

Maidencraig Active Travel Links Evaluation Report



30 June 2023

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Cover photo of path improvements within Maidencraig Nature Reserve
(Aberdeen City Council)

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Contents

Executive summary	5
1. Introduction	7
1.1 The Maidencraig Active Travel Links project	7
1.1.1 About the scheme: site location and context to scheme delivery	7
1.1.2 About the scheme: key features of the improvements	7
1.1.3 Scheme information: grant information, costs and timelines	9
1.2 Places for Everyone	10
1.3 About Sustrans' Research and Monitoring Unit	10
1.4 Methodology Summary	10
1.4.1.1 Evaluation approach	10
1.4.1.2 Summary of monitoring data collection	11
2. Outcomes	13
2.1 Places for Everyone outcomes	13
2.1.1.1 Report structure	13
2.2 Project outcomes	14
3. Findings	15
3.1 Active Travel	15
3.1.1 Levels of active travel	15
3.1.1.1 A note on annual usage estimates for cyclists and pedestrians	17
3.1.2 Everyday journeys	18
3.1.2.1 Access to education/journeys to school	19
3.1.3 Preferred mode of travel	22
3.2 Meeting the needs of the community	23
3.2.1 Consideration of community needs	23
3.2.2 Meeting the needs of all	27
3.2.2.1 Usage by different genders	27
3.2.2.2 Usage by different age groups	28
3.2.3 Linking people with places	29
3.2.4 Physical activity levels	30
3.2.4.1 Physical activity levels for areas of higher SIMD	31
3.3 Placemaking	33
3.3.1 Perceptions of the path	34
3.3.1.1 Perceptions of safety	35
3.3.2 Use of public space	36
3.4 Creating an enabling environment	38
3.4.1 Enabling environment for active travel	39

3.4.1.1	Propensity to travel actively	39
3.4.2	Walking and cycling experience	40
3.4.2.1	Experience of safety	40
3.4.2.2	Comfort and directness	40
4.	Future Monitoring	42
4.1	Legacy monitoring	42
4.1.1	Monitoring tools to be repeated at legacy monitoring	42
4.1.2	Additional monitoring to carry out at legacy	42
4.1.2.1	Further analysis of counter data	42
4.1.2.2	Collection of qualitative data	42
4.1.2.3	Maintenance audit of new infrastructure and environmental amenities	43
5.	Methodology	44
5.1	Monitoring tools detailed description	44
5.1.1	Route User Intercept Survey	44
5.1.1.1	Annual Usage Estimate	45
5.1.2	Automatic Counters	45
5.1.3	Hands Up Scotland Survey (HUSS)	46
5.1.4	Supplementary data: National Records of Scotland Demographic data	47
5.2	Rounding and data presentation	48
5.3	Planned monitoring not carried out	48
5.3.1	Household survey	48
5.3.2	Focus groups	48
5.3.3	Contextualising results in wider datasets	49
6.	Appendix	50
6.1	The 2021 Route User Intercept Survey form	50

Executive summary

Summary of results from monitoring pre and post scheme improvements.

Levels of active travel



How many trips? The number of people who are using the area per year has more than doubled following improvements, with an estimated additional 86,500 trips per year.

For what purpose?



Many more people are visiting the area for leisure purposes: 97% of those interviewed were using the path for recreation (such as exercise and dog walking) following improvements, up from 93%.



Meanwhile **the numbers using the paths for an everyday journey decreased** both in real terms and as a proportion of trips. Route users nonetheless felt the area has been improved to facilitate 'everyday journeys', even if this is not reflected in usage patterns.



The scheme has created an **enabling environment for active journeys to school**: 91% of use by children was on 'termtime weekdays'.

How are people travelling in the area?



Following improvements, **pedestrians still make up the vast majority of route users** (92% of trips in 2019 and 85% in 2021 were made by pedestrians)



.... however **the scheme has encouraged more people to cycle in the area**: cycling trips per year are estimated to have increased over 220% relative to pre-intervention volume

Accessibility and diversity of usage



Improvements for accessibility

There is increased diversity of usage: more people with self-reported health or disability conditions were using the area, and more wheelchair users were counted.



And more positive user perceptions: more people agreed 'this path is easily accessible' at follow up (98%). Almost all agree the paths 'meet the needs of the community' (94%).

Use by different demographic groups



Age groups: the scheme has successfully **encouraged usage by adults who were previously under-represented**, especially by the 'over 65s'. The profile of users compared to Aberdeen's population as a whole remains skewed towards children.

The **gender** split of route users remained roughly equal between males and females.

Meeting the needs of the community

The scheme has....



Created better connected communities: More people said the route helped them reach 'family and friends'



Increased physical activity: 96% of survey respondents said that this route has helped them to increase the amount of physical activity they regularly take, 38% more than at baseline.

What do people think of the area?



Positive perceptions of 'quality of place'

Improvements have enhanced the already very positive perceptions of the area: at follow-up, 98% agreed 'the path is fit for purpose', 99% agreed the path 'enhances the area', and 91% agreed the path 'is well maintained'. 'The paths are well lit' was the path quality which saw the greatest jump in user perceptions (up from 59% to 96% agreement) however perceptions of safety declined slightly.



An enabling environment for active travel

The paths were rated more highly as transport links: More people said the paths allowed them to go straight to their destinations and was the most convenient route. Many more people said they 'save money by using this route'.



Transport links for encouraging active travel: Almost all route users (92%) said the upgraded path encouraged them to walk and cycle more.

1. Introduction

1.1 The Maidencraig Active Travel Links project

1.1.1 About the scheme: site location and context to scheme delivery

Maidencraig is a wetland nature area to the west of Aberdeen. The site is designated as a Local Nature Reserve¹ and is popular amongst residents as a local 'green and blue space'.

The delivery of this scheme at Maidencraig took place in the context of flood alleviation efforts, as the area is prone to flooding and the reserve's susceptibility increased with the construction of nearby Bancon Homes housing developments.

This Places for Everyone scheme formed the second phase of Aberdeen City Council's 'Maidencraig Flood Management and Wetland scheme'. As Phase 2, this scheme focused on providing for and prioritising active travel, primarily through upgrading paths, adding seating, lighting and other environmental amenities. Aberdeen City Council described the improvements as 'multi benefit for the community and environment, therefore providing more than just flood management'.² In particular, the improvements offer 'the opportunity for the community to interact with wildlife while allowing active travel across the Den Burn Valley and to the Maidencraig Nature Reserve'.³

Phase 1 of the scheme was delivered in 2018 and created a new route between the Maidencraig housing development and Hazlehead area along with other flood alleviation measures.⁴

1.1.2 About the scheme: key features of the improvements

There were two elements to the works: upgrading the path network and installing or replacing environmental amenities (Figure 1).

The path improvements sought to make walking and cycling within the Den of Maidencraig more attractive and safe. While the Local Nature Reserve as a green space is a major trip

¹As per: <https://www.aberdeencity.gov.uk/services/environment/natural-heritage> [accessed Dec 2022]

²Statement from Aberdeen City Council funding application

³As per: <https://consultation.aberdeencity.gov.uk/operations/maidencraig-phase-2/> [accessed Dec 2022]

⁴As per: <https://www.agcc.co.uk/news-article/next-stage-of-a-flood-management-scheme> [accessed Dec 2022]

generator in itself, other local trip generators include schools, community areas, Woodend General Hospital, the adjacent public highway and new and existing residential areas. The works involved upgrading existing paved and 'whin dust' core paths (resurfacing and adding drainage and culverts to Bressay path and Skene Road Path).

'Environmental amenities' improvement works involved:

- Installation of new directional finger posts
- LED upgrades to 19 street light columns
- Addition of new bench(es)
- Construction of a 15-square-metre viewing platform and 20-square-metre dipping platforms
- Installation of educational information boards
- Construction of 2-metre-high sand martin nesting wall

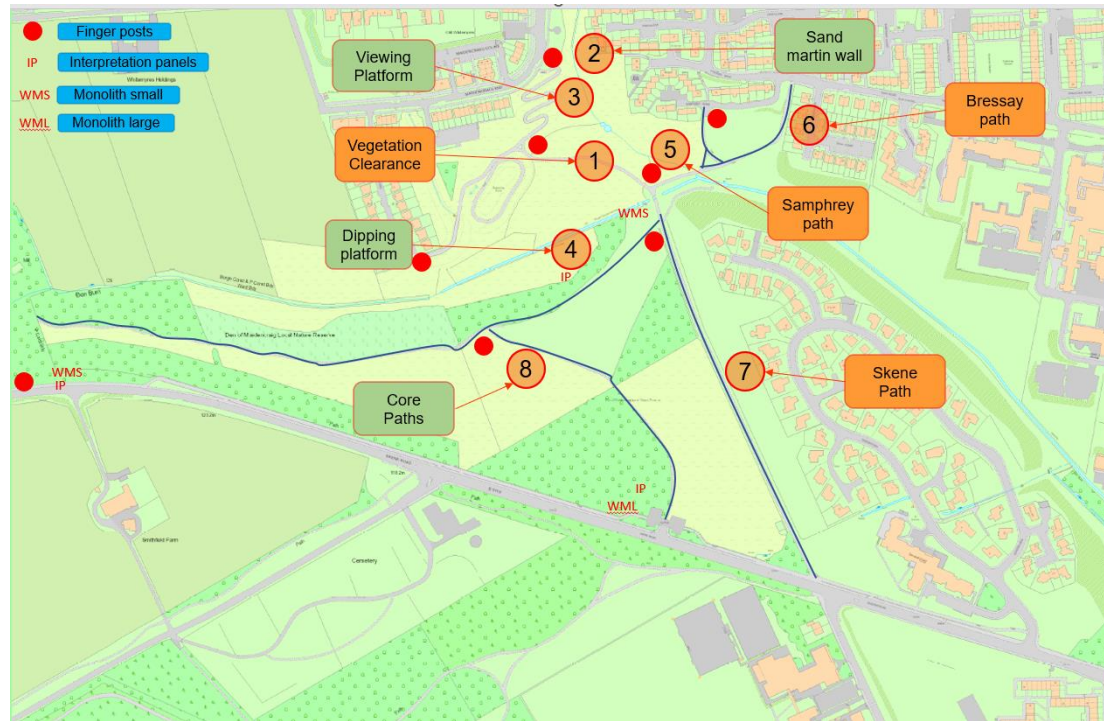
Image 1 Improvements to the core paths

Source: Aberdeen City Council



Figure 1: Map of key aspects of scheme improvements

Source: Aberdeen City Council



1.1.3 Scheme information: grant information, costs and timelines

The Maiden Craig Active Travel Links project was delivered by Aberdeen City Council and received Places for Everyone (formerly Community Links) funding during the 2018-2019 grant iteration. Scheme construction took place between 24 February 2020 and 15 April 2020. It is a Category 2⁵ scheme, reference ID ACC-TS2122-PFE-13434/2997. The Total Global Cost was £321,971.00 which includes design, construction, contract management, site supervision, liaising and reporting to Sustrans. Contributions from Sustrans were £202,848.90.⁶

⁵ Places for Everyone projects are allocated Categories from 1 to 4 based on their complexity and scale: https://www.sustrans.org.uk/media/5769/places_for_everyone_application_guide_v20.pdf

⁶ This is the total spend associated with the construction of the infrastructure only during the construction phase. Figure from ACC June 2023.

