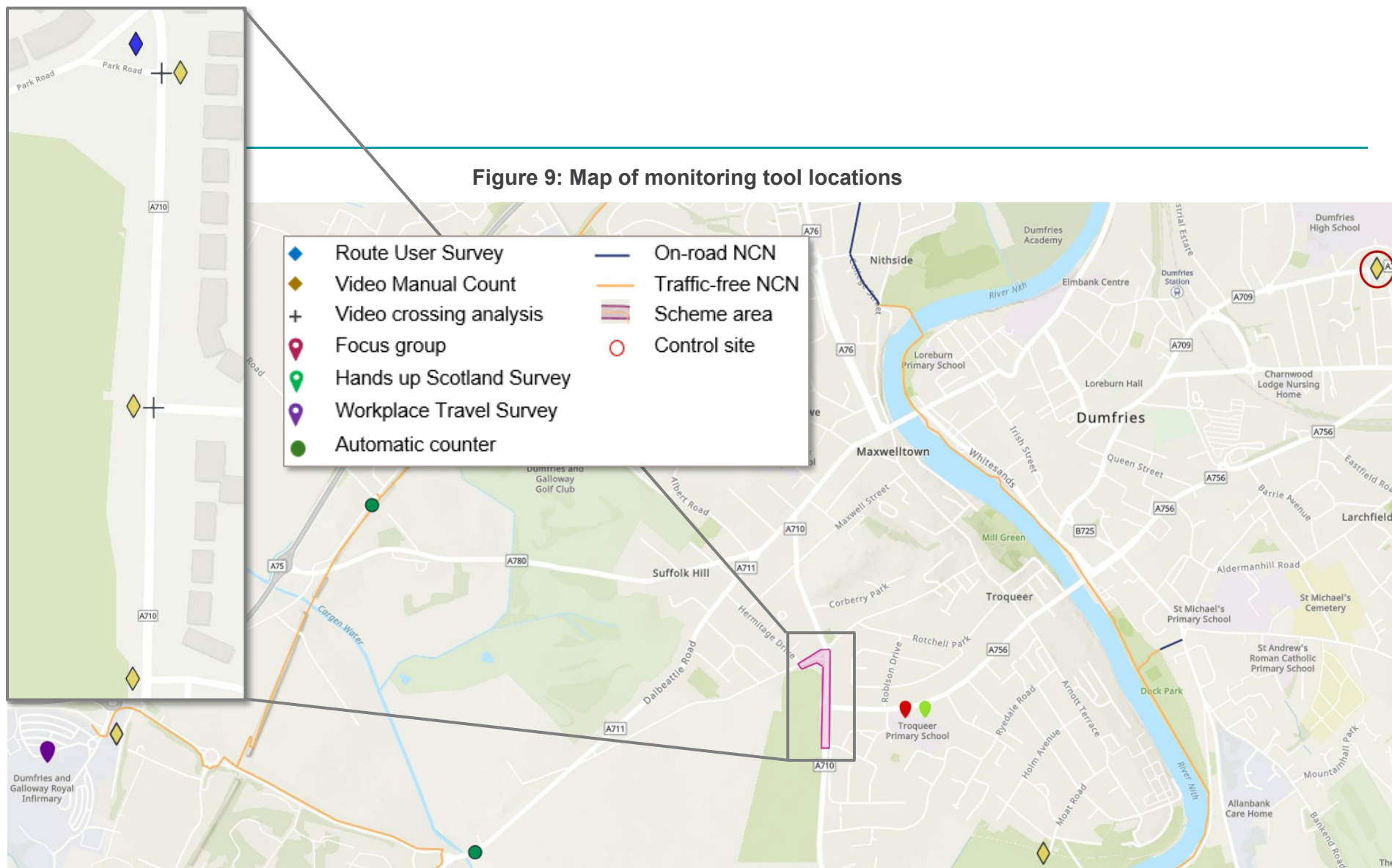
Table 1 outlines the monitoring tools used to evaluate the project. Baseline monitoring was conducted in 2020 and 2021. The Baseline Monitoring Report details the findings from the data collection⁴. Construction began in November 2022 and was completed in June 2023. Follow-up monitoring was conducted from October 2023 to September 2024.

Table 1: Monitoring programme summary table

Monitoring tool	Baseline		Construction: Nov 2022 – June 2023	Follow up	
	2020	2021		2023	2024
Video Manual Counts	✓		Construction: Nov 2022 – June 2023		✓
Automatic counters		✓		✓	✓
Video Analysis (crossing)	✓				✓
Route user intercept survey				✓	
Focus groups					✓
Workplace Travel Survey	✓	✓			✓
HUSS	✓	✓		✓	✓

Figure 9 shows a map of monitoring tool locations. Monitoring tools are described in detail in Section 3: Detailed methodology.

⁴ See: [SUSR2091 Dumfries New Hospital Baseline Monitoring Report v2.0](#)



Credit: Esri, Intermap, NASA, NGA, USGS | Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS | Sustrans National Cycle Network data contains Ordnance Survey data (© Crown copyright and database rights (2018)). The dataset contains © OpenStreetMap contributions in Northern Ireland which is available under the Open Data Commons Open Database License (ODbL).

2. Findings

2.1 Outcome – Active travel levels

Outcome: increase the number of people and trips for walking, cycling, and wheeling for everyday journeys.

Monitoring indicates there has been an increase in the overall number of active travel trips through and along New Abbey Road. The new infrastructure has facilitated more active travel journeys than monitoring locations which did not receive a direct infrastructure intervention.

2.1.1 Levels of active travel

Video monitoring data shows that the **estimated number of people who use the infrastructure on New Abbey Road per year has increased** between 2020 and 2024. This equates to an estimated additional **56,000** trips per year, from 444,000 trips before the changes to **500,000** trips after the changes, an increase of **13%**.

Usage at the Pleasance Avenue and Park Road junctions have increased by **14%** to **160,000** and **240,000** trips per year, respectively. Usage at Priestlands Drive has increased by **6%** to **100,000** trips per year (see Figure 10).

However, active travel at the three video monitoring sites in Dumfries not in the project area have either remained the same or fallen (see Figure 11).

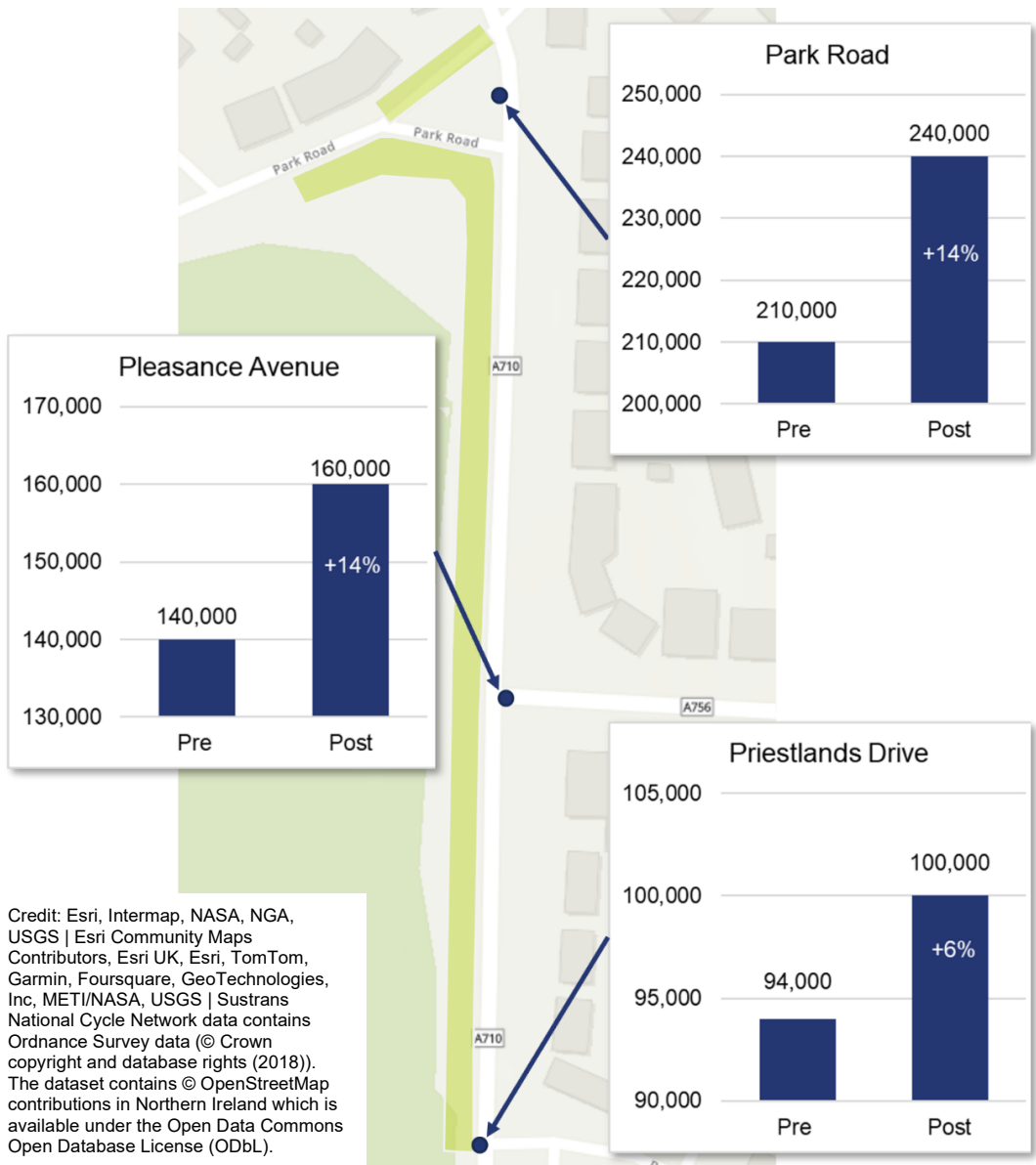
- At the control site on Lockerbie Road, estimated annual usage was unchanged at 250,000 trips. This location was unaffected by the project, and shows that background active travel levels have remained stable.
- At the Hospital, estimated annual active travel fell from 51,000 to 38,000 trips.
- At Troqueer, estimated annual active travel fell from 82,000 to 75,000 trips.

This suggests that **increases in active travel along New Abbey Road can be attributed to the project**. The infrastructure changes have facilitated more people to travel actively along and through New Abbey Road, compared to the sites which did not receive a direct infrastructure intervention.

It is worth noting that pre monitoring was conducted in August and September 2020 when, because of Covid-related restrictions, more people than normal may have been using active travel modes. The increases seen at the three New Abbey Road sites may therefore be an underestimate, and the decreases seen at the three other sites in Dumfries may be an overestimate if more people than normal were using active travel modes at baseline.

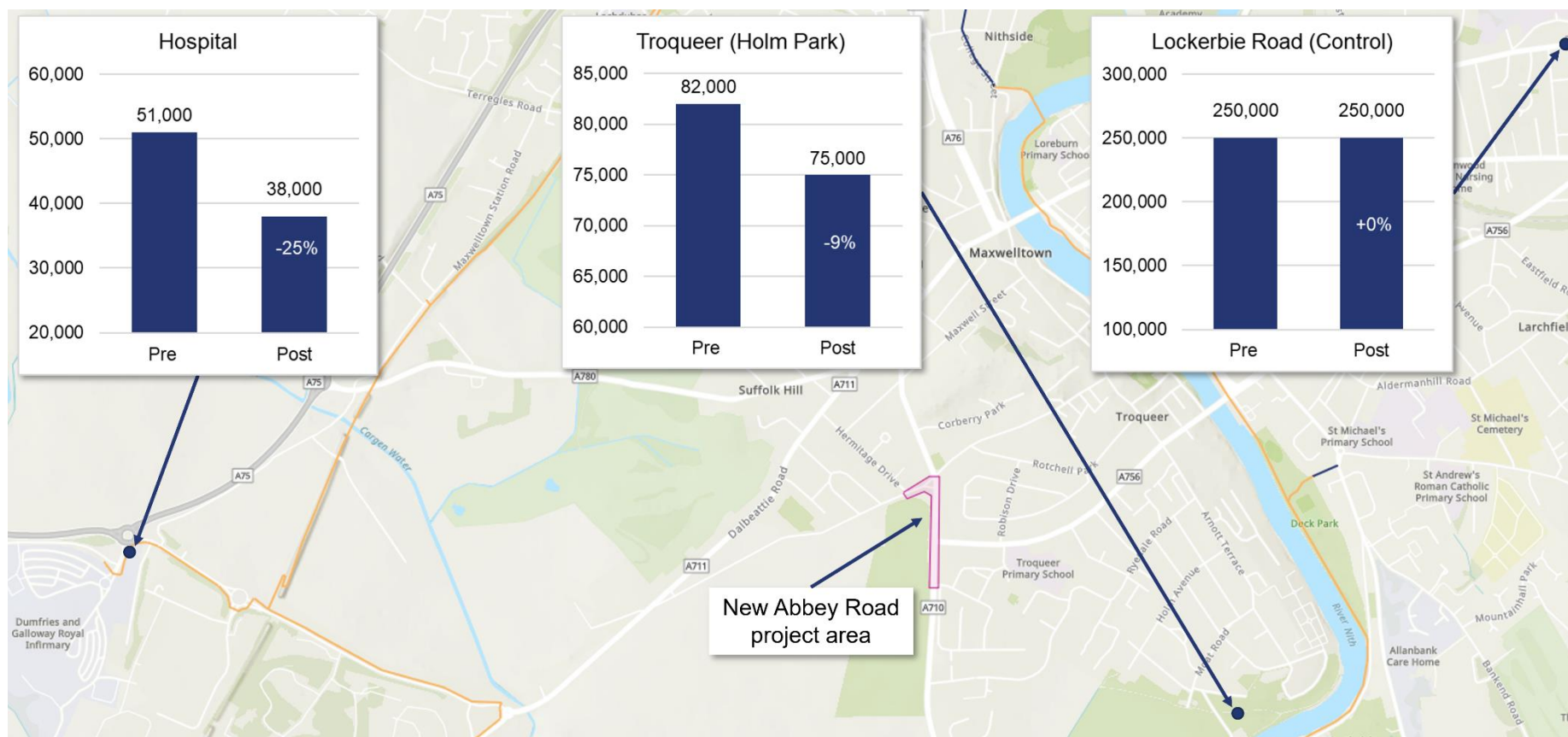
See Appendix, section 5.2, Table 6 for full AUE data tables for each count site.