1.2 Places for Everyone

Places for Everyone is an infrastructure fund that aims to create safe, attractive, healthier places by increasing the number of trips made by walking, wheeling⁷ (using a wheelchair or mobility scooter) and cycling for everyday journeys.

The scheme is funded by the Scottish Government through Transport Scotland and is administered by Sustrans. The Places for Everyone programme superseded the Community Links programme in 2019.

1.3 About Sustrans' Research and Monitoring Unit

The Sustrans Research and Monitoring Unit (RMU) aims to provide evidence on sustainable and active travel that is transparent and authoritative and which influences and shapes policy, practice and behaviour in Scotland and across the UK. To this end, the RMU works with Sustrans colleagues and partner organisations to monitor and evaluate the impact of specific projects, whether infrastructural or behavioural change based.

1.4 Methodology Summary

Note that a detailed [Methodology](#) section can be found below the findings.

1.4.1.1 Evaluation approach

Sustrans' Research and Monitoring Unit led on the evaluation of the scheme. The evaluation aims to assess the extent to which the programme outcomes have been met by gathering travel data and information on changes in people's experiences and behaviour in the affected area.

At scheme inception a number of intended outcomes were selected from the Places for Everyone funding programme which the scheme has been delivered under. These guide the monitoring and evaluation of the scheme, the results of which are presented in this report.

Sustrans were responsible for monitoring the Places for Everyone programme-wide outcomes, Aberdeen City Council were responsible for the measurement of additional project-specific outcomes. See [Section 2: Outcomes](#).

⁷ Wheeling refers to using a wheelchair or mobility scooter, here and throughout the report.

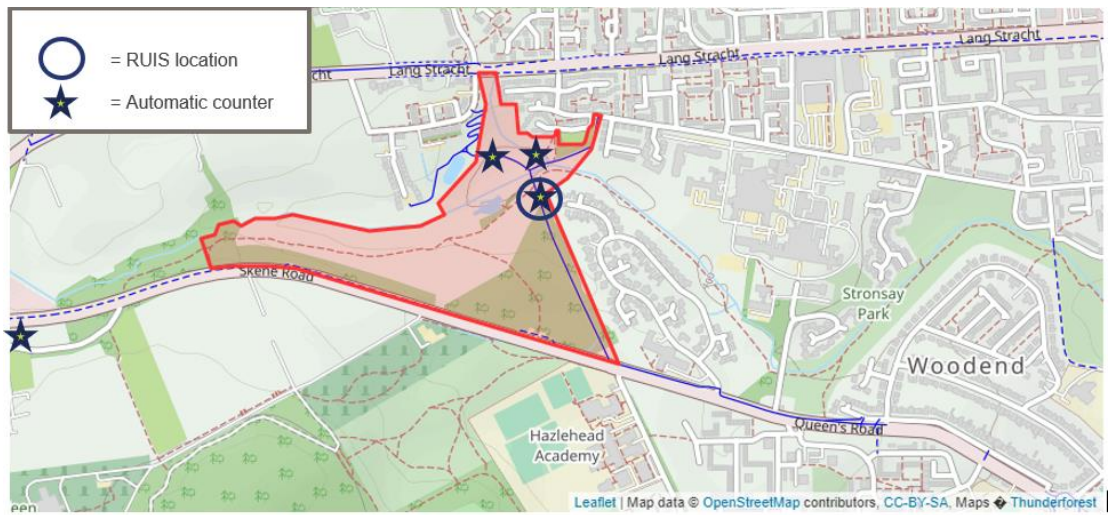
1.4.1.2 Summary of monitoring data collection

A series of data collection methods – ‘monitoring tools’ – have been used to capture changes between baseline (in 2019, before the intervention) and follow-up (in 2021, after completion of the intervention) to understand what changes occurred as a result of the intervention. The follow-up data collection was carried out after a suitable ‘bedding-in’ period had elapsed (minimum of six months). To ensure comparability of data, the same monitoring tools were used and data collection took place at similar times of year to minimise seasonal influence on results. Although the scheme construction was affected by the Covid-19 pandemic and associated lockdowns, all lockdown restrictions had been lifted at the time of the follow-up 2021 Route User Intercept Survey. Nonetheless, the effects of the pandemic on travel behaviour are an uncontrolled factor which has not been accounted for in this report. For detailed information on the monitoring tools see the [Methodology](#) section, for a summary see [Table 1](#) and for locations see [Figure 2](#).

Table 1: Summary of monitoring tools

Monitoring tool	Purpose	Data collection dates
Route User Intercept Survey (RUIS) with Manual Count	To count users (RUIS) and gather data on active travel behaviour and perceptions of the route from users. Annual Usage Estimates have been calculated from count data.	June 2019 (before scheme delivery; 80 interviewees) and August 2021 (after scheme delivery; 94 interviewees)
Hands Up Scotland Survey	Mode share for travel to school	Annual statistic with data collected in September. Data included from 2017 – 2021 from 5 primary schools and 1 secondary school.
Automatic Pedestrian and Cyclist counters	Continual collection of data on number of pedestrians and cyclists to see patterns in usage over time. Annual Usage Estimates have been calculated from count data.	Aberdeen City Council installed three Automatic Pedestrian and Cyclist counters during construction. Data is available from 2020 onwards.

Figure 2: Map showing scheme area and monitoring locations



2. Outcomes

2.1 Places for Everyone outcomes

This project was originally funded under the Community Links programme (now Places for Everyone). The following outcomes were agreed on at scheme inception between Sustrans Scotland and Aberdeen City Council, having been selected from the 2018-19 Community Links programme:

1. Create infrastructure that encourages people to cycle, walk or use another **active travel** mode as their preferred mode of travel for everyday journeys
2. Meet the needs of **communities**: provide communities with the opportunity to shape their local environment and link the places people live in with the places they want to get to
3. Encourage **placemaking** which facilitates greater use of public space and higher levels of active travel
4. Create an **enabling environment** for active travel that limits the speed and volume of motorised vehicles while improving the walking and cycling experience, such as traffic calming measures and implementing filtered permeability
5. Encourage innovation: support partner organisations in raising the standard of infrastructure for walking and cycling in Scotland⁸

2.1.1.1 Report structure

The report is structured around these programme outcomes, with the exception of outcome 5 (Encourage innovation) which was not covered by the monitoring tools used by the RMU. These outcomes apply to all schemes receiving funding under the 2018/19 Community Links funding year. ACC are responsible for monitoring and reporting on separate project outcomes (see below).

⁸ Maidencraig Active Travel Links has not been evaluated against this programme objective as it was agreed between Sustrans and Aberdeen City Council that it was not relevant to the project's specific outcomes.

2.2 Project outcomes

The objectives of the Maidencraig Active Travel Links project included by Aberdeen City Council⁹ as part of their grant application are:

- Objective 1: provide public participation events within the green space with encouragement to cycle and walk to the site with a minimum of two events within the first year.
- Objective 2: increase usage of the paths by 10% following completion of the flood management & wetland scheme in the first year.
- Objective 3: Enhance habitats and achieve at least 10% increase in number of recorded wildlife numbers in 5 years.

⁹ Aberdeen City Council outcome evaluation overview can be found in the report 'Places for Everyone 2020/21 End of Year Report Maidencraig Construction'

3. Findings

3.1 Active Travel

Outcome: create infrastructure that encourages people to cycle, walk or use another active travel mode as their preferred mode of travel for everyday journeys.

The upgraded infrastructure at the Den of Maidencraig is encouraging people to use active travel - the number of trips taken through the area has more than doubled since the changes. Although the trips made along the paths are predominantly for leisure, there is an increase in the number of people choosing to walk and cycle along the path instead of using a car for everyday journeys.

The estimated number of annual cycling trips has increased by 220% compared to pre-intervention numbers, which equates to an estimated additional 11,000 cycling trips per year.

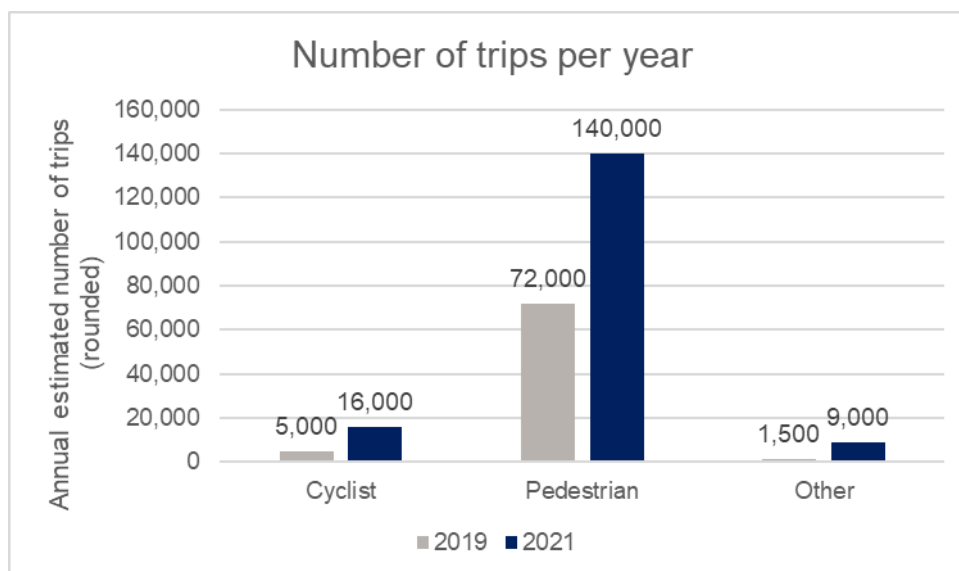
Use by children is predominantly during the week (91% of use by children is on 'termtime weekdays'), implying the scheme has created an enabling environment for active journeys to school.

3.1.1 Levels of active travel

At follow-up the estimated number of people who use the area per year more than doubled. In absolute numbers, this equates to an estimated additional 86,500 trips per year (from 78,500 before, to 165,000 after path improvements)¹⁰. [Figure 3](#) shows the increase across mode categories of 'cyclist', 'pedestrian' and 'other', also detailed in [Table 2](#).

¹⁰ This figure is derived from a comparison of manual counts at pre and post. The annual usage estimate reflects the total number of trips estimated to pass the survey location in a year, not the total number of trips being made across the entire route length.

Figure 3: Estimated number of trips annually by mode (pre and post construction 2019 – 2021, based on manual count)



Pedestrians make up the vast majority of route users both before and after improvements; 92% of trips in 2019 and 85% in 2021 were made by pedestrians.

The project aimed to increase cycling in the area by connecting the pre-existing cycle paths to the north and the south of the nature reserve and upgrading path surfaces. The proportion of trips made by cycling has slightly increased from 6% pre-construction to 10% at follow up. Although this is a small percentage as a proportion of trips, this is a 220% increase compared to the estimated number of annual trips pre-construction, which equates to an estimated additional 11,000 cycling trips per year (Table 2).

Table 2: Levels of active travel usage (pre and post compared by mode)

Active travel mode	Proportion of trip users (based on manual count)			Number of trips per year (AUE based on manual count)			
	2019	2021	Percentage point change	2019	2021	Actual difference	Percentage change
Cyclists	6%	10%	+ 4	5,000	16,000	+ 11,000	+ 220%
Pedestrians	92%	85%	- 7	72,000	140,000	+ 68,000	+ 94%
Other ¹¹	2%	5%	+3	1,500	9,000	+ 7,500	+ 500%
Total	n/a	n/a	n/a	78,500	165,000	+ 86,500	+110 %

¹¹ 'Other' includes 'jogging', 'wheelchair', and 'other wheeled'.

3.1.1.1 A note on annual usage estimates for cyclists and pedestrians

An Annual Usage Estimate (AUE) is an estimate of the total number of cycle and pedestrian trips passing a particular location in a calendar year. As part of the scheme improvements three automatic counters were installed in 2020 by Aberdeen City Council, therefore it is possible to compare Annual Usage Estimate figures from these automatic counters to the figures from the manual count for August 2021.

Based on automatic counter data, the AUE for cyclists in 2021 was 19,000 trips per year and for pedestrians was 130,000 trips per year. (Table 3) This cyclist AUE is greater (by nearly 3,000) than the manual-count based AUE of 16,000 (Table 2), suggesting the manual count based AUE for cyclists in 2021 reported on above may be an underestimate.¹²

The 2021 AUE figures for pedestrians from the counter-based and manual-count data are more comparable, conferring greater confidence in the estimate that annual pedestrian trips are around 130,000 (Table 3) and 140,000 per year (Table 2).

Table 3: Automatic counter-based Annual Usage Estimates for cyclists and pedestrians

Active travel mode	Number of trips per year (AUE based on automatic counter data ¹³)		
	2020 ¹⁴	2021	2022
Cyclist	32,000	19,000	16,000
Pedestrians	130,000	130,000	80,000

Image 2 New automatic counters installed by Aberdeen City Council



Source: Aberdeen City Council

¹² A note that is relevant to the comparability of AUEs: the automatic counters do not have an 'other' category, so it is possible they are picking these users (jogging, wheelchair and other wheeled) up as 'cyclists', which could explain some of the discrepancies in the count.

¹³ To generate Annual Usage Estimates from counter data which is comparable to the manual count-based AUEs, data from the same month (August) was used and from a counter in the same location as the manual count. See methodology for further information.

¹⁴ Note that for 2020 this AUE was calculated from September counter data as insufficient data was available for August

3.1.2 Everyday journeys

Over 90 percent of people interviewed were using the path for leisure both before and after the improvements.

Trips are considered either 'everyday' or 'leisure' journeys according to the following definitions:

'Everyday journeys' are the short, regular trips that are made in day-to-day life such as going to work, school or shops. For the RUIS survey this category covered users who stated their journey purpose was either: Commuting (getting to/from work); In course of work; Education; Shopping; Personal business; Visiting friends or family; Getting to/from holiday base; Escorting to school

'Leisure journeys' are those recreational trips that you make for pleasure and/or to keep fit, such as to the park or countryside. For the RUIS survey this category covered users who stated their purpose was 'Recreation (including dog walking).'

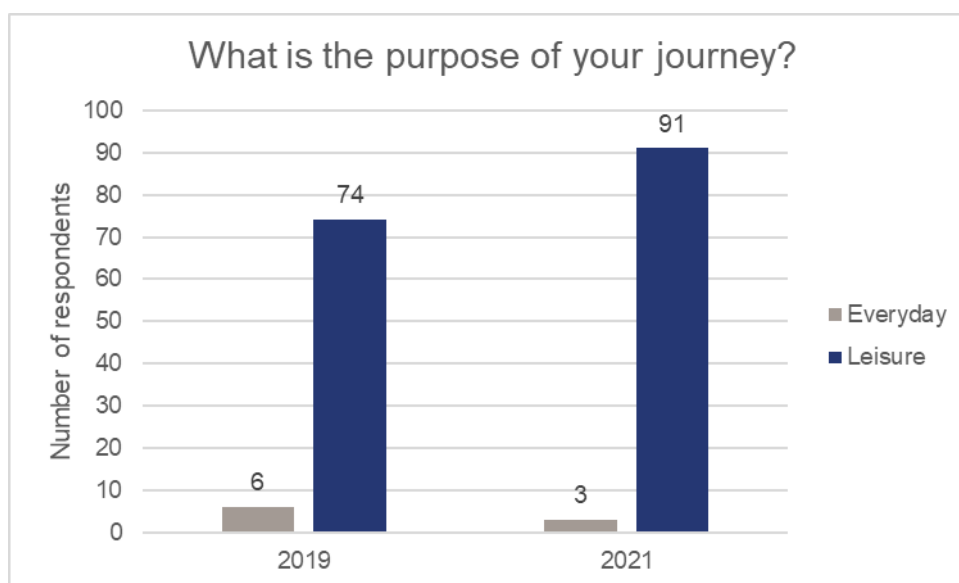
As a proportion of total trips, leisure journeys made up 97% of trips post-intervention, an increase of 4 percentage points. In absolute terms, the number of leisure trips more than doubled post-intervention, rising by 119% (an increase of 87,000 estimated annual leisure trips per year from 73,000 in 2019 to 160,000 in 2021). This skew towards leisure trips is unsurprising given the nature of the site and scheme improvements.

The number of interviewees using the paths for an everyday journey decreased both in real terms and as a proportion of trips. In real terms, the estimated number of everyday journeys per year declined by 8% relative to pre-intervention numbers (a decrease of 500 trips per year) to make up 3% of the proportion of total trips in 2021. ([Table 4](#))

Table 4: Route usage according to journey purpose

Journey type	Proportion of route users (based on Manual Count)			Number of trips per year (AUE based on Manual Count)			
	2019	2021	Percentage point change	2019	2021	Actual difference	Percentage change
Everyday	8%	3%	-5	6,000	5,500	-500	-8%
Leisure	93%	97%	+ 4	73,000	160,000	+87,000	+119%

Figure 4: Everyday vs leisure journeys (number of respondents)



Although fewer people are using the paths for everyday journeys, more people agreed after improvements that the paths facilitated some type of 'everyday journey': 29% of respondents agreed the route helped them to access 'family or friends' (23 percentage point increase), 23% agreed it helped them access 'retail' (7 percentage point increase) and 8% agreed it helped them access 'health services' (5 percentage point increase).

There was no change in the percent of respondents who agreed the routes helped them to access 'transport', and 'workplace', while a smaller percentage of respondents after improvements agreed that the paths enabled them to access 'Education' (2 percentage point decrease) or 'Non-health public services' (13 percentage point decrease).

See [Section 3.4.2.2 Comfort and directness](#) for a discussion of the qualities of the area as a transport route.

3.1.2.1 Access to education/journeys to school

An average of 59% of pupils travel to school in an active way¹⁵ following the improvements, an increase of 3 percentage points from baseline levels in 2019. Use by children is predominantly during the week (91% of use by children is one 'termtime weekdays') implying the scheme has created an enabling environment for active journeys to school.

¹⁵ An 'active mode' includes walking; cycling; scooter/skating.

A key aim of the scheme was to provide an enabling physical environment for active travel to school. There are five schools in the vicinity of the scheme¹⁶ which are plotted on [Figure 5](#).