Figure 10: Annual Usage Estimates (AUE) for pre and post at the New Abbey Road video count locations⁵



⁵ Annual Usage Estimates (AUE) are estimates of the number of trips not individuals using these locations on the route. It is important to note that there will be an overlap of trips across these sites as people move north and south along the route.

Figure 11: Annual Usage Estimates (AUE) for pre and post at other Dumfries video count locations⁶



Credit: Esri, Intermap, NASA, NGA, USGS | Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS | Sustrans National Cycle Network data contains Ordnance Survey data (© Crown copyright and database rights (2018)). The dataset contains © OpenStreetMap contributions in Northern Ireland which is available under the Open Data Commons Open Database License (ODbL).

⁶ Annual Usage Estimates (AUE) are estimates of the number of trips not individuals using these locations on the route. It is important to note that there may be an overlap of trips across the sites as people move between areas e.g. from Priestlands Drive through Troqueer (Holm Park).

2.1.2 Active travel modes

Walking is the most popular active travel mode⁷ across the six Dumfries video monitoring sites, accounting for **76%** of estimated annual journeys before (2020) and **80%** after (2024) the infrastructure changes. Figure 12 and Figure 13 show that:

- ❖ All sites (except Lockerbie Road) have seen an **increase in the proportion of walking** journeys as a share of all active travel journeys. This is consistent with national trends in Scotland.
- ❖ There is a corresponding **decrease in the proportion of cycling** journeys. This is consistent with cycling trends seen in England, though not Scotland (see national trends), and perceptions from focus groups (see perceptions of comfort).
- ❖ Pleasance Avenue, Park Road, Priestlands Drive and the Hospital have all seen an **increase in pedestrian annual usage estimates (AUE)**. Lockerbie Road has remained the same, and Troqueer has declined. Overall, this suggests that the **infrastructure changes have contributed to an increase in walking journeys**.
- ❖ All sites have seen a decrease in cycling AUE. However, sites on New Abbey Road have seen a smaller percentage decrease than the wider Dumfries sites.
- ❖ Journeys made by other modes have remained stable at all sites. The three New Abbey Road sites and Troqueer have broadly similar shares across the three modal groups (pedestrian, cyclist, and other).
- ❖ Lockerbie Road has the highest proportion of walking journeys – the site is in close proximity to Dumfries High School.
- ❖ The Hospital has the lowest proportion of walking journeys and the highest proportion of cycling journeys. This could be because of its distance from Dumfries (approximately 30 minutes' walk from the western suburbs).
- ❖ The Hospital has seen a large increase in the proportion of walking journeys, from 30% to 47% of all active travel journeys, and a corresponding decrease in the proportion of cycling journeys, from 67% to 47%. This is due to a large decrease in cycling AUE.

See Appendix, section 5.2, Table 7 and Table 8 for full modal share data tables for each count site.

⁷ Modes are grouped as follows: 'Pedestrian': walking, walking with an aid (e.g. walking frame, guide dog), jogging. 'Cycling': non-electric bicycle, electric bicycle, other cycle (e.g. cargo bike, hand trike). 'Other': pushchair, wheelchair, other wheeled (e.g. scooting, skating), other legitimate users (e.g. horse rider).

Figure 12: Active travel modal share – before and after the changes at each video monitoring site

NB. ordered by pedestrian share, lowest to highest

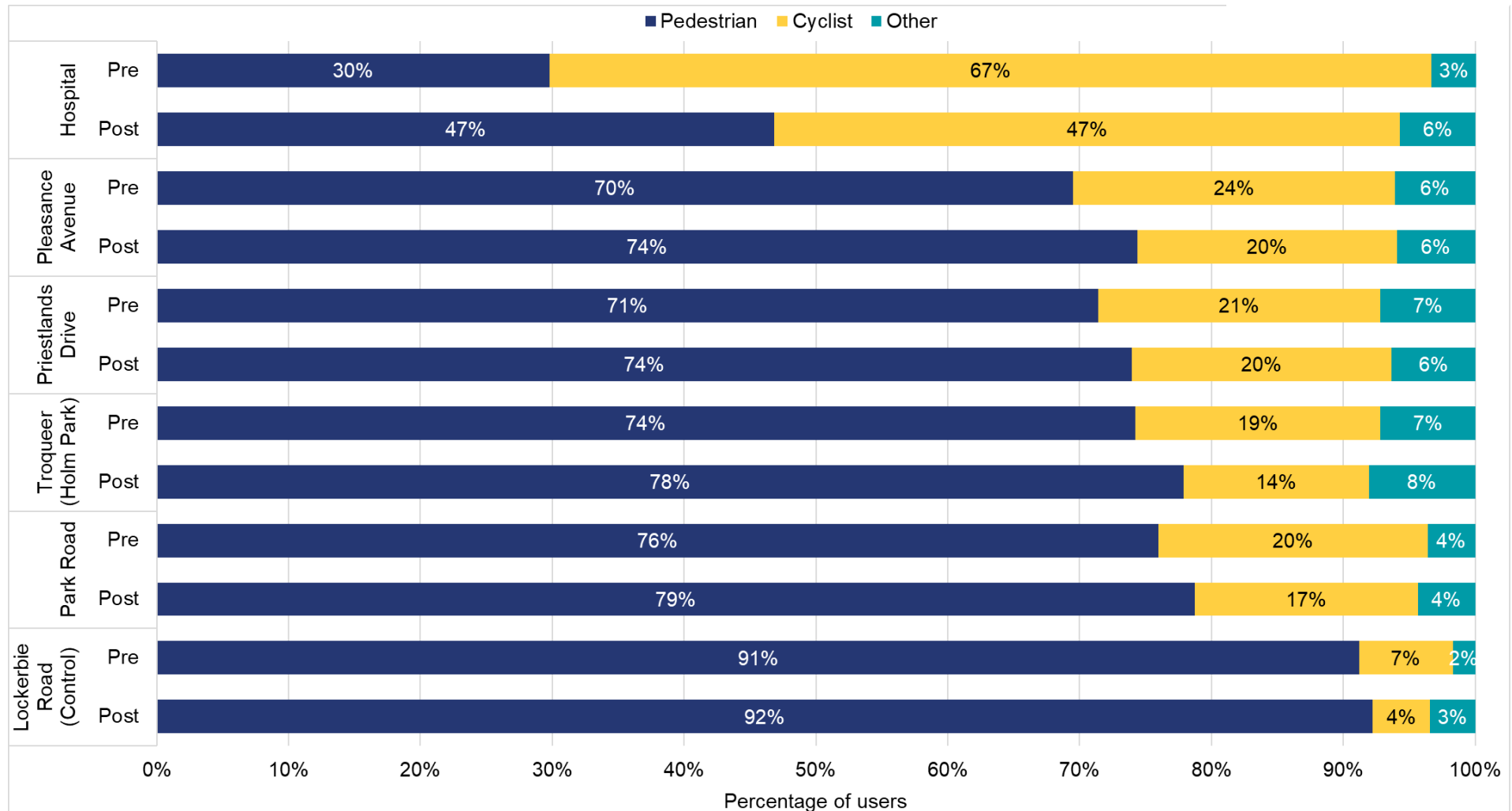
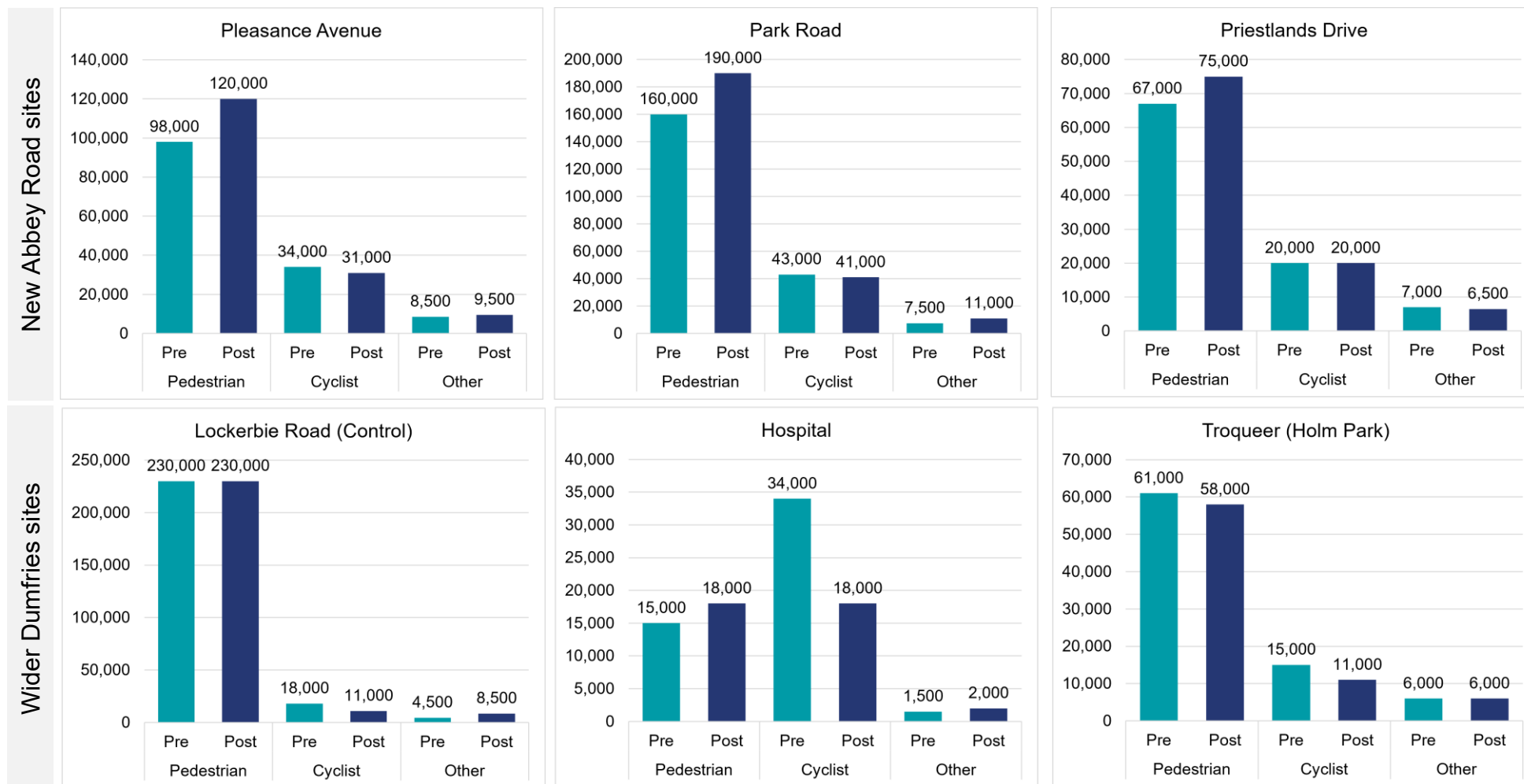


Figure 13: Active travel mode AUE for each video monitoring site

NB. ordered by New Abbey Road / Wider Dumfries sites



Data from two automatic counters provides further context to cycling levels. These counters are the only ones available in Dumfries, and whilst they do not sit directly within the project area, they can be used to monitor background levels of active travel, as well as monitor active travel towards the hospital.