Figure 5: Map showing schools in the vicinity of the scheme



Source: Google maps

The increase in the average (to 59% across all schools) was particularly due to increased active travel levels at Kingsford and Holy Family RC primary schools. Compared to the statistics on travel to school for Aberdeen City as a whole, the schools in the vicinity of the scheme have slightly higher levels of active travel in 2021 (by 2 percentage points) having previously been two percentage points lower than the Aberdeen City average in 2017, three years prior to construction. ([Table 5](#))

Table 5: Active travel levels per school per year

School	School type	Percentage of pupils using active travel modes to school				
		2017	2018	2019	2020	2021
Fernielea School	Primary	64%	60%	54%	59%	57%
Hazlehead Academy	Secondary	59%	61%	67%	No data	No data

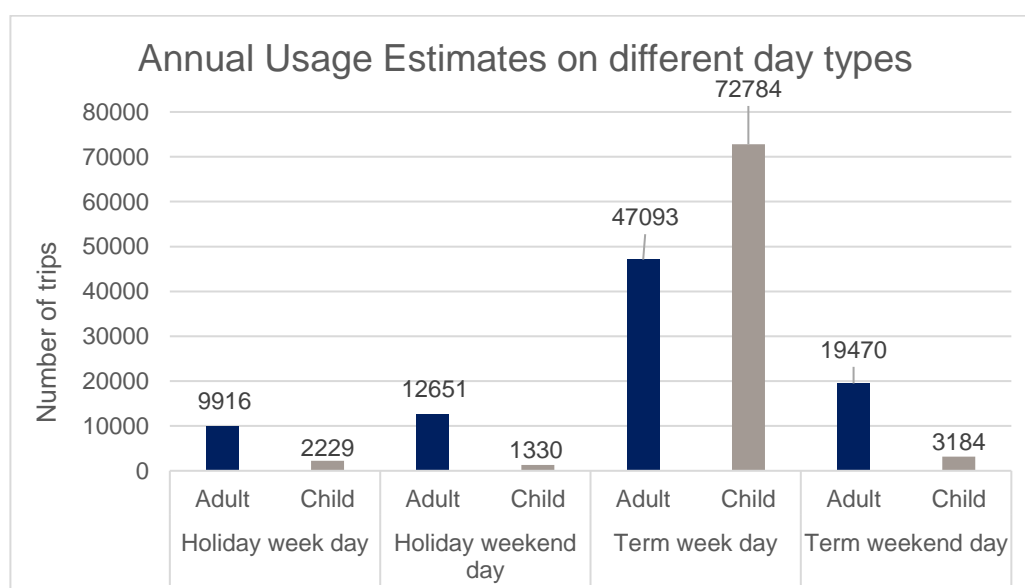
¹⁶ See 'Section 5: Methodology' for explanation of selection of schools

Hazlehead Primary School	Primary	48%	47%	No data	61%	59%
Holy Family RC Primary School	Primary	22%	23%	22%	29%	31%
Kingsford School	Primary	76%	67%	70%	79%	80%
Muirfield School	Primary	65%	63%	69%	71%	69%
Average across all six schools		55%	54%	56%	60%	59%
Aberdeen city-wide		57%	54%	53%	57%	57%

Use by children is predominantly during the week (91% of use by children is one ‘termtime weekdays’), implying the scheme has created an enabling environment for active journeys to school.

Since user interviews were only conducted with people aged over 16, travel to school is not reflected in survey results for journey purpose. However, children were over-represented among route users compared to the population profile of Aberdeen City (discussed in Section 3.2.2 Meeting the needs of all). This may be because the paths are well used for travel to school: the results from the 2021 manual count¹⁷ show how usage is distributed across different day types and that the area is most used during ‘termtime weekdays’ Unlike other day types, on ‘termtime weekday’ use by children exceeds that by adults and accounts for 91% of all use by children. (Figure 6)

Figure 6: 2021 Annual usage estimates for adults and children across different day types



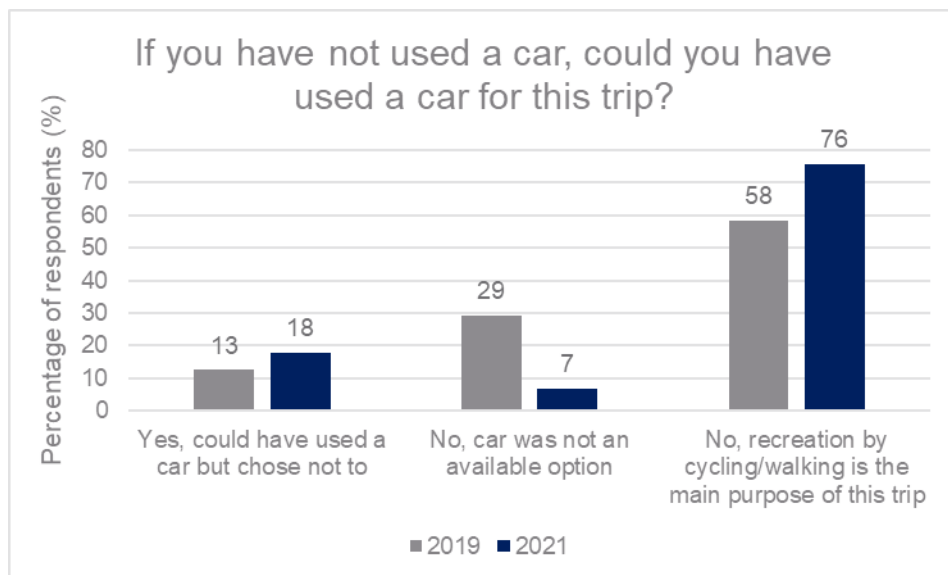
¹⁷ In 2019 surveys were only conducted during school termtime whereas in 2021 surveys were conducted both during term time and school holiday.

3.1.3 Preferred mode of travel

More people were making trips with the explicit purpose of ‘recreation by cycling/walking’ following improvements, so by implication active travel is the preferred mode. At the same time, more people stated they ‘could have used a car but chose not to’, providing evidence of shift in mode preference to active travel.

To understand the extent to which the routes have encouraged modal shift away from car journeys, respondents were asked ‘If you have not used a car, could you have used a car for this trip instead of cycling/walking?’ (Figure 7). Most users responded that they chose not to use a car because their journey purpose was ‘recreation by cycling/walking’, a proportion which increased by 17 percentage points to make up three quarters of respondents at follow up. At the same time, there is evidence that walking and cycling is the preferred mode of travel for people since route improvements: more people responded that they ‘could have used a car but chose not to’ (increased by 5 percentage points to 18%); also fewer people said that the reason they did not use a car was because ‘car was not an available option’, suggesting that using the car was an available option for more people at follow up however they chose not to use it. For interviewees who responded that they ‘could have used a car but chose not to’, the most important factor influencing their decision was ‘health benefits’.

Figure 7: Assessing preferred mode of travel among route users



3.2 Meeting the needs of the community

Outcome: provide communities with the opportunity to shape their local environment and link the places people live in with the places they want to get to.

Prior to the improvements the nature reserve was already a highly valued asset for the local community, based on the very positive ratings given by route users around a variety of quality of place indicators. These positive ratings were greater following improvements: almost all users agreed 'the path is fit for purpose' (98%) and that the path 'meets the needs of the community' (94%). The reserve can also be thought of as a natural asset which benefits the community in ways which can be converted into economic terms: for example half of users at follow up agreed they 'save money' by using the route.

User perceptions of the accessibility of the area have improved, and following improvements there is greater diversity of people using the area (with different health and mobility needs). The increase in usage was experienced across all age categories; the 'over 65' group saw the greatest growth relative to pre-intervention levels.

3.2.1 Consideration of community needs

The improvements have enhanced the already very high ratings from route users on how well the paths serve the community. 94% of route users agreed that the path 'meets the needs of the community' following the improvements. (Figure 8) Almost all route users at follow-up agreed the path 'is fit for purpose', an increase of 12 percentage points to 98% (Figure 9).

Of note, results highlight a shift within route users' answers between baseline and follow-up away from 'strongly agreeing' with these statements in favour of merely 'agreeing'. This pattern is replicated across almost all answers to statements about the path, the reasons for which cannot be extrapolated from the survey results. We will revisit these ratings in future monitoring.

Figure 8: Agreement levels with the statement ‘the path meets the needs of the community’

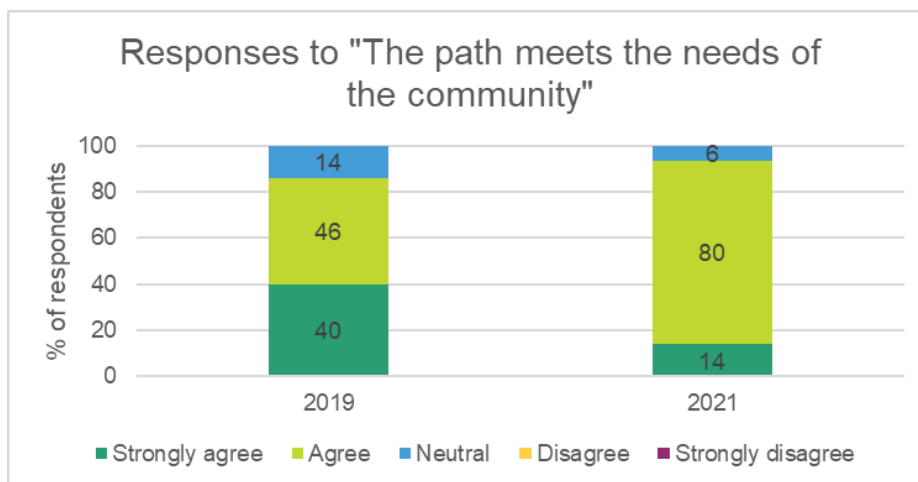
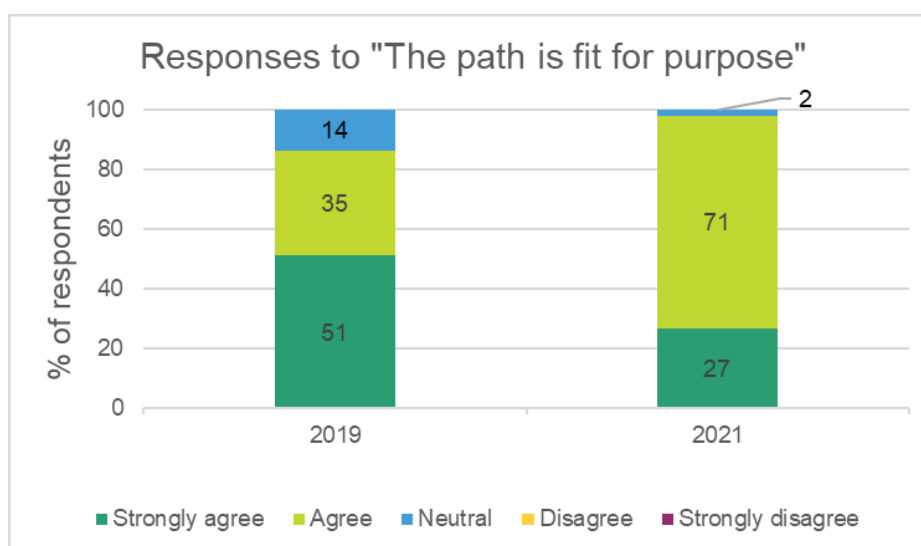


Figure 9: Agreement levels with the statement ‘The path is fit for purpose’



The reserve can also be thought of as a natural asset which benefits the community in ways which can be converted into economic terms. One metric for this is agreement level with the statement ‘I save money by using this route’, for which 50% of people agreed at follow up, an increase of 17 percentage points.