Figure 14 shows that the **average number of cyclists** travelling past the NCN7 Maxwelltown path and A711 Cargenbridge counters **have remained stable**.

Unfortunately, due to technical issues, data is not available for the A711 Cargenbridge counter in 2022, which would provide an indication of route usage before construction at New Abbey Road. Moreover, data is not available from 2020 (project baseline year) for pedestrians, this makes it difficult to draw firm conclusions.

However, the counter data suggests that approximately one third of cyclists seen at the Park Road video monitoring site are travelling down Park Road to Cargenbridge. Of the 41,000 estimated annual cycling journeys seen at Park Road (see Figure 13), there are an estimated **13,000** annual cycling journeys travelling towards Cargenbridge (Figure 14).

This is consistent with the Park Road video monitoring data, which indicates that an estimated **13,000** cycling trips are heading west down Park Road. This further suggests that the video monitoring data is accurate in terms of providing an annual usage estimate.

Overall, this suggests that the infrastructure changes haven't yet supported an increase in cycling journeys towards the Hospital. However, as focus group participants observed, the new segregated path doesn't yet link effectively with existing active travel infrastructure in Dumfries (see section on perceptions of comfort), which could be limiting cycling journeys.

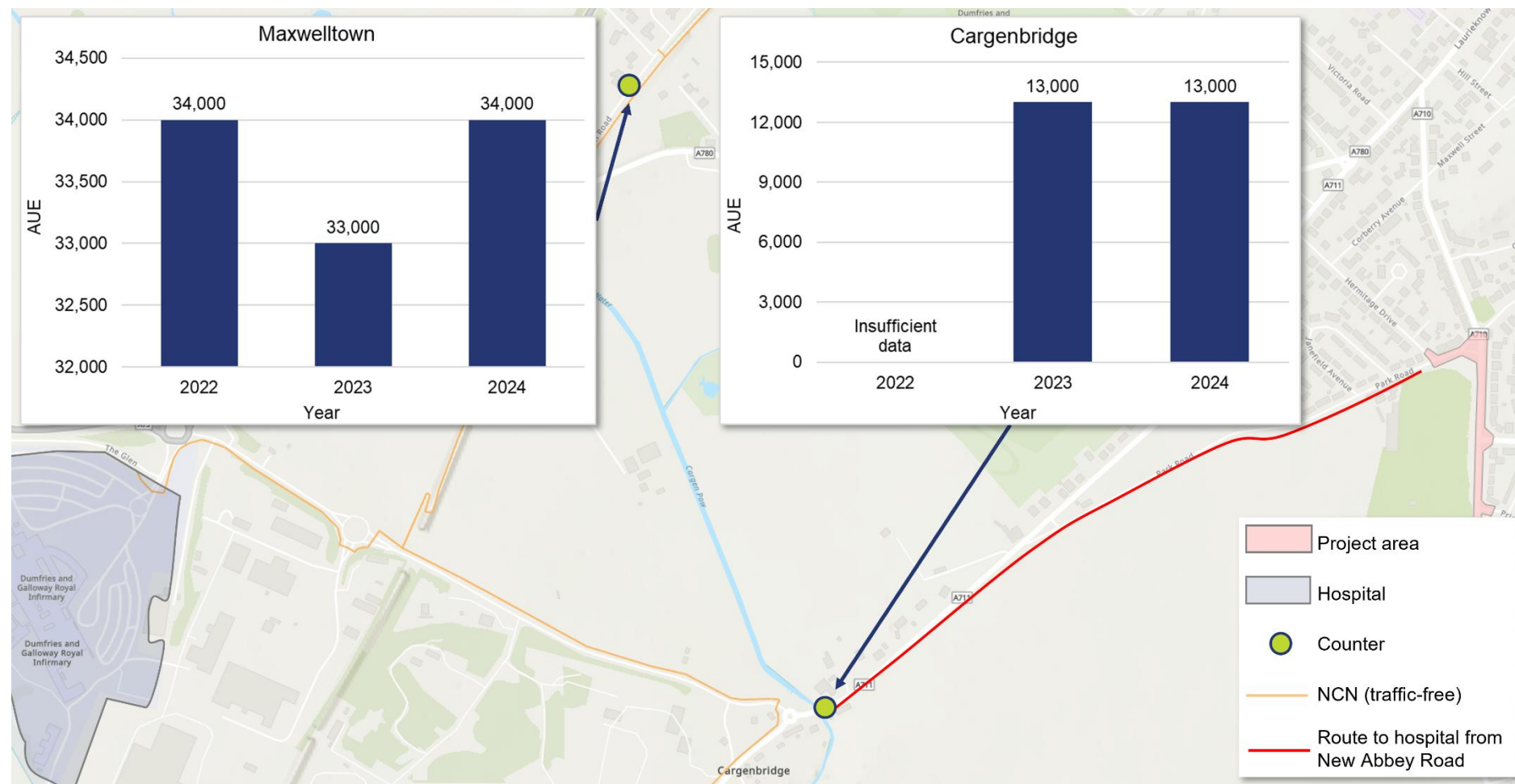
National trends

Walking levels in Scotland have decreased in the period 2012-22, despite seeing an initial boost during Covid-19. Walking rates decreased by 13% from 2012-19 (26% to 22.1% of overall mode share), and by 15% from 2012-22 (26% to 22.6% of overall mode share).⁸ National cycling levels have fluctuated over the period 2012-22, with an increase following Covid-19 that has been somewhat sustained. Prior to Covid-19, national cycling rates had seen no change from 2012-19 (1.2% of overall mode share in both years). Following a boost as a result of Covid-19, rates have increased by 42% between 2012 and 2022 (1.2% to 1.7% of overall mode share).⁹

⁸ SUSR2318 Places for Everyone Infrastructure Impact Report 2023-24 v1.0.xlsx (tab 10.1)

⁹ SUSR2318 Places for Everyone Infrastructure Impact Report 2023-24 v1.0.xlsx (tab 10.1)

Figure 14: AUE for the NCN7 Maxwelltown and A711 Cargenbridge automatic cycle counters



Credit: Esri, Intermap, NASA, NGA, USGS | Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS | Sustrans National Cycle Network data contains Ordnance Survey data (© Crown copyright and database rights (2018)). The dataset contains © OpenStreetMap contributions in Northern Ireland which is available under the Open Data Commons Open Database License (ODbL).

In comparison, walking levels have increased along New Abbey Road. Whilst national mode share rates are not directly comparable to AUEs, as the increase in walking around New Abbey Road is greater than wider national trends, **the uptake of active travel could be attributed to the infrastructure changes.**

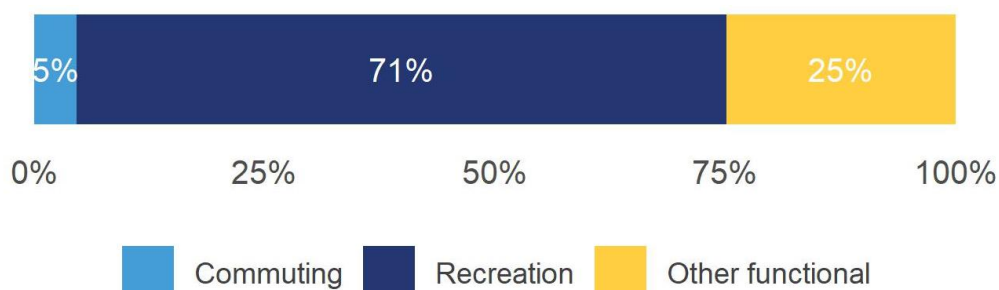
However, cycling levels have fallen along New Abbey Road and the wider Dumfries monitoring sites. This is in contrast to national (Scotland) levels. However, this isn't the case in England, which has seen a backdrop of reduced cycling on multiple measures between 2021 and 2022.¹⁰

Moreover, the increase in walking trips seen around New Abbey Road between 2020 and 2024 was much greater than seen at a PfE projects in general. For example, across a sample of PfE projects where data is aggregated at pre and post, there was an increase of 16% for walking trips,¹¹ compared to an increase of **18%** for all three count sites on New Abbey Road. In particular, walking trips at Pleasance Avenue and Park Road have increased by **22%** and **19%** respectively.

2.1.3 Everyday journeys

'Everyday journeys' are defined as those which are short, regular trips made in day-to-day life, such as when you travel to work, school, or the shops.¹² **29%** of the 52 respondents to the Route User Intercept Survey (RUIS) were making everyday journeys, including 5% (two respondents) who were commuting (Figure 15).

Figure 15: Trip purpose (RUIS respondents, n=52)



The infrastructure has enabled survey respondents to access a range of amenities within Dumfries, including retail, family or friends, green space, and work (Figure 16). For example, eight respondents to the RUIS answered that they used the route to access 'work' (15%).

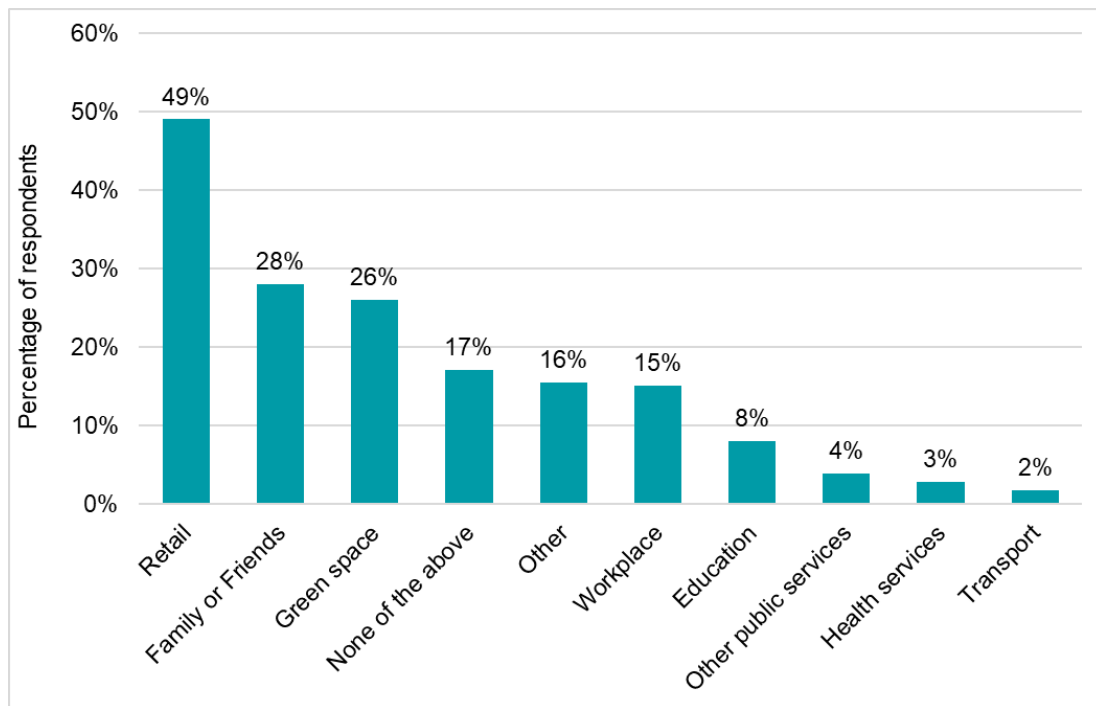
¹⁰ Sport England, [Active Lives Survey](#) (April 2024)

¹¹ SUSR2318 Places for Everyone Infrastructure Impact Report 2023-24 v1.0.xlsx (tab 10.1)

¹² Definition from: [Sustrans, Defining everyday journeys](#) [internal].

‘Other’ includes dog walking (comprising 63% of the category, and 10% of the total), leisure, cycling, and sports club. The popularity of dog walking in the area was also noted in the focus groups.

Figure 16: Access to amenities (RUIS respondents, n=52)



Travelling to school

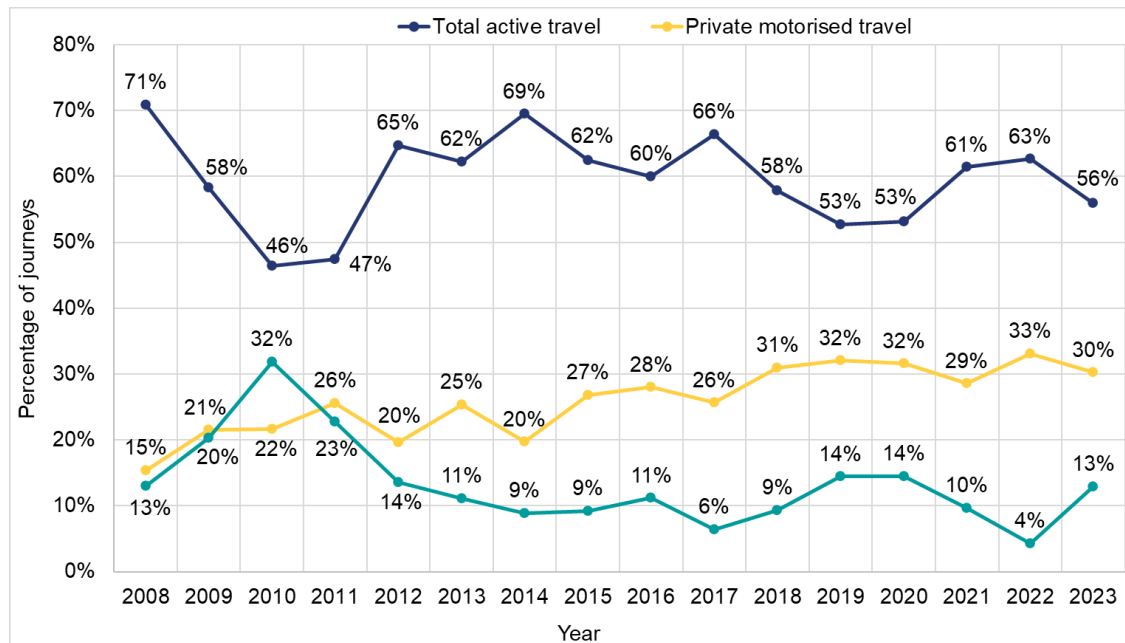
HUSS data shows that **active travel modes¹³ are the main way children travel to Troqueer Primary School**, comprising **56%** of all journeys after the infrastructure changes in 2023, up from 53% in 2020 (Figure 17). This is higher than Dumfries & Galloway (46%) and Scotland (54%) averages.¹⁴ However, Figure 17 shows that active travel levels to the school have fluctuated since 2008.

Private motorised travel to Troqueer Primary School fell to **30%** in 2023, down from 32% in 2020. However, there has been a general trend of steadily increasing private motorised travel since 2008 (Figure 17).

¹³ Modes are grouped as follows: ‘Active travel’: walking, cycling, scooting/skating. ‘Private motorised travel’: driven, taxi. ‘Other’: park & stride (parking a ten-minute walk from school and completing the journey on foot), bus, and all other modes (e.g. train).

¹⁴ See Appendix section 5.2, Table 9 for the full data table comparing Troqueer Primary School with regional (Dumfries & Galloway) and national (Scotland) averages.

Figure 17: All journeys to Troqueer Primary School, 2008-2023: active travel, private motorised travel, and other travel

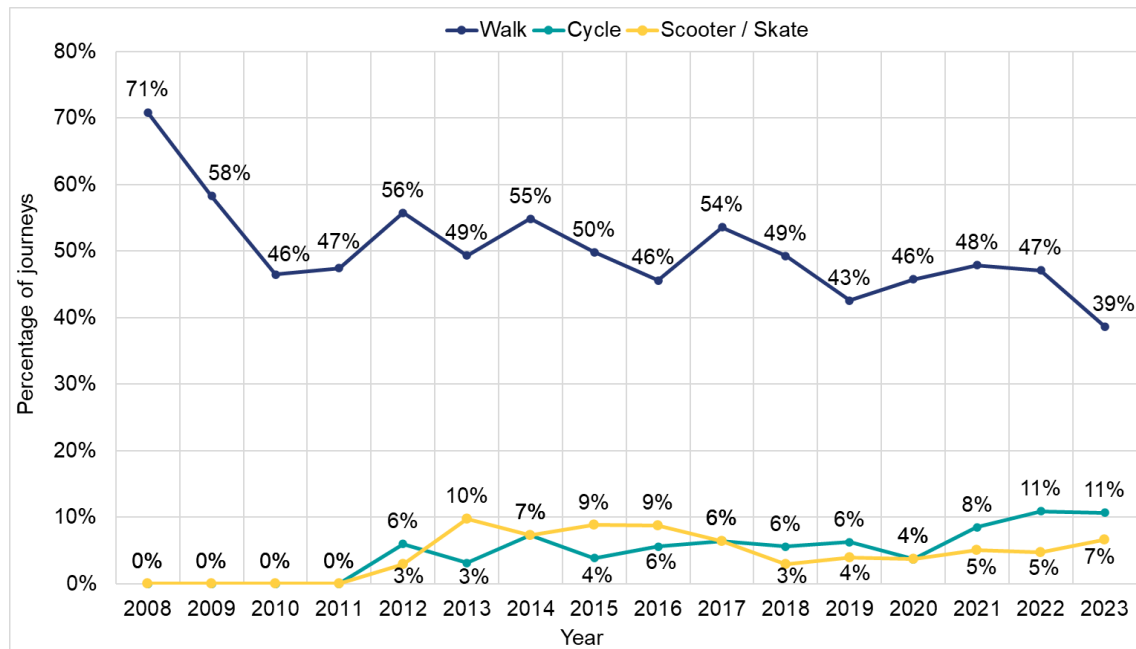


With active travel, walking was the most popular overall mode in 2023, comprising **39%** of journeys (Figure 18). This is higher than the Dumfries & Galloway average of 36%, but lower than the Scotland average of 43%. However, this represents a fall from 46% in 2020.

Cycling journeys increased from 4% of journeys in 2020 to **11%** in 2023. This is higher than the regional and national average of 7%. **Scooting/skating journeys have also increased** from 4% of journeys in 2020 to **7%** in 2023, higher than the regional and national averages of 4% and 5%, respectively. This could suggest that the **infrastructure has helped facilitate children to cycle and wheel to school**.

The recent fall in active travel journeys from 2022 to 2023 does not necessarily reflect current levels of active travel, as construction was only completed in June 2023, so there has been limited opportunity for children to benefit from the changes (e.g. crossing points) when the HUSS was conducted in September 2023. Data from September 2024 may be more illustrative of changes in active travel behaviours of children travelling to Troqueer Primary School (this will be available in Spring 2025).

Moreover, the project did not have specific objectives to increase active travel journeys to Troqueer Primary School, and whilst the infrastructure is beneficial to those coming from the direction of New Abbey Road, there is no new active travel link (i.e. a segregated cycle / foot path) along Pleasance Avenue to the school.

Figure 18: Active travel journeys to Troqueer Primary School, 2008-2023

Travelling to work

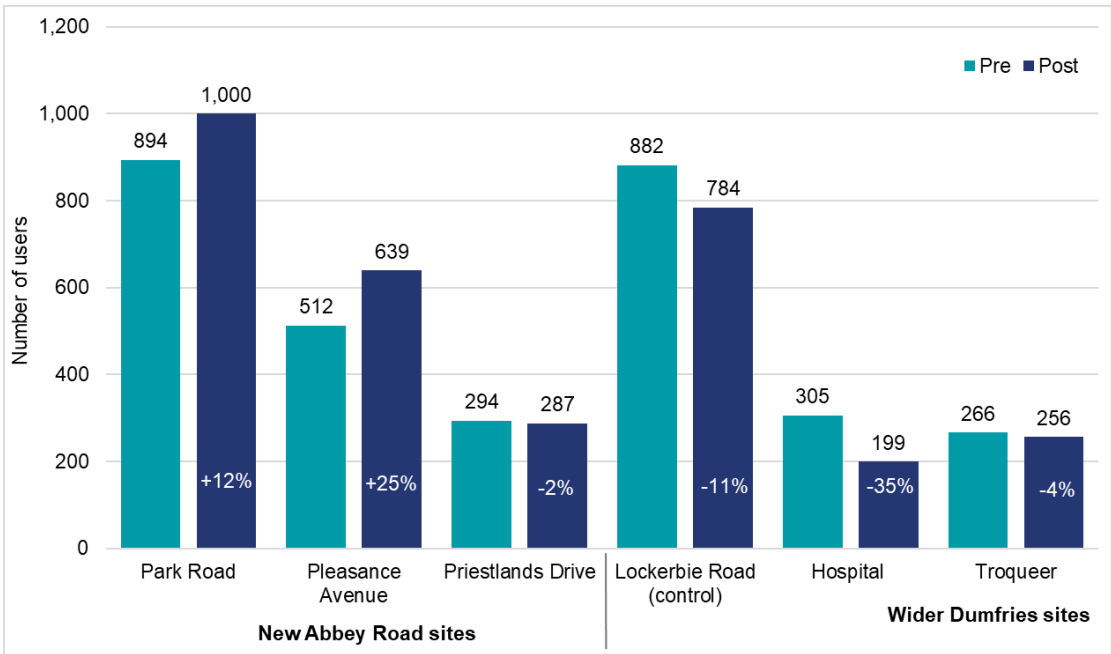
For analysis purposes, commuting time is defined as weekday mornings 07:00-09:00 and weekday afternoons 16:00-18:00. Data from the three **video monitoring sites on New Abbey Road** shows that commuting has increased at Pleasance Avenue and Park Road, and remained stable at Priestlands Drive. At the three wider Dumfries sites, commuting has decreased at Lockerbie Road and the Hospital, and remained stable at Troqueer (see Figure 19).

In particular, **morning commuting by cyclists has increased** at Pleasance Avenue (by **84%**), Park Road (by **37%**), Priestlands Drive (by **10%**), and the Hospital (by **19%**). Morning commuting by pedestrians has decreased at all sites except the Hospital (**+36%**) and Troqueer (no change).

Afternoon commuting by cyclists has remained stable, although it has decreased at the Hospital by 39%. This could be reflective of working shift patterns rather than a decrease in active travel commuting journeys. **Afternoon commuting by pedestrians has increased at all sites except the Hospital**. In particular, evening commuting by pedestrians has increased by **75%** at Pleasance Avenue and **48%** at Park Road.

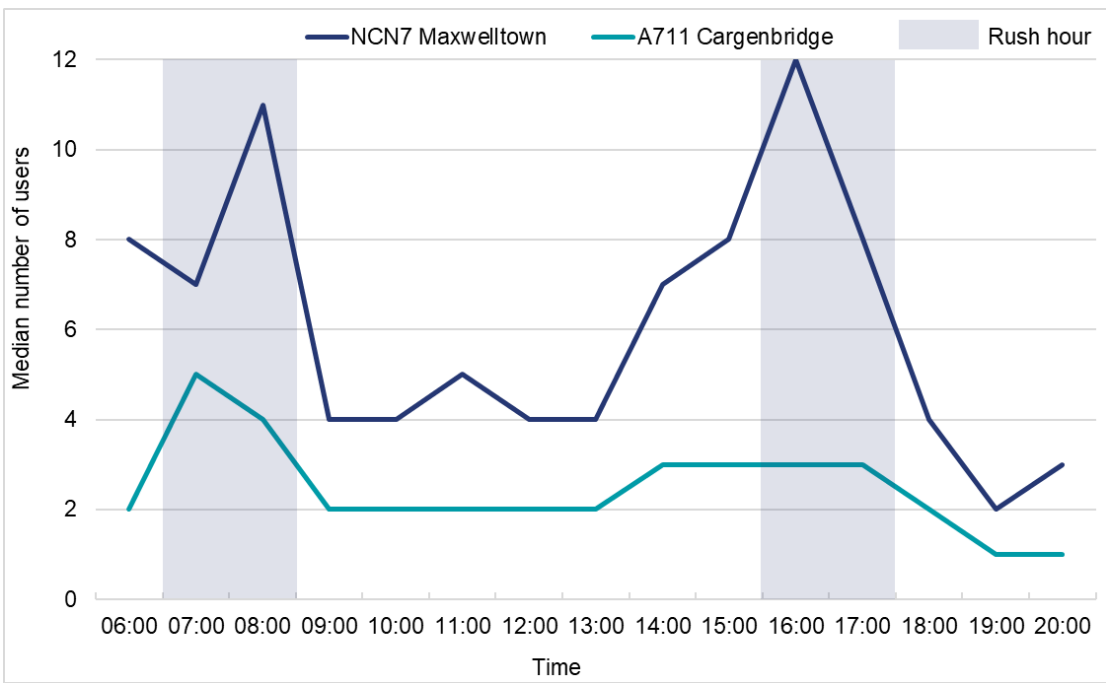
It is difficult to identify any strong patterns in the commuting data: pedestrian counts have increased in the afternoon, but decreased in the morning, whilst the opposite is true for cyclists. Continuous, longer-term monitoring is needed to help identify trends in active travel journeys along and through New Abbey Road.

Figure 19: Commuting counts at Dumfries video monitoring sites



Hourly data trends show the Maxwelltown **automatic cycle counter** has higher usage at commuting times of 07:00-09:00 and 16:00-18:00 (Figure 20). Similarly, the A711 counter shows higher usage on weekdays, and there is a spike in usage at commuting times, particularly in the morning. This data suggests both routes are used for commuting, for example, to the DGRI and Garroch Business Park.

Figure 20: Median weekday hourly totals for the automatic cycle counters



Responses to the **DGRI workplace travel survey** shows the mode of transport DGRI employees use to travel to work.