The proportion who agreed their journey was influenced by the fact they ‘have environmental concerns’ increased by 7 percentage points to almost three-quarters of users at follow up, indicating it is increasingly important for people to have the opportunity for sustainable transport and access to green spaces (Table 6). Section 3.3 Placemaking further explores how and why people are using the reserve, while Section 3.4.2 Walking and cycling experience specifically discusses the value of the paths as transport links.

Table 6: Agreement levels with factors that influence decision to walk, wheel or cycle in project areas (Selection of response options)

Statement from RUIS survey	Before project delivery 2019	After project delivery 2021	Percentage point change
I save money by using this route	33%	50%	+17
I have environmental concerns	66%	73%	+7

Image 3: New seating and signage within the reserve

Source: Aberdeen City Council



Figure 10: Summary of percentage of respondents who 'agree' and 'strongly agree' with statements about the path



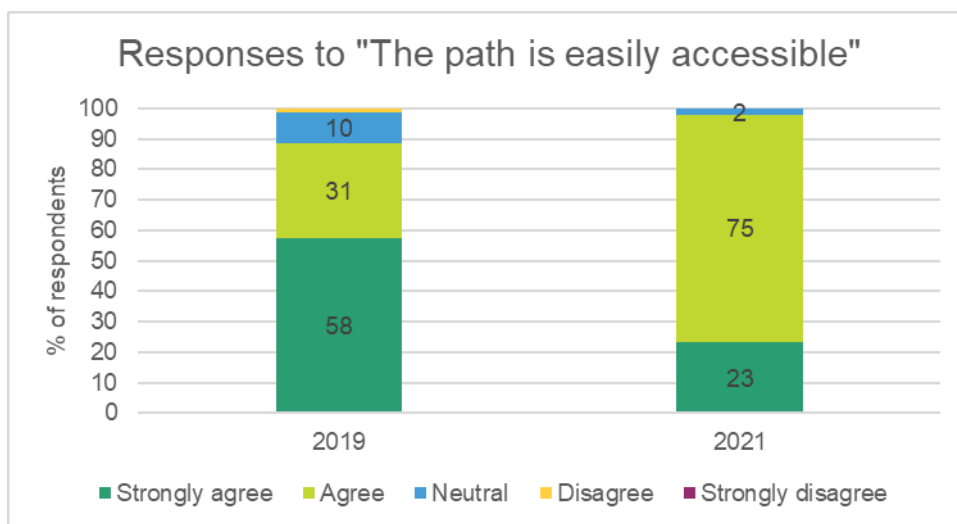
3.2.2 Meeting the needs of all

Almost all route users (98%) agreed with the statement 'this path is easily accessible' at follow up, an increase of nine percentage points (Figure 11).

The profile of users surveyed also provides some evidence that the paths are more used by people with diverse accessibility needs following the improvements.

There were two wheelchair users recorded during the manual count before the intervention and 12 at follow up. Moreover, there is greater use by people with self-reported health or disability conditions: at follow up over a quarter of users stated that their 'day-to-day activities [were] limited because of a health problem or disability which has lasted, or is expected to last at least 12 months', compared to 16 percent pre-intervention.

Figure 11: Agreement levels with the statement 'The path is easily accessible'



3.2.2.1 Usage by different genders

The gender split of route users did not change following the improvement works, remaining roughly equal between males (52% of users) and females (48%). Female route users are slightly underrepresented compared to the wider Aberdeen City population: in 2021 the gender demographic split of the population of Aberdeen City was 49.8% males and 50.2% females. The actual increase in usage was also similar for both genders and was encouragingly high: 110% increase by females and 115% by males (Table 7).

Table 7: Number and proportion of route users across different gender categories

Gender	Mid 2021 population estimates Aberdeen City	Percentage of route users (based on Manual Count)			Number of trips per year (AUE based on Manual Count)			
		2019	2021	Percentage point change	2019	2021	Actual difference	% change
Female	50.2%	48%	48%	No change	38,000	80,000	42,000	+110%
Male	49.8%	52%	52%	No change	41,000	88,000	47,000	+115%

3.2.2.2 Usage by different age groups

Following the improvements, usage increased by people of all ages, however the profile of users compared to Aberdeen’s population as a whole remains skewed towards children.

Route users were divided into three age groups: ‘0 – 15’; ‘16 – 64’ and ‘65 +’. The number and proportion of trips made by each group are detailed in [Table 8](#). The estimated number of trips per year made by users across all three age groups increased following improvements.

Usage by the ‘over 65’ group saw the greatest growth relative to pre-intervention levels, increasing by 329% (an additional 11,500 trips per year). This meant this category accounted for a greater proportion of route users, growing by 4 percentage points to make up an estimated 9% of route users at follow up. Despite the increase, if route user numbers were reflective of Aberdeen’s population demographics there would be 16% of route users in this category.¹⁸

In contrast, while the proportion of route users who are children (under 16) shrank by 13 percentage points following the intervention to make up 47% of route users, this still remained disproportionately higher than the proportion of Aberdeen City population in this age group (16% of Aberdeen population in this age category¹⁸). Use by children still saw an absolute increase in volume, increasing by 70% (33,000 additional trips per year).

Use by the age group 16 – 64 increased 168% (47,000 additional trips) in terms of volume, and the proportion of route users in the 16 – 64 category increased from 35% to 44%, bringing this closer to - but still well under - the percentage of Aberdeen City in this category (68%).

Overall, these changes in usage distribution suggest the scheme has been successful in encouraging usage by adults who were previously under-represented.

¹⁸ See chart ‘Population by age group by sex, Aberdeen City, 2021’ on [Aberdeen City Council Area Profile \(nrsotland.gov.uk\)](https://nrsotland.gov.uk) [accessed Jan 2023]

Table 8: Number and proportion of route users across different age categories

Age group	Mid 2021 population estimates Aberdeen City	Percentage of route users (based on Manual Count)			Number of trips per year (AUE based on Manual Count)			
		2019	2021	Percentage point change	2019	2021	Actual difference	% change
Child	15.8%	60%	47%	-13	47,000	80,000	+ 33,000	+70%
16-64	67.8%	35%	44%	+9	28,000	75,000	+ 47,000	+168%
65+	16.4%	5%	9%	+4	3,500	15,000	+ 11,500	+329%

3.2.3 Linking people with places

A primary goal of upgrading the paths was to connect key local destinations - 'trip generators' - with safe and attractive active travel routes through the reserve.

The major success of the scheme in 'linking people with places they want to go to' has been in developing the area as an attractive destination in itself for leisure purposes and especially for exercise (further discussed in [section 3.3.2 Use of public space](#)).

Leisure journeys overwhelmingly remain the main type of journey which people are making on the route, and the number of people visiting the area for leisure purposes has more than doubled following the improvements (see [section 3.1.2 Everyday journeys](#)).

It is unclear the extent to which the improvements have encouraged active journeys between local trip generators. 'Everyday journeys' have decreased as a proportion of overall trip types and in real terms too (300 fewer 'everyday' journeys per year). Nonetheless, **there is some evidence that the area has been improved to facilitate 'everyday journeys', even if this is not reflected in usage patterns.** At follow up, more route users agree the routes facilitate some types of everyday journeys (see [section 3.1.2 Everyday journeys](#)) and the paths also are rated more highly for their qualities as practical transport options (see [section 3.4.2.2 Comfort and directness](#))

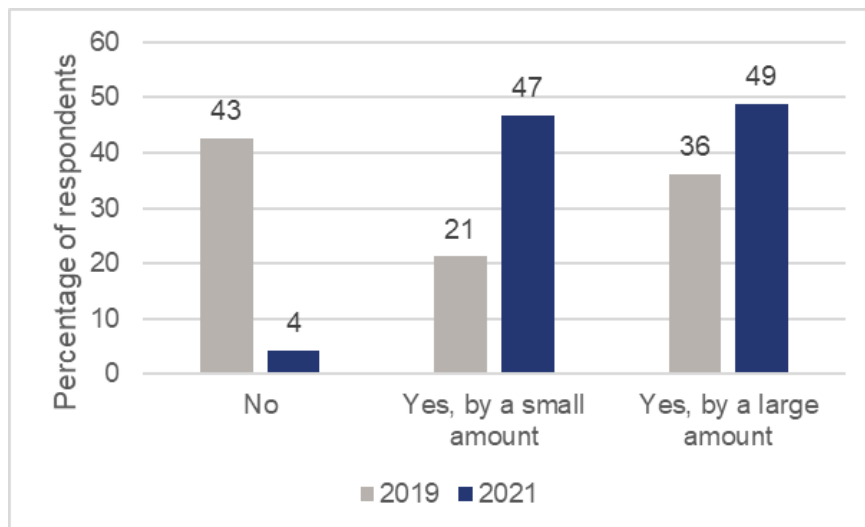
Interviewees were asked whether the routes help them to access a range of destinations and services ([3.1.2 Everyday journeys](#)). Of note is that a third of users at follow up stated the route helped them access 'family and friends', which was the 'destination' response option which saw the greatest increase, suggesting the scheme has been successful in creating better connected communities.

3.2.4 Physical activity levels

Many more route users consider (access to) the area as important for enabling them to undertake physical activity.