The number of people travelling actively to DGRI has fallen to **12%** in 2024, from 14% in 2020 (Table 2). Concurrently, car (drive alone) travel has increased to 77%, the highest recorded; bus usage has also risen to 7%. The highest levels of active travel were recorded in 2021 (18%) – this could be a result of Covid-19 habits.

Longer-term monitoring of workplace travel (e.g. 2025 and 2026) could show if the new infrastructure has bedded in and people are adapting their travel to work habits.

Table 2: Proportion of people travelling to work at the DGRI by different modes

Mode of transport	Pre			Construction ¹⁵		Post
	2019	2020	2021	2022	2023	2024
Car (drive alone)	72%	73%	61%			77%
Car (shared)	6%	2%	5%			3%
Taxi	1%	2%	2%			-
Bus	6%	5%	2%			7%
Cycle	10%	14%	11%			7%
E-bike	1%	0%	5%			2%
Walk	4%	0%	2%			3%
Multiple modes	0%	6%	11%			-
Train	-	-	-			1%
Active travel¹⁶	15%	14%	18%			12%
Private motorised travel¹⁷	79%	77%	68%			80%
<i>Number of survey responses</i>	82	68	44			156

¹⁵ No data is available for 2022 and 2023.

¹⁶ Includes non-electric and electric bicycles, and walking.

¹⁷ Includes driving alone, car share, and taxi.

2.2 Outcome – Quality of place

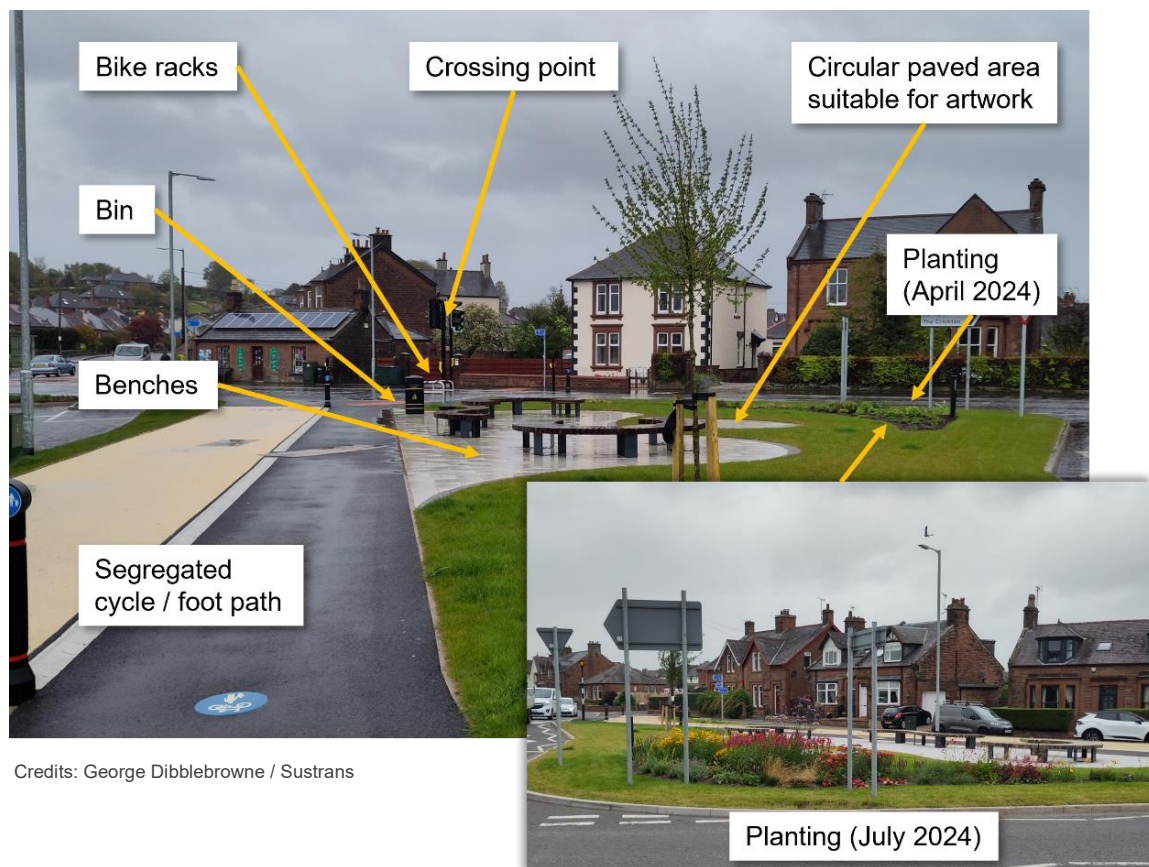
Outcome: improve the quality of place and where possible increase the quality and quantity of green infrastructure.

The project has created an improved public space. What was once a wide and busy junction, is now a meeting place and stopping point for residents. Evidence from monitoring indicates that people view the quality of the area more favourably now than they did before the changes were made.

2.2.1 Definition of quality of place and placemaking

Quality in this context specifically refers to the placemaking area of the project at the junction of Park Road and New Abbey Road. This refers to the quality of the built environment, the quality of the new features implemented as part of this project (including benches, bike racks, bins, planting, and paving, see Figure 21), how people use the space, and users enjoyment of the space.

Figure 21: Placemaking changes at the Park Road / New Abbey Road junction



2.2.2 Perceptions of quality – route user intercept survey

Evidence from the RUIS indicates the project has improved the quality of place and enhanced the quality of green infrastructure in Dumfries, with the effect that users now spend more time in the area than previously.¹⁸



50% of survey respondents now spend more time on the route, compared to before the changes.



91% of survey respondents agreed that they used this route because they like the surroundings.



26% of survey respondents said that this route has helped them to access green space.

Respondents were particularly satisfied with the quality of the space, with large increases in perceptions of quality after construction.¹⁹



95% of survey respondents agreed this route has a high-quality surface, compared to 35% before the changes (a 171% increase).



94% of survey respondents agreed this route is well maintained, compared to 32% before the changes (a 194% increase).



94% of survey respondents agreed this route is fit for purpose, compared to 65% before the changes (a 45% increase).



90% of survey respondents agreed this route enhances the area, compared to 25% before the changes (a 260% increase).



89% of survey respondents agreed this route is well lit, compared to 56% before the changes (a 59% increase).

¹⁸ Please note that this RUIS was retrospective – rather than surveying route users before and after construction, the survey was based on questions which ask users to think back and consider the route prior to the changes. As such, these questions are not a true pre and post comparison. There were 52 respondents to the RUIS.

2.2.3 Perceptions of quality – focus group

Quality in this context specifically refers to the placemaking area on Park Road. We asked participants about the quality of the built environment improvements (including the new features implemented as part of the project (see Figure 21), their enjoyment of the space, and how they and others use the space.

Positive perceptions

The **consensus from the focus groups was positive**, with participants having favourable perceptions about the overall quality of the placemaking area and the design. The changes have transformed what was primarily a road junction into a pleasant space for local communities to travel through, rest and enjoy.

‘It feels nice, and it feels like somebody has thought about it and spent money on it. It’s not just been squeezed on to a pavement.’

The new features of the project, such as the benches and the planting, were seen particularly positively. Benches enabled people to rest and enjoy the surroundings, whilst the planting had created a “pleasant” environment for people to enjoy.

‘You can sit and when it’s beautiful you can see Criffel...it definitely has given a focal point, or at least a rest area for people to use.’

Participants discussed how they used the space and observed others using it, describing how they had personally used it as a rest stop on cycle rides, with elderly parents, or sitting and eating an ice cream bought from the nearby shop. One participant had observed someone reading a newspaper, whilst another had seen people sitting and having a drink with their bikes leant up against the rack.

‘It is actually a destination in itself, a good meeting place: ‘I’ll meet you at the New Abbey benches.’ And it is a pleasant place just to sit down, just stop on your bike, or on your walk.’

Participants suggested several minor improvements to the placemaking area. One participant observed that the benches needed back rests (see also [section on accessibility](#)), whilst another noted that the area would be a good place for a map and/or noticeboard to improve wayfinding (see [section on wayfinding](#)).

Negative perceptions

Participants raised very few negative perceptions about the quality of the placemaking area. The main observation concerned the limited potential of the space due to the location (a road junction), with more attractive green space options available in Dumfries, for instance, as one participant noted, Dock Park.

2.3 Outcome – Safety and comfort

Outcome: provide dedicated, safe spaces for people to walk, cycle and wheel through, adhering to Sustrans Scotland's Design Principles.

The project has improved safety by providing 6 new crossing points along New Abbey Road and a 336-metres segregated path. Evidence from monitoring shows that people view the safety of the area more favourably now than they did before the changes were made.

2.3.1 Perceptions of safety – route user intercept survey

RUIS respondents were particularly satisfied with the safety of the space, with large increases in perceptions of safety after construction.¹⁹



95% of survey respondents agree this route feels like a safe place to be during the day, compared to 63% before the changes.



84% of survey respondents agree this route feels safe with regard to motor traffic, compared to 48% before the changes.



70% of survey respondents agree it feels like a safe place to be after dark, compared to 42% before the changes.

2.3.2 Perceptions of safety – focus group

Positive perceptions

The consensus from the focus groups was that the **infrastructure changes had made walking, wheeling, and cycling around New Abbey Road safer.**

Crossings

The changes have transformed what was primarily a busy road with no formal crossing points, to a multi-user route with multiple, safe crossing points.

'I used it for years, before there was the new crossing. It has made a big difference in terms of it's safer...it was a bit harem scarem before and it does feel a lot safer.'

¹⁹ Please note that this RUIS was retrospective. After construction, route users were asked to think back and consider the route prior to the changes. As such, the survey is not a true pre/post comparison. There were 52 respondents to the RUIS.

Desire lines in the grass verge on the west side of New Abbey Road indicated that people were previously using the grass verge to access Park Road or avoid crossing the busy Pleasance Avenue (see Figure 2).

‘I used to cross on to the grass verge, and then cross at the Toll Bar, because I couldn’t cross at the top of Pleasance Avenue. So, [it’s] obviously a lot easier now...I find it an improvement.’

Safety from motor traffic

Participants observed that the infrastructure changes, including a new filter lane for left-hand turns into Pleasance Avenue and traffic lights, had improved overall perceptions of safety for those using New Abbey Road. This was due to vehicles slowing down more, as well as priority at filters and bike boxes.

‘[As a cyclist] you’re not stopped in traffic a lot of the time because you’ve now got the filter lane. It’s traffic calming, for sure.’

Participants observed that the new cycle/foot path along New Abbey Road has improved safety for walking, wheeling, and cycling. Several participants noted that they are now more confident in using active travel modes because they know the new path is safe. For example, two participants who lead and attend group cycle rides now use the New Abbey Road path due it being an “ultrasafe” route.

‘As a not extremely confident cyclist, that [Park Road] junction made me nervous, but now, this is great. A big improvement for me.’

Participants noted that the path width and level of separation helped prevent conflicts between pedestrians (including dog walkers) and cyclists. For example, even if someone is in the ‘wrong’ lane, there is still plenty of space to pass safely.

‘The other thing that’s really lovely about it is that it doesn’t pinch at all, so at that crossing point...it’s not funnelling people in, it’s really nice. <murmurs of agreement>.’

Personal safety

Several participants noted how the changes had improved lighting along New Abbey Road. For example, the removal of the hedge on the west side of the road to enable construction had opened up the route so that it was no longer “dark and dingy,” and the addition of street lamps made participants feel safer, particularly with children.

Negative perceptions

Participants also observed negative perceptions associated with safety. Generally, this was due to participants comparing the increased perceptions of safety on the

new infrastructure with the poorer safety of routes beyond the area of improvements on New Abbey Road. Pleasance Avenue and Park Road were perceived as particularly unsafe for cycling due to motorists and parked cars.

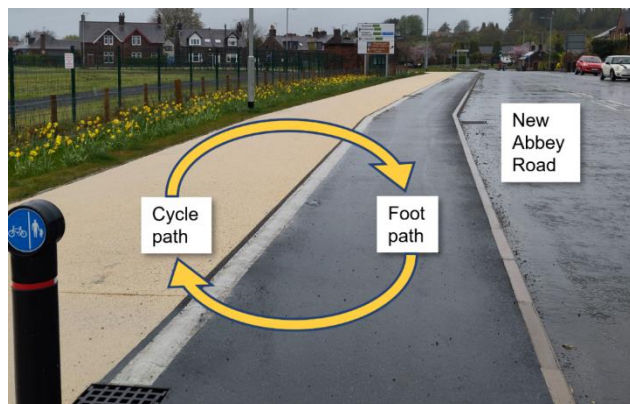
Crossings

Participants commented that they are wary of vehicles not giving way when required to do so. These comments suggest there is still a culture shift required amongst motorists, although participants noted that they felt this is happening, reflected in vehicles giving way in the [crossing behaviour analysis](#).

Segregated cycle and foot path

Several participants thought the cycle and pedestrian elements of the path were the wrong way round; the cycle path should be closest to the road, with the pedestrian path closest to the grass verge (see Figure 22). They felt the current setup could lead to conflict if dogs crossed the cycle path to use the grass verge. Moreover, some preferred to walk on the cycle path as they felt safer further away from the road and the cycle path was wider, meaning they could hold hands with their children.

Figure 22: Segregated cycle/foot path layout, with foot path closest to the road



Credit: George Dibblebrowne / Sustrans

‘The comment made in the planning process was that you got them the wrong way round. The footpaths are predominantly used by dog walkers, and no matter what you do the dogs will go across.’

One participant suggested increasing the number of painted markings on the path itself. This would improve journey flow and ensure different active travel modes use the correct path.

Several participants had negative perceptions about path entry and exit points. At the end of the path on Park Road, users are directed down Hermitage Drive. Users have to stop and turn sharply to check oncoming traffic before crossing the road at no formal crossing point. Moreover, the alignment of the dropped kerb directs users into the path of oncoming traffic on Hermitage Drive. Participants suggested:

- A sign to remind users to join Park Road first before turning into Hermitage Drive.
- The creation of a dropped kerb at the layby on Park Road to improve journey flow if cyclists want to continue down Park Road (see Figure 23).

Figure 23: Park Road exits – turn onto Hermitage Drive (left), potential location for a dropped kerb to continue onto Park Road (right)



Credits: George Dibblebrowne / Sustrans

At the southern end, the new path only takes users as far as Priestlands Drive where they need to cross over to the east side if they continue down New Abbey Road. Participants observed that this could encourage cyclists to use the pavement along Broomlands Drive, potentially causing pedestrian-cyclist conflict.

2.3.3 Perceptions of comfort – focus group

Positive perceptions

The consensus from focus group participants was that the new crossing points and new segregated active travel path were **comfortable and easy to use**.

‘It’s a lot quicker, a lot easier for me on foot.’

Several participants observed that the **design of the path surface** was good. In particular, participants noted the colour of the surface and the ridge separating the cycle and pedestrian elements of the path were well designed.

‘From a biking point of view, it’s fab...Because you’re not worried about decking yourself crossing over [the ridge].’

Participants also observed that the new infrastructure had **good levels of signage**, and that these were well placed, both in terms of position on the route, but also at an appropriate height to enable ease of reading (see Figure 24).

‘Some signs were [shoulder] height, which I was impressed with.’

Figure 24: Example of new signage on the new segregated path



Negative perceptions

The main negative perceptions concerning comfort and ease of use centred on two interconnected elements: **connectivity and wayfinding**. Whilst participants thought highly of the new infrastructure, they observed that the new infrastructure “literally just facilitates” this part of New Abbey Road, and suffers from a lack of “joined-up-ness” to other active travel facilities.

‘I don’t really know what it’s connected to. It’s great that it’s there, but it’s not really connected to anything in terms of active travel.’

For example, several participants noted a missing link of 300 metres between the new segregated infrastructure on New Abbey Road with the existing shared use path on Park Road, which links to NCN7 and the hospital at Cargenbridge (Figure 25). Participants noted that this section of Park Road was narrow and had a poor surface, posing a barrier to people using the route.

‘That whole thing would be dramatically resolved by that tiny little stretch [on Park Road] that links to the next bit of cycle path...that would mean just a flowing walking route, a flowing cycling route.’

In terms of wayfinding, whilst participants observed that wayfinding on the new path itself was good, perceptions of general wayfinding and signage around Dumfries was poor. Whilst this was not in scope of this project, participants noted that this posed a barrier to active travel journeys, both for Dumfries residents and for visitors.

‘There’s no continuation of wayfinding and signage.’

Figure 25: Park Road ‘missing link’



Other suggestions for improving how people use the space included:

- A large noticeboard with a map, possibly located at the new placemaking area (see 2.2.3), to improve wayfinding for Dumfries residents and visitors.
- Increased priority at crossings by (see also [crossing behaviour analysis](#)).

2.3.4 Crossing behaviour

The infrastructure changes introduced **six new crossing points** along New Abbey Road, where previously there were none (Figure 4). Crossing behaviour data shows:

- The **total number of crossings has increased**, by **102** crossings at Pleasance Avenue and **111** crossings at Park Road (see Figure 26).
- The Pleasance Avenue ‘East’ and Park Road ‘North’ crossings were well used at baseline, indicating that people wanted to cross there (Figure 26).
- At follow-up, the Pleasance Avenue ‘North’ and Pleasance Avenue ‘East’ crossings saw the greatest increase in usage.
- The Park Road ‘North’ crossing was the busiest, with **183** crossings at baseline and **245** at follow-up. The crossing provides access to the new placemaking area as well as a corner shop (Toll Bar).

Overall, this data suggests that the **new crossings have enabled people to cross where they need to, improving the safety of journeys as well as usability.**

Moreover, it suggests people are crossing over to the segregated cycle/foot path to use the new infrastructure, as well as to the placemaking area.

Figure 26: Number of crossings before and after construction of new crossing points at Pleasance Avenue and Park Road



Credit: Esri, Intermap, NASA, NGA, USGS | Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS | Sustrans National Cycle Network data contains Ordnance Survey data (© Crown copyright and database rights (2018)). The dataset contains © OpenStreetMap contributions in Northern Ireland which is available under the Open Data Commons Open Database License (ODbL).

Further crossing analysis shows:

- **More vehicles are now giving way after the infrastructure changes**, indicating improved priority to active travellers. This relates to the new zebra crossing at Park Road ('West' arm).²⁰ However, vehicles are also giving way at other crossings (e.g. Park Road 'North' arm).
- The average waiting time to cross has increased slightly at Pleasance Avenue, and only fallen by one second on Park Road. This could suggest that the signalised crossings do not give enough priority to active travel, or that vehicles are not giving way (e.g. at zebra crossings).
- Three pedestrian/vehicle conflicts were recorded at Pleasance Avenue (+3 to baseline). Fortunately, none of these conflicts were serious. The increase could be attributed to the increased number of crossings.

Overall, **these findings indicate that New Abbey Road is now safer for active travellers**. The previous infrastructure gave vehicles priority and underprovided for active travel. This was a barrier to people walking, wheeling, or cycling. After the changes, more people are crossing the road and are being given priority.

Table 3: Crossing analysis: priority, average wait time, and conflicts

Analysis	Junction	Pre	Post
Priority	Pleasance Avenue	No people crossing New Abbey Road were given way to by a vehicle.	Of those who met a vehicle, 2 (2%) were given way to by the vehicle.
	Park Road	Of those who met a vehicle, 3 (2%) were given way to by the vehicle.	Of those who met a vehicle, 18 (46%) were given way to by the vehicle. ²⁴
Average wait time to cross	Pleasance Av	24 seconds	26 seconds
	Park Road	6 seconds	5 seconds
Conflicts	Pleasance Av	No conflicts recorded	3 conflicts (Grade 1) ²¹
	Park Road	2 conflicts (Grade 1) ²⁰	1 conflict (Grade 1) ²⁰

²⁰ Note: of the 39 total vehicles that gave way, 14 (36%) were at the new Park Road zebra crossing ('West' arm), where vehicles are expected to give way to active travellers.

²¹ Grade 1 definition: Precaution – one or both users (vehicle, pedestrian) slowed down as a precaution in response to another user requiring the same space.

2.4 Outcome – Accessibility

Outcome: Improve accessibility for people with protected characteristics.

The project has created an accessible and safe space for traffic-free active travel on what was previously a busy road. Evidence from monitoring shows that people view the accessibility of New Abbey Road more favourably now than they did before the changes were made.

Accessibility refers to whether children, elderly people, women, and people with disabilities perceive that the route feels accessible. Monitoring data includes counts of users (e.g. wheelchair users), alongside perceptions of route users.

2.4.1 Accessibility and equality – user counts

As an indicator of how accessible the infrastructure is for everyone, we have monitored the number of wheelchair users who make a journey through the project area. Overall, wheelchair usage on New Abbey Road has increased by **120%**, from 10 users before the changes, to 22 users after.

Table 4 shows the figures for each video count site. The data shows an increase in wheelchair users at all sites at follow up, except Park Road, which shows a small decrease. This suggests that the infrastructure changes have improved accessibility.

Table 4: Number of wheelchair users before and after the changes

Location	No. of wheelchair users at baseline	No. of wheelchair users at follow up	Change
Total – New Abbey Road	10	22	+12
Pleasance Avenue	3	6	+3
Park Road	7	6	-1
Priestlands Drive	0	10	+10
Total – other locations	3	20	+17
Lockerbie Road (Control)	1	2	+1
Hospital	0	10	+10
Troqueer (Holm Park)	2	8	+6
Overall total	13	42	+29

2.4.2 Accessibility and equality – perceptions from the RUIS



96% of survey respondents agreed the route is easily accessible after the changes, compared to 64% beforehand.

2.4.3 Accessibility and equality – perceptions from focus groups

Accessibility in this context refers to whether children, elderly people, women, and people with disabilities perceive that the route feels accessible. This could be from participants' personal use of the infrastructure, when using the infrastructure with family and/or friends, and observed use by the wider community.

Positive perceptions

The consensus from focus group participants was that the new infrastructure felt accessible. **Participants perceived the route to be accessible for children**, including those travelling to Troqueer Primary School. One participant noted that they use the new infrastructure with their daughter, and observed that the changes have improved safety and enabled her daughter to walk to school by herself. Several participants also noted that the school use the route, and actively encourage the children to walk or wheel to school.

‘[My daughter] actually used the cycle area as well with the school, because they were doing Back to Bikes and things.’

One participant recounted seeing users with buggies and prams and a child with a little bike using the new path. Another participant commented that they use the placemaking area with their granddaughter as it's nice to sit and walk around there.

Participants observed improved accessibility for **elderly people**. For example, several participants noted that the new benches at the placemaking area were important in enabling elderly route users a chance to stop and rest. Participants had observed older people sitting on the benches too. One participant also observed that the level of segregation on the active travel path was positive, enabling cyclists to safely pass elderly people and give them space.

‘Having now got parents in their 80s, I’m evangelical about benches, because dad will just collapse if he can’t sit down, so you’re kind of looking around panicking, where can he sit? You’d almost want more.’

Figure 27: New benches at the Park Road placemaking area



Credit: George Dibblebrowne / Sustrans

Furthermore, participants observed that the route has improved accessibility for **people with disabilities**. One participant had observed someone using the infrastructure with a recumbent trike.

‘Somebody comes on our rides with a recumbent trike, and that’s a really good test of any infrastructure, because it’s long and wide. [The new path is] completely accessible compared to some of the other paths, where you have to go through chicanes or barriers.’

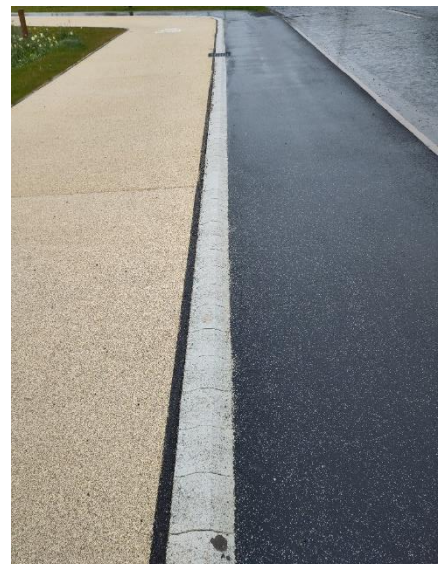
Another participant noted that Leonard Cheshire, a national disability charity, has a site near New Abbey Road. They perceived that the changes would make it easier for residents, some of whom are wheelchair users, to use the path and cross the road safely. However, they hadn’t actually observed the residents.

Negative perceptions

Generally, there were limited negative perceptions related to accessibility. However, as one participant noted, they are non-disabled, and it would be interesting to hear about how accessible the infrastructure was from a disability perspective. For example, in relation to the central ridge on the cycle/foot the path, one participant observed that this might cause accessibility issues for people with visual impairments:

Having done a lot of work with visibility charities, [the ridge] probably isn’t enough to be a distinction. I guess a guide dog probably won’t be able to detect it as it’s not a big enough ridge...is a cane going to detect it? I don’t know.

Figure 28: Central ridge on the new segregated path



Credit: George Dibblebrowne / Sustrans

Moreover, perceptions relevant to safety were also particularly relevant to accessibility, for example:

- Time to cross – relevant to children, people with disabilities, and elderly people (see section on [time to cross](#)).
- That the cycle and foot elements of the segregated path are the wrong way round, which could lead to conflict – relevant to children, people with disabilities, and elderly people (see section on [path design](#)).
- Lighting – relevant to children and women (see section on [personal safety](#)).