After the improvements the percentage of respondents agreeing that the 'presence of the route has helped [them] to increase the amount of physical activity that [they] regularly take' rose by 38 percentage points to a total of 96%. Of these, the increase was large amongst those who agreed this was 'by a small amount' (26 percentage point increase) compared to 'by a large amount' (13 percentage point increase) (Figure 12).

Figure 12: Responses to the question: 'Has the presence of this route helped you to increase the amount of physical activity that you regularly take?'



At the same time, route users' self-reported general physical activity levels increased at follow up too, but by a much lesser extent. Following improvements 86% of respondents completed 30 minutes or more physical activity on five or more days of the week, an increase of five percentage points.¹⁹ Based on these two questions there is reason to believe the scheme improvements have played a role in enabling people to take physical activity, though there are likely to be many factors influencing this outcome.

Journey frequency and length are two factors to consider. The proportion of people who stated they make their journey at least 2 - 5 times a week was 86% in 2019 and 87% in 2021. As people are not using the reserve more frequently this may be because route users are

¹⁹ Responses to the survey question: 'In the past week on how many days have you completed 30 minutes or more physical activity that was enough to raise your breathing rate?'. Those who answered this for five days or more completed the 150 minutes as recommended by the UK Chief Medical Officers' guidelines [Physical activity guidelines: UK Chief Medical Officers' report - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/physical-activity-guidelines)

making longer journeys: the average median (ie middle value) journey length of users increased by 0.25 miles following improvements to 4 miles from 3.75 miles pre-intervention, while the mean (ie average value) increased 1.78 miles to 5.63 miles from 3.86 miles. It may also be due to a shift in activities undertaken, as more people are using the area for cycling and running/jogging following the improvements (see [section 3.3.2 Use of public space](#)).

3.2.4.1 Physical activity levels for areas of higher SIMD

The improvements sought to enhance active travel opportunities, and therefore increase physical activity levels, for residents in adjacent areas of higher Scottish Index of Multiple Deprivation (SIMD). The trip origin postcodes of route-users give an insight into the extent to which the area is used by people across SIMD areas.

While there is some change in origin postcodes following improvements there is not a clear change in the SIMD-catchment area of users. Prior to the intervention 61% of users were travelling from data zones within the 'most deprived' two quintiles which decreased slightly to 57%. The proportion of users from the 'least' deprived quintile grouping also decreased slightly (by 6 percentage points to 33%), while the middle quintile increased from 0% to 10%. A comparison of the proportion of users from each quintile is shown in [Table 9](#), while [Figure 13](#) plots these geographically.

Table 9: Distribution of route users' trip origin postcodes by SIMD quintile

SIMD Quintile	Before project delivery 2019	After project delivery 2021	Percentage point change	
1 (Most Deprived)	0%	1%	1	-4
2	61%	56%	-6	
3	0%	10%	10	10
4	14%	0%	-14	-6
5 (Least Deprived)	25%	33%	8	

3.3 Placemaking

Outcome: Encourage placemaking which facilitates greater use of public space and higher levels of active travel.

The major success of the scheme has been in improving the site as a green space in itself as an important asset for the community's wellbeing which people are choosing to visit, beyond merely improving the paths as connecting routes. New environmental amenities included installing a new pond dipping platform, a viewing platform, information boards on the flora and fauna, seating and lighting.

More people are drawn to the area for leisure purposes, and both before and after improvements the main factor which influenced users' decision to undertake an active travel journey was 'to get exercise', which increased by one percentage point to 96% at follow up.

Users have more positive perceptions of the paths following improvements, in particular about the adequacy of lighting in the reserve.

Image 4: The new dipping platform

Source: Aberdeen City Council



3.3.1 Perceptions of the path

Respondents were asked to agree or disagree with statements about the path to understand perceived quality of place. In general, a greater percentage of route users have positive perceptions of the path following improvements (refer back to Figure 10). Notably, 99% of route users agreed that the path 'enhances the area' (an increase of 9 percentage points following improvements) (Figure 14) and 91% agreed the path 'is well maintained' (an increase of 4 percentage points) (Figure 15).

Figure 14: Agreement levels with the statement 'The path enhances the area'

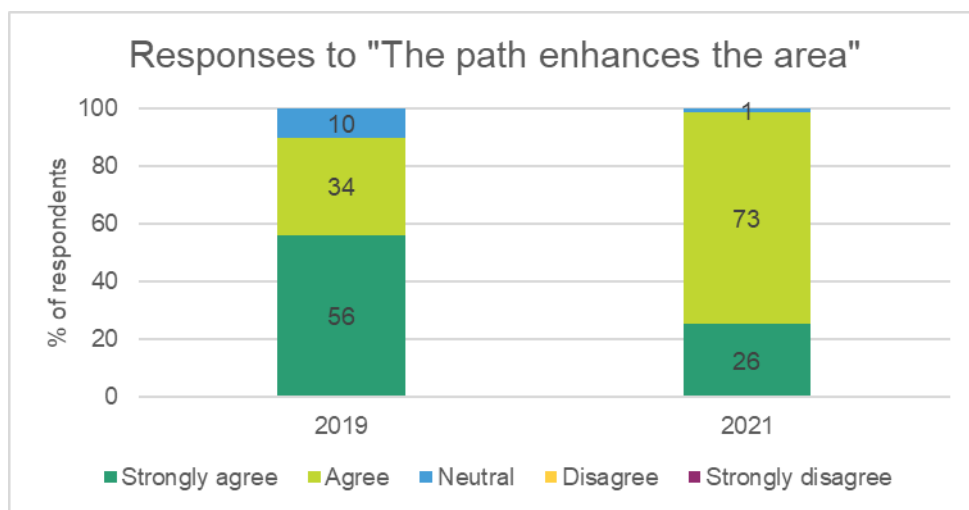
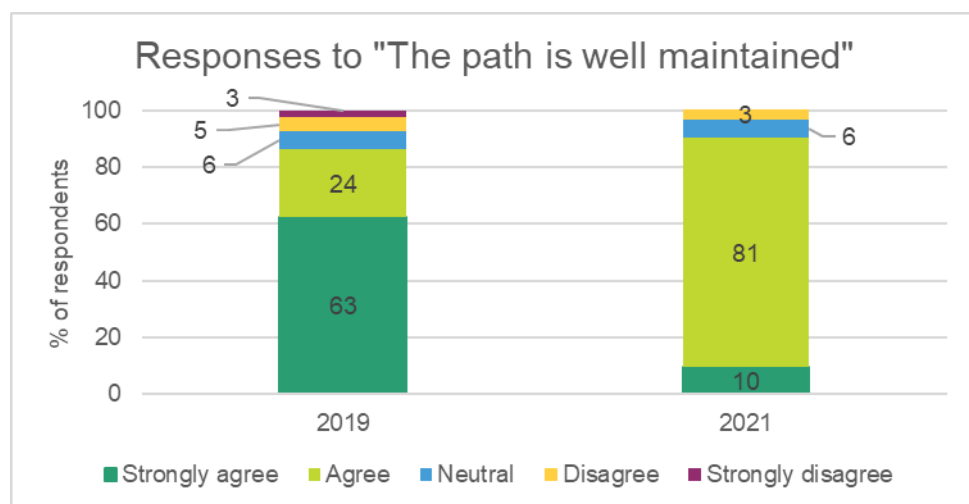


Figure 15: Agreement levels with the statement 'The path is well maintained'

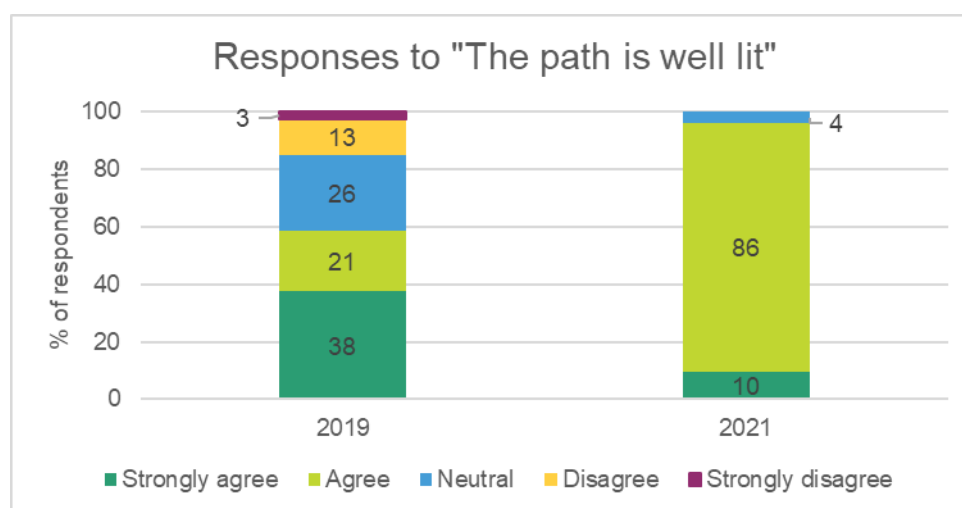


3.3.1.1 Perceptions of safety

Despite the improvements to lighting, perceptions of safety among route users have decreased at follow up.

'The paths are well lit' was the statement which saw the greatest increase in agreement levels, a 37 percentage point increase to 96% of route users agreeing at follow up (Figure 16). Adequacy of lighting was the statement for which the paths scored lowest according to user perception prior to the improvements. As the area is a nature reserve and separated from urban street lighting the improvements involved upgrading 19 street light columns.

Figure 16: Agreement levels with the statement 'The path is well lit'



The percent of route users agreeing that 'the path feels safe' decreased by 2 percentage points to 89% at follow up, and within this 89% the fraction of those who 'strongly agreed' diminished (Figure 17). Route users were also asked whether feeling that the route was safe was a factor influencing their decision to undertake an active travel journey, for which agreement levels decreased by 10 percentage points to 85%. (Table 10) It should be noted however that only one percent of respondents 'disagreed' that the route felt safe (Figure 17).

Reasons underlying the declining perception of safety are unclear. The area is known to have a history of vandalism (which was experienced by the construction company during the works) and antisocial behaviour, which could be contributing factors.