3. Detailed methodology

This section describes each monitoring tool in greater detail, including an explanation of the tool, the specifics of data collection, and the process for analysis. Table 5 shows the number of respondents or counts for each monitoring tool.

Table 5: Number of respondents or counts for each monitoring tool

Monitoring tool	Stage	Number	Note
RUIS	Post only	52	Respondents to interview
Manual Count	Post only	447	Counted as part of RUIS
Focus group participants	Post only	10	Number of participants
Workplace travel survey	Pre	68	Number of respondents to survey
	Post	156	
VMCs			Counts
Pleasance Avenue	Pre	2,384	
	Post	2,619	
Park Road	Pre	3,569	
	Post	4,000	
Priestlands Drive	Pre	1,581	
	Post	1,743	
Lockerbie Road (control)	Pre	4,049	
	Post	3,973	
Hospital	Pre	942	
	Post	662	
Troqueer	Pre	1,361	
	Post	1,252	

3.1.1 Route User Intercept Survey (RUIS)

The RUIS comprised a manual count of all route users alongside interviews over a 12-hour period (7am-7pm) on four days (two weekdays and two weekend days during term-time and school holidays).

The RUIS was conducted on the placemaking area at the junction of Park Road and New Abbey Road in October 2023 (Figure 29). The surveyors intercepted as many route users as possible over the age of eighteen, and route users were only interviewed once over the four-day period. The survey included questions about journey purpose, travel behaviour, perceptions of safety and physical activity.

Figure 29: Location of the route user survey



Credit: CTS Traffic and Transport

Survey responses were analysed in R Studio and Microsoft Excel. Of the 447 users counted during the manual count, 52 submitted survey responses. Due to the number of survey responses received, results could not be weighted and are based on the number of respondents alone (noted where applicable). Survey results should therefore not be considered representative of all route users. The Annual Usage Estimates (AUEs) have, however, been weighted since the demographic and travel mode profile of respondents was sufficiently similar to the observations from the manual count.

Data limitations

As the survey could not be conducted before construction due to Covid-19 related restrictions, retrospective questions were asked to capture changes. The survey asked respondents to think back and consider the route prior to the changes. As such, the level of service questions, which asked about perceptions before and after the changes are not a true pre and post comparison.

3.1.2 Video manual counts

Six video manual counts (VMCs) counted users over 12 hours per day (07:00-19:00) for 7 days, and noted the mode of travel, age of user (adult/child), gender of user, and direction of travel. The VMCs at baseline were conducted in August and September 2020 during term time; follow up counts were conducted in August and September 2024 during term time. The locations were as follows (see Figure 30).

New Abbey Road	Wider Dumfries
Pleasance Avenue	Lockerbie Road (control site)
Park Road	DGRI hospital (The Glen)
Priestlands Drive	Troqueer (Holm Park)

Lockerbie Road is a control site which we monitored as a counterfactual location to distinguish background trends from the impact of the project. This location was not affected by the project, so it will provide a representation of what will happen to normal, background active travel levels without the presence of the project. This will enable us to attribute impact more accurately to the project.

Data limitations

The baseline counts were conducted during the Covid-19 pandemic, which may have impacted the number of active travel trips recorded and therefore the AUE.

The categorisation of modes at baseline was different to that at follow-up. For example, at baseline in 2020 ‘pushchairs’ were included in the pedestrian category, whilst ‘joggers’ were included in the other category. At follow-up in 2024, Sustrans now categorise ‘pushchairs’ as other, and ‘joggers’ as pedestrians. For consistency and comparison purposes, follow-up data has been included in the ‘old’ mode categories. However, please exercise caution when comparing follow-up data from this report with other Sustrans data. Please note that this does not affect the cyclist category.

Moreover, the video counts at Pleasance Avenue and Park Road had to be repeated at follow-up as the cameras did not have the correct angles in which to adequately count the different direction and crossing movements required. The count and video analysis data from Pleasance Avenue and Park Road is from 18th-24th September, rather than from 26th August to 1st September as with the four other sites. The weather was similar across both weeks and the day types were the same, and the counts recorded similar numbers, so we judge the data to be consistent.

3.1.3 Video analysis – crossing analysis

To monitor crossing behaviour, a sample of footage was analysed from the video monitoring conducted at the Pleasance Avenue and Park Road sites (see Figure 30). This covered five of the six new crossings (i.e. the new zebra crossing at Priestlands Drive was not monitored).

The video footage was used to analyse the number of pedestrians crossing, waiting time, whether a vehicle gave way, and whether there was any conflict between road

users. These behaviours will be taken to indicate pedestrian and cyclist safety, comfort, and enjoyment.

Data limitations

The crossing analysis was only conducted on a small sample of footage (14 hours across the 7 days), so only provides a snapshot of crossing behaviour.

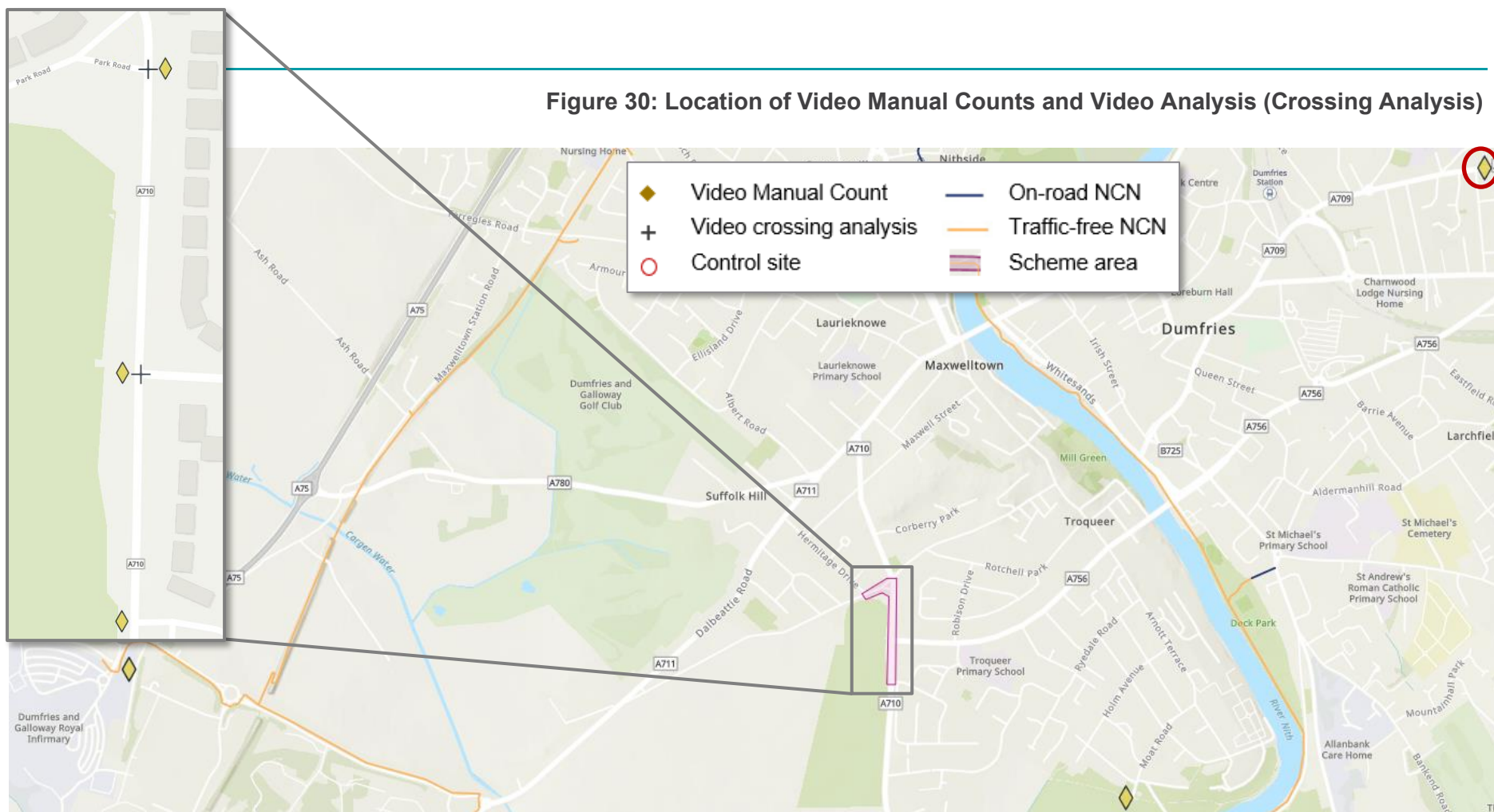
3.1.4 Focus group with local residents

Two semi-structured focus groups²² were conducted with residents of Dumfries, the majority of which lived in the Troqueer area of Dumfries where the infrastructure improvements were located. The focus groups were held at Troqueer Primary School, approximately 300 metres from the infrastructure. The focus groups took place on Wednesday 24th July 2024, one at 14:00 and one at 18:00. The discussions lasted approximately 90 minutes per group. Four participants attended the first group; six attended the second. Participants were paid for their time.

The discussions were recorded on a dictaphone and professionally transcribed; notes were also taken by the two researchers/facilitators. Participants were briefed on the overall topics in advance, but the list of issues for discussion were not circulated beforehand. The discussions focused on four areas:

- Travel behaviours – general context.
- Perceptions of quality – related to outcome 3.
- Perceptions of safety and comfort – related to outcome 4.
- Perceptions of accessibility – related to outcome 5.

²² The focus group topic guide can be found in the [Appendix](#).



Map credit: Esri, Intermap, NASA, NGA, USGS | Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS | Sustrans National Cycle Network data contains Ordnance Survey data (© Crown copyright and database rights (2018)). The dataset contains © OpenStreetMap contributions in Northern Ireland which is available under the Open Data Commons Open Database License (ODbL).

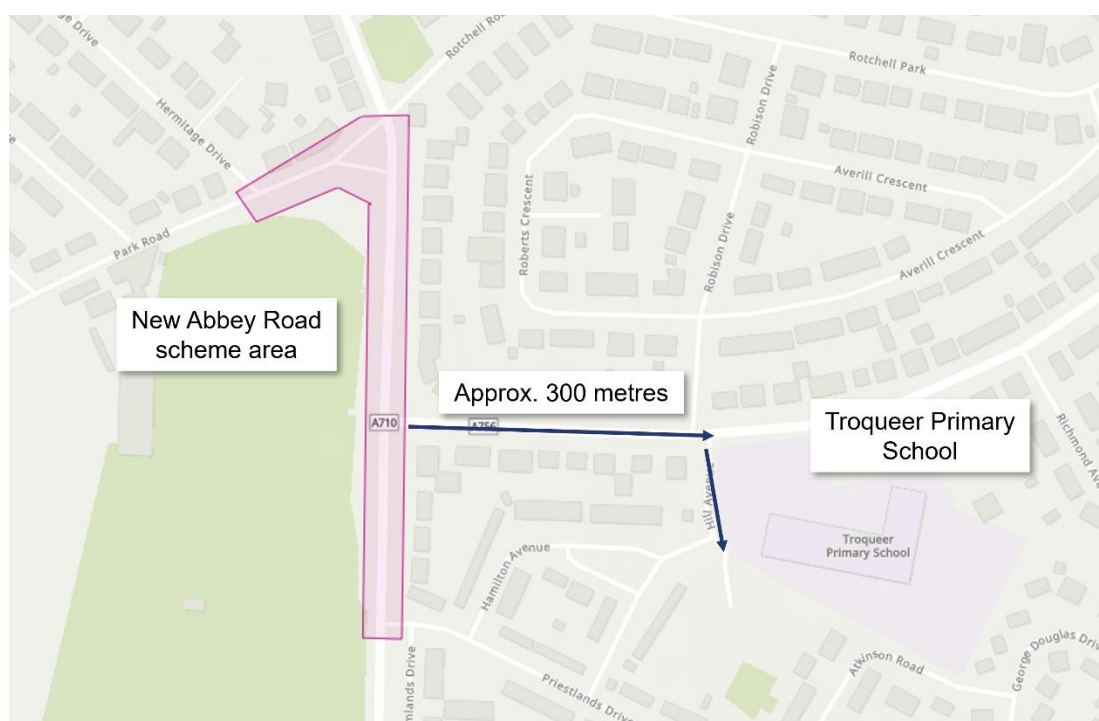
3.1.5 Hands Up Scotland Survey (HUSS)

The Hands Up Scotland Survey (HUSS) is an annual survey of how pupils travel to school across Scotland. Each September, schools across Scotland complete the survey by asking their pupils 'How do you normally travel to school?' Local authority officers distribute the survey to schools and return responses to Sustrans' Research and Monitoring Unit for overall collation, analysis, and reporting.