Figure 17: Agreement levels with the statement 'The path feels safe'

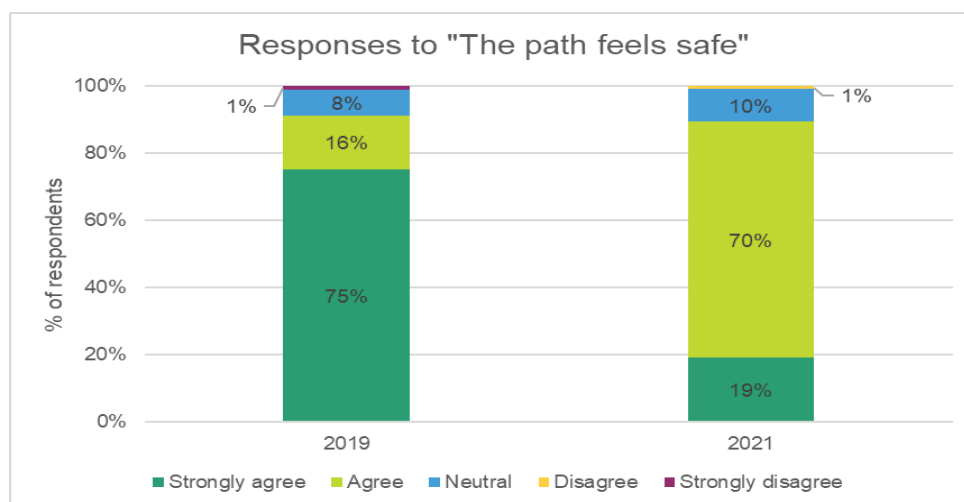


Table 10: Agreement levels with factors that influence decision to walk, wheel or cycle in project areas

Statement from the RUIS survey	Before project delivery 2019	After project delivery 2021	Percentage point change
I like the surroundings on this route	98%	92%	-6
The route feels safe	95%	85%	-10
To get exercise	95%	96%	+1

3.3.2 Use of public space

The major success of the scheme has been in improving the site as a green space in itself, based on increased use for leisure purposes. ([3.1.2 Everyday journeys](#))

Route users were asked to what extent a number of factors influenced their decision to use the route, the answers to which indicate that people are mainly using the paths because they are visiting the reserve for recreation. Following improvements, the most popular reason for which people chose to visit the area remained 'to get exercise', which 96% of users agreed with at follow up, an increase of 1% (refer back to [Table 10](#)). This is corroborated by the fact that the main reason given by people who 'could have used a car but chose not to' for this journey was because of 'health benefits' (presumably through physical activity and access to outdoor space).

A slightly smaller proportion of people are using the area for active travel explicitly because they 'like the surroundings' (a 6 percentage point decrease at follow up) however this was still an influencing factor for 92% of route users (refer back to [Table 10](#)).

At follow up there is a greater diversity in the active travel activities undertaken. While most people are still using the area for either 'walking' or 'dog walking', these activity categories made up a smaller proportion of users at follow up. Meanwhile, the proportion of users 'cycling' or 'running/jogging' increased by eight and seven percentage points. ([Figure 18](#))

Figure 18: Activity undertaken

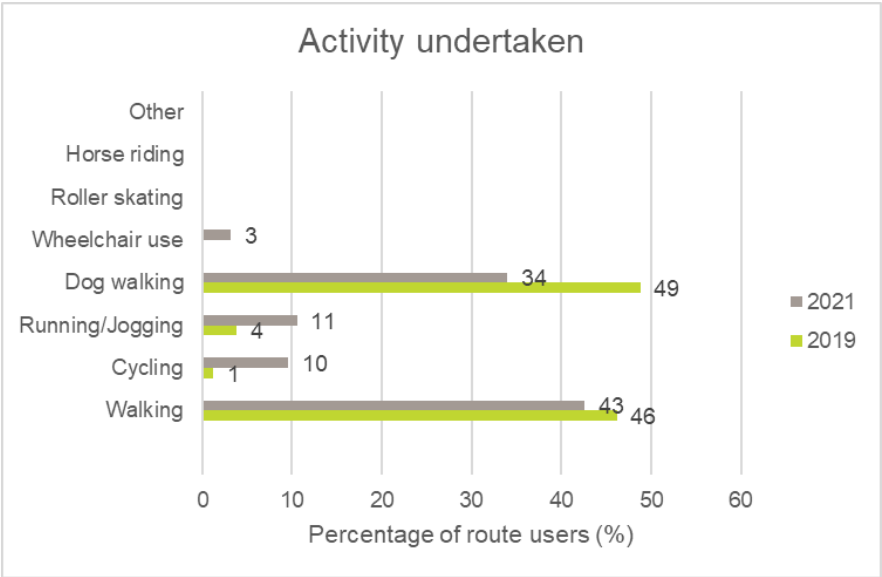


Image 5: The new viewing platform

Source: Aberdeen City Council



3.4 Creating an enabling environment

Outcome: Create an enabling environment for active travel that limits the speed and volume of motorised vehicles²⁰ while improving the walking and cycling experience, such as traffic calming measures and implementing filtered permeability.

Those using the paths are more positive about their qualities as transport routes. More people agree that the existence of the paths means they can go straight to their destinations and is the most convenient route. After project delivery, almost all route users (92%) reported that the upgraded path encouraged them to walk and cycle more.

²⁰ Note that since the Maidencraig scheme area is off-road and paths are fully segregated from roads with vehicular traffic, the quality of the environment for active travel is not being evaluated in relation to motorised transport. Therefore speed and volume of motorised vehicles has not been measured.

3.4.1 Enabling environment for active travel

3.4.1.1 Propensity to travel actively

After completion of the path upgrades the number and proportion of route users who intended to walk and cycle more in the next 12 months increased, as did the number and proportion of those who thought it was likely that they would walk and cycle more.

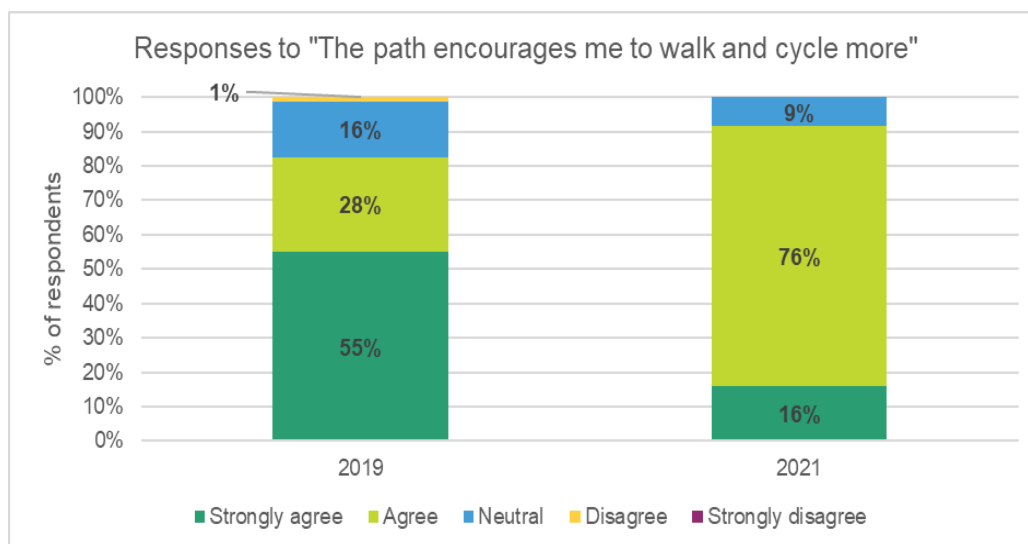
The biggest increase was in the proportion of route users intending to walk more - this increased from 43% of respondents before to 89% after project delivery. The proportion of users intending to cycle more increased from 20% before to 34% after. (Table 11) The increase in propensity to active travel was scaled similarly between walking and cycling (ie people were not disproportionately more positive towards either mode).

Table 11: Route users' agreement with statements on propensity to walk and cycle

RUIS survey statement	Before project delivery 2019	After project delivery 2021	Percentage point change
I intend to cycle more in the next 12 months	20%	34%	+14
I intend to walk more in the next 12 months	43%	89%	+47
It is likely I will cycle more in the next 12 months	19%	36%	+18
It is likely I will walk more in the next 12 months	43%	82%	+38

After project delivery, almost all route users (92%) reported that the upgraded path encouraged them to walk and cycle more (compared to 83% before project delivery) (Figure 19). This suggests that some of the increase in propensity to walk and cycle is due to the path improvements.

Figure 19: Agreement levels with the statement ‘The path encourages me to walk and cycle more’



3.4.2 Walking and cycling experience

3.4.2.1 Experience of safety

Refer to section 3.3.1 [Perceptions of the path](#) for a discussion on perceptions of safety, which declined despite improvements to lighting. Reasons underlying the decline are unclear.

3.4.2.2 Comfort and directness

Route users' perceptions of the quality of the path as a transport route improved at follow up. The proportion of users who agreed that using the paths meant they '[could] go straight to [their] destination' (a measure of 'route directness') increased by 19 percentage points to 90% of users. Of all the factors which influenced people's decision to travel in the area, this was the factor which saw the greatest change following the improvements. A similarly high percentage agreed this was 'the most convenient route' (89% of users, an increase of 6 percentage points) and that this was 'the best transport option' (83% of users, an increase of 3 percentage points). ([Table 12](#))

Table 12: Selection of answers for factors influencing the decision to use active travel

Statement from RUIS survey	Before project delivery 2019	After project delivery 2021	Percentage point change
I can go straight to my destination	71%	90%	+19
This is the most convenient route	84%	89%	+6
It's the best transport option	80%	83%	+3
I save money by using this route	33%	50%	+18

Refer back to section [3.3.1 Perceptions of the path](#) where increases in route user agreement with statements about the path's lighting, maintenance and overall contribution to the area are detailed.

Image 6: Samphrey Path (top) and Bressay Path (bottom) before and after improvements

Source: Aberdeen City Council



4. Future Monitoring

4.1 Legacy monitoring

Legacy monitoring is undertaken to understand the longer-term impacts of the scheme, typically carried out 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 scheme on the original scheme outcomes as well as any additional outcomes as appropriate (eg maintenance).