Troqueer Primary School is located approximately 300 metres from the project area along Pleasance Avenue, and participates in the HUSS every year. Data for Troqueer Primary School is available 2008 to 2023. This data will be used as supplementary data to track any potential changes in active travel at the school, although we recognise that there may be other factors affecting active travel at the school besides the construction of this project.

A Parliamentary Order was passed designating Sustrans as Official Statistics Providers in the production of Hands Up Scotland on 1 June 2012. The results provide a valuable annual snapshot of school travel.

Figure 31: Location of Troqueer Primary School in relation to the project area



Map credit: Esri, Intermap, NASA, NGA, USGS | Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS | Sustrans National Cycle Network data contains Ordnance Survey data (© Crown copyright and database rights (2018)). The dataset contains © OpenStreetMap contributions in Northern Ireland which is available under the Open Data Commons Open Database License (ODbL).

3.1.6 Counters

Data from two automatic cycle counters provide further context to levels of active travel monitored at the six video locations on New Abbey Road and wider Dumfries. The first counter is located on the NCN7 in Maxwelltown which runs to the north of Dumfries. Data from this counter is available from November 2021 to June 2024. This counter is not directly affected by the project, so can provide a representation of normal, background active travel levels without the presence of the project. At the baseline monitoring stage, the NCN7 Maxwelltown counter was deemed comparable to Park Road / New Abbey Road in terms of cycling usage, meaning it could be used as a control site to monitor cycling levels without the presence of the project.²³ If cycling levels remain the same at the Maxwelltown counter while cycling levels change on New Abbey Road following the new infrastructure, we can be confident that this change is more likely to be due to the project than local trends.

The second counter is located on the A711 near Cargenbridge, which lies on the route between New Abbey Road and the hospital, and can be used to measure active travel towards the hospital.

Data limitations

Due to technical issues, no pedestrian data is available for either the NCN7 Maxwelltown counter or the A711 Cargenbridge counter. This means that only cycling levels can be monitored and compared before and after the changes.

Moreover, data from the A711 Cargenbridge counter was not available pre-construction due to technical issues, and post-data is only available for 12 months (August 2023 to August 2024). This makes it difficult to determine longer term trends.

3.1.7 Workplace Travel Survey

Since 2019, a survey has asked people what mode of transport they use to travel to work at DGRI. This tool was historically delivered by a separate Sustrans RMU team and incorporated into the project's evaluation. The Sustrans RMU-led project ended in 2022. NHS Scotland continued this survey, and data is available for 2024 (collected between 15th April and 24th May 2024). The workplace travel survey measures the levels of active travel of employees at DGRI before and after construction. DGRI were a key partner in the project, with the new infrastructure aiming to facilitate active travel journeys to the hospital.

²³ On Park Road / New Abbey Road, we estimated an average of 119 cyclists and 444 pedestrians per day. The counter on the NCN7 in Maxwelltown recorded 96 cyclists and 833 pedestrians per day.

4. Future monitoring

4.1 Monitoring tools to be repeated at legacy

Legacy monitoring is undertaken to understand the longer-term impacts of the project, typically conducted more than two years after project construction has finished to allow time for the local community to build familiarity with the new infrastructure and for usage to settle. Future monitoring would aim to examine the long-term impact of the project on the original project outcomes as well as any additional outcomes as appropriate (e.g. maintenance).

All monitoring tools included in this report should be repeated at legacy monitoring, particularly tools where we have baseline and follow-up data, and which can be repeated two years post construction, i.e. Video Manual Counts and Video Analysis (Crossing Analysis). Longitudinal data sources, including counters, the Hands Up Scotland Survey, and the DGRI Workplace Travel Survey, will enable longer-term active travel trends to be established.

Tools where monitoring was only conducted at follow-up (i.e. RUIS with Manual Count and focus groups with residents) should also be conducted.

4.2 Methodology considerations

For this report, monitoring was conducted two months before construction began and 14 months after the route was completed, excepting the RUIS which was conducted four months after completion. Reflecting on our monitoring and evaluation for this project we have considered the following measures we would like to have incorporated:

- The RUIS would be conducted at the same month as the video counts (August/September rather than mid-October) to ensure a good response rate.
- A TSV could have been conducted along New Abbey Road to measure vehicle speed before and after construction.

5. Appendix

5.1 Additional insights for Dumfries & Galloway Council

Additional insights from the focus groups show the positive perceptions of the quality of the new infrastructure. Participants noted that they hoped the infrastructure would set the new standard for future cycling infrastructure in Dumfries (and beyond).

‘I think it’s a good exemplar, to show people what’s normal, or what could be normal, in other places...because now I hope that they cannot rollback on that standard when they implement new things.’

Other insights which may be useful for Dumfries & Galloway Council for future maintenance on this route, and for future active travel projects are outlined below.

Hedge maintenance

The cutting of the hedge to enable construction of the new path had a knock-on positive impact of improving the openness and lightness of the space. Participants wanted the hedge to be kept short and well maintained to continue this benefit, particularly as female participants felt safer without the “dark and dingy” hedge.

Benches

The benches were appreciated by focus group participants. However, in the future, benches as part of placemaking projects should have backrests.

Wayfinding/signage

General active travel wayfinding and signage around Dumfries was deemed poor among focus group participants, though it was noted that this was not within scope of this particular project.

5.2 Additional data tables

Table 6: Annual Usage Estimates (AUE) for each count site

Site name	Pre AUE	Post AUE	AUE Change	% Change
Pleasance Avenue	140,000	160,000	+20,000	+14%
Park Road	210,000	240,000	+30,000	+14%
Priestlands Drive	94,000	100,000	+6,000	+6%
Total – New Abbey Road	444,000	500,000	+56,000	+13%
Lockerbie Road	250,000	250,000	-	-
Hospital	51,000	38,000	-13,000	-25%
Troqueer (Holm Park)	82,000	75,000	-7,000	-9%
Total – wider Dumfries	383,000	363,000	-20,000	-5%
Overall total	827,000	863,000	+36,000	+4%

Table 7: Active travel modes – AUE

Site name	Pedestrian				Cycling				Other			
	Pre AUE	Post AUE	Change	% Change	Pre AUE	Post AUE	Change	% Change	Pre AUE	Post AUE	Change	% Change
Pleasance Avenue	98,000	120,000	+22,000	+22%	34,000	31,000	-3,000	-9%	8,500	9,500	+1,000	+12%
Park Road	160,000	190,000	+30,000	+19%	43,000	41,000	-2,000	-5%	7,500	11,000	+3,500	+47%
Priestlands Drive	67,000	75,000	+8,000	+12%	20,000	20,000	-	-	7,000	6,500	-500	-14%
Total – New Abbey Road	325,000	385,000	+60,000	+18%	97,000	92,000	-5,000	-5%	23,000	27,000	+4,000	+17%
Lockerbie Road	230,000	230,000	-	-	18,000	11,000	-7,000	-39%	4,500	8,500	+4,000	+89%
Hospital	15,000	18,000	+3,000	+20%	34,000	18,000	-16,000	-47%	1,500	2,000	+500	+33%
Troqueer (Holm Park)	61,000	58,000	-3,000	-5%	15,000	11,000	-4,000	-27%	6,000	6,000	-	-
Total – wider Dumfries	306,000	306,000	-	-	67,000	40,000	-27,000	-40%	12,000	16,500	+4,500	+38%
Overall total	631,000	691,000	+60,000	+18%	164,000	132,000	-32,000	-20%	35,000	43,500	+8,500	+24%

Table 8: Active travel modal share before and after the infrastructure changes

Site name	Pedestrian			Cycling			Other		
	Pre AUE	Post AUE	Change	Pre AUE	Post AUE	Change	Pre AUE	Post AUE	Change
Pleasance Avenue	70%	74%	+4	24%	20%	-4	6%	6%	-
Park Road	76%	79%	+3	20%	17%	-3	4%	4%	-
Priestlands Drive	71%	74%	+3	21%	20%	-1	7%	6%	-1
Total – New Abbey Road	73%	77%	+4	22%	18%	-4	5%	5%	-
Lockerbie Road	91%	92%	+1	7%	4%	-3	2%	3%	+1
Hospital	30%	47%	+17	67%	47%	-20	3%	6%	+3
Troqueer (Holm Park)	74%	78%	+4	19%	14%	-3	7%	8%	+1
Total – wider Dumfries	79%	84%	+5	17%	11%	-6	3%	5%	+2
Overall total	76%	80%	+4	20%	15%	-5	4%	5%	+1

Table 9: HUSS data: Active travel journeys to school for Scotland, Dumfries & Galloway, and Troqueer, 2020 and 2023

Mode	2020			2023		
	Troqueer Primary School	Dumfries & Galloway	Scotland	Troqueer Primary School	Dumfries & Galloway	Scotland
Walk	46%	38%	47%	39%	36%	43%
Cycle	4%	5%	5%	11%	7%	7%
Scoot/skate	4%	2%	4%	7%	4%	5%
Park & stride	14%	14%	12%	13%	13%	12%
Driven²⁴	32%	35%	26%	30%	34%	26%
Total active travel²⁵	53%	45%	55%	56%	46%	54%

²⁴ Does not include bus or taxi. As very low numbers of Troqueer Primary School children reported using these modes to travel to school, they are not included in this table.

²⁵ Active travel journeys refer to walking, cycling, and scooting/skating.

5.3 Topic guide for focus groups

Table 10: Topic guide for the focus groups

No.	Question	Prompts / follow ups
Icebreaker		
1.	To start, if we could introduce ourselves, where you travelled from today and how, and your link to the area	E.g. do you live/work/attend social events/do your children go to school here
Travel behaviours		
2.	How do you usually travel in the project area?	Why do you travel in this way?
3.	Can you describe a typical journey for you using New Abbey Road (one that you would do most often)?	What is the usual purpose of your trips? How easy is it? What is difficult about it?
4.	What do you think are the barriers of active travel within the local area?	Are these the same for you personally and the community as a whole? (e.g. safety / infrastructure / traffic / confidence)?
5.	Have the changes encouraged you walk/cycle more?	In what way?
Quality of the space		
6.	What do you think of the quality of the infrastructure public realm on New Abbey Road? Specifically... Park Road placemaking area (benches, bike racks etc.) Cycle/foot path	What do you think of it as a place? Do you like the design and new features? Why/why not? Do you spend time here? What do you notice about how people use the space?
7.	How does this compare to how it was before, if you remember it then?	
8.	What facilities are lacking?	How would these be useful/help?

No.	Question	Prompts / follow ups
Safety of the space		
9.	Generally, how safe is travelling by foot or bike in the project area?	How have the changes impacted safety? In what way(s)?
10.	Cycle/footpath – how would you rate the level of separation between vehicles, cycles, and pedestrians?	
11.	Junctions – how do you find crossing the protected junctions?	Is there enough time to cross? How safe do you feel crossing? How accessible are they?
12.	How do you think the changes to the route will impact on the safety perceptions of local residents?	And you personally? Have they noticed who uses the route and whether it is any different?
Accessibility		
13.	How accessible do you think travelling around New Abbey Road is?	Why / why not? Has this changed from how the route was previously?
14.	Has this project had an impact on accessibility?	In what way(s)?
15.	If so, what barriers have been overcome?	
16.	Are there any issues which haven't been addresses in this project?	
Other comments		
17.	Is there anything we haven't asked about which you think is relevant?	

5.4 Additional project delivery details

Table 11: Key features of the Active Travel Links to Dumfries New Hospital project

Key feature	
Places for Everyone Project ID	DGC-PFE-2819
Category	2
New route (previously not passable on foot)?	Yes
Upgrade of existing route?	Yes
Length (if linear / known)	336 metres
Date of works starting (first spade / cone)	November 2022
Date of works completion (last cone)	June 2023
Total PfE Grant Awarded	£887,091
Total project cost (forecast)	£1,600,000

Dumfries & Galloway Council outcomes

D&G Council had specific intended outcomes from the project – these outcomes are not monitored or reported on by Sustrans RMU, but are included here to provide context to the project. The intended outcomes for D&G Council are to:

1. Rationalise the junction for vehicle movements and efficiency of traffic flows.
2. Increase vehicular capacity of the junction, while also reallocating road space to improve provision for cyclists and pedestrians and providing controlled crossings.
3. Create an aspirational design layout with high-quality active travel infrastructure for both cyclists and pedestrians.
4. Encourage behavioural change with more people walking and cycling as part of their everyday journeys to work, school, shopping, and recreation.
5. Improve connectivity, access for all, and equality of opportunity in the public space.

5.5 Key contacts

Table 12: Key contacts

Role	Name	Email address
RMU Project Manager	George Dibblebrowne	george.dibblebrowne@sustrans.org.uk
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RMU Project Sponsor	Nigel Donnell	nigel.donnell@sustrans.org.uk
Grant Advisor	Joanne Stewart	joanne.stewart@sustrans.org.uk
Partner contact	Tony Topping	tony.topping@dumgal.gov.uk