4.1.1 Monitoring tools to be repeated at legacy monitoring

Data from all tools included in this report should be used again at legacy monitoring: RUIS with Manual Count; Hands Up Scotland Survey; Automatic Counter analysis.

4.1.2 Additional monitoring to carry out at legacy

These are recommendations for areas to investigate and monitoring tools to use at follow up in cases where additional research is needed or data will subsequently be available.

4.1.2.1 Further analysis of counter data

Currently data from only one counter has been included in the form of an Annual Usage Estimate [3.1.1 Levels of active travel](#). However there are three counters within the reserve which provide continuous daily data, which could be analysed to understand usage across the reserve and patterns over time. Since improvements to the paths were undertaken in the context of the 'flood management' plans, a key consideration for active travel is whether the works have rendered the paths suitable for year-round use and reduced susceptibility to flooding.

4.1.2.2 Collection of qualitative data

There were some outcomes which we were not able to report on due to cancelled monitoring tools (a consequence of social distancing measures during the Covid-19) pandemic. Going forwards collection of qualitative data could focus on the following aspects of the results to date:

- Perceptions of safety and possible reasons for the decline (see [Perceptions of safety 3.3.1.1](#))
- Accessibility to new cyclists. The outcome of 'creating an enabling environment for active travel which is accessible to new cyclists' has not been reported on here. This is because the small sample sizes for cyclist respondents to the RUIS survey prohibit drawing conclusions from the survey data.
- Understanding the shift within route users' answers away from 'strongly agreeing' with statements in favour of merely 'agreeing' between baseline and follow up. This pattern is replicated across almost all answers to statements about the path, the reasons for which cannot be extrapolated from the survey results (seen particularly in sections [3.3 Placemaking](#) and [3.2.1 Consideration of community needs](#)). For example, looking at agreement levels with the statement: 'The path meets the needs of the community', we found that 94% of users agreed/strongly agreed in 2021. While this is an increase of 7 percentage points from baseline, at baseline responses were evenly split between people who 'agreed' and 'strongly agreed', whereas at follow up the majority only 'agreed' and a small fraction 'strongly agreed'.

We will revisit these ratings in future monitoring. The shift away from 'strongly agreeing' with these statements is worth exploring further especially in relation to the element of [Outcome 3.2 Meeting the needs of the community](#) which refers to 'providing communities with the opportunity to shape their environments'. To fulfil this outcome, schemes are expected to develop and implement community engagement and consultation strategies. The aspiration to do so was outlined in the scheme's grant application, however, the scheme was delivered in the context of the Covid-19 pandemic and the Council's 'End of project report' states that 'Due to Covid-19 restrictions and social distancing it was not possible to involve communities.' It would be useful to understand how users' perceptions relate to the extent of community engagement and insights from any consultations.

4.1.2.3 [Maintenance audit of new infrastructure and environmental amenities](#)

To ensure the new infrastructure and amenities (dipping platform, viewing platform, benches, lighting, information boards, sand nesting wall) are in good state of repair.

5. Methodology

5.1 Monitoring tools detailed description

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.

5.1.1 Route User Intercept Survey

The Route User Intercept Survey (RUIS) is the main tool used by Sustrans for monitoring and evaluation. It comprises a manual count of users alongside interviews over a 12-hour period (7am-7pm) on four days (two weekdays and two weekend days). The survey includes questions about journey purpose, travel behaviour, perceptions of safety and physical activity. The surveyors intercept as many route users as possible over the age of sixteen and route users were only interviewed once over the four-day period.

See [Table 13](#): Details of Route user intercept surveys carried out in 2019 and 2021 for a summary of data collection information for the two RUIS surveys for this scheme, and [Appendix 6.1](#) for the survey form used. RUIS locations were the same for both 2019 and 2021 surveys, shown in Figure 2.

Table 13: Details of Route user intercept surveys carried out in 2019 and 2021

Survey year	Total number of interviews	Exact survey dates	Day type	Weather
2019	80	29/05/2019	Term weekday	am - dry cool and clear. pm - cool damp start, turning overcast.
		01/06/2019	Term weekend day	am - warm and dry. pm - warm and dry with some cloud cover
		05/06/2019	Term weekday	am - heavy rain at start, becoming lighter as morning passed. pm - cold and mostly dry, becoming wet as afternoon passed.
		08/06/2019	Term weekend day	am - warm dry and bright. pm - wet and overcast.

2021	94	11/08/2021	Holiday weekday	am - overcast and warm. pm - overcast with rain.
		14/08/2021	Holiday wkd day	am - dry and overcast. pm - scattered showers.
		18/08/2021	Term weekday	am - sunny dry and windy. pm - sunny dry and windy.
		21/08/2021	Term wkd day	am - overcast and wet. pm - heavy rain and strong winds.

Survey responses were analysed in R Studio and Microsoft Excel. Due to the number of responses received (particularly the low number of cyclists surveyed: 1 cyclist in 2019; 9 in 2021) survey 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 have, however, been weighted since the demographic and travel mode profile of respondents was sufficiently similar to the observations from the manual count.

5.1.1.1 Annual Usage Estimate

An AUE (Annual Usage Estimate) is an estimate of the total number of cycle and pedestrian trips passing a particular location in a calendar year. In the context of RUIS and manual counts, it is calculated from the data collected by the manual count – typically four days of 12hr counts, conducted between 7am and 7pm on each of the four selected day types (weekday/weekend, term time/school holiday).

5.1.2 Automatic Counters

Three automatic counters were installed in 2020 as part of the scheme works. These provide continuous data on usage by cyclists and pedestrians. Locations are shown in Figure 2.

From the raw counter data, a monthly median daily total is generated (per counter). The annual usage estimate is calculated by multiplying the monthly median daily total by the number of days in the year. To ensure the AUE from counter data is comparable to the AUE calculated from a manual count, the monthly median daily total should be used from the same month as that during which manual count data was gathered. In this case a counter-based AUE was calculated for August 2021 from the counter which is in the same location as the manual count (Counter ID 10006325). This enabled the comparison of 2021 figures from two different estimates of AUE based on two different sources of data from the same date range.

Table 14: Availability of counter data for the four counters within proximity of the scheme

Counter ID	2017	2018	2019	2020	2021	2022	Notes about counter	Note about counter data analysis and inclusion in report
10000056	Yes	Yes	Yes	Yes	Yes	Yes	ACC owned	Not included in this report. Counter on Skene Road - not within nature reserve.
10006325	No	No	No	Yes	Yes	Yes	Installed during construction; ACC owned Counter in same location as RUIS	Counter data used for AUE calculation. Annual median daily totals have not been reported on due to issues with the consistency of data which affected the annual median daily total (pedestrian counts required cleaning and had dates 14/10/2021 to 06/06/2022 excluded, this did not affect the AUE calculation.)
10006326	No	No	No	Yes	Yes	Yes	Installed during construction; ACC owned	Not included in this report. Data quality not high enough to include in report.
10006327	No	No	No	Yes	Yes	Yes	Installed during construction; ACC owned	Not included in this report.

5.1.3 Hands Up Scotland Survey (HUSS)

The Hands Up Scotland Survey (HUSS)²¹ is an annual survey of pupils enrolled at schools and nurseries across Scotland. It is a joint project between Sustrans and Scottish local authorities, which is funded by Transport Scotland. Since June 2012, the HUSS has been designated as an Official Statistic. The survey is designed to provide reliable and up to date information on mode of travel to school, both at a national and local authority level, as well as by school type and year group.

For the purposes of this analysis, we looked at data from five schools in the vicinity of the scheme over a span of five years (2017 – 2021) to understand changes in mode of travel to school before, during and after construction. Schools were considered in the vicinity of the scheme if they were within a 2-mile radius of and/or travel to schools from within their

²¹ <https://www.sustrans.org.uk/scotland/hands-up-scotland-survey>

catchments may involve travelling through the reserve. Note that a further school (Countesswells Primary School) was within the vicinity however excluded from the dataset due to anomalies in the data.

Data availability is shown in

Table 15. The availability of data relies on schools having completed the survey in the given data collection window in line with the HUSS methodology.

School type and name		2017	2018	2019	2020	2021	Rationale for inclusion/exclusion
Primary	Hazlehead School	✓	✓	✗	✓	✓	Proximity of school; listed in application
	Seaside School	✓	✓	✓	✓	✓	Proximity of school; listed in application
	Seaside School	✓	✓	✓	✓	✓	Proximity of school; listed in application
	Seaside School	✓	✓	✓	✓	✓	Proximity of school; listed in application
	Kingsford School	✓	✓	✓	✓	✓	Proximity of school
	Muirfield school	✓	✓	✓	✓	✓	Proximity of school
	Muirfield school	✓	✓	✓	✓	✓	Proximity of school
	Holy Family RC Primary School	✓	✓	✓	✓	✓	Proximity of school
	Holy Family RC Primary School	✓	✓	✓	✓	✓	Proximity of school
	Countesswells school	✗	✗	✓	✓	✓	Excluded due to anomalies within data.
	Countesswells school	✗	✗	✓	✓	✓	Excluded due to anomalies within data.
	Countesswells school	✗	✗	✓	✓	✓	Excluded due to anomalies within data.
Secondary	Hazlehead Academy	✓	✓	✓	✗	✗	Proximity of school; listed in application
	Hazlehead Academy	✓	✓	✓	✗	✗	Proximity of school; listed in application

Table 15: Availability of HUSS data for schools within vicinity of scheme

5.1.4 Supplementary data: National Records of Scotland Demographic data

Demographic data for Aberdeen City was obtained from the National Records of Scotland Aberdeen City Council Area Profile. Data was accessed in January 2022 and at the time of access the population estimates had been last updated in July 2022.

Available from: https://www.nrscotland.gov.uk/files/statistics/council-area-data-sheets/aberdeen-city-council-profile.html#population_estimates

This demographic data was then compared to the demographic data of the survey respondents to provide insight into how representative the survey respondents are of the local population.

5.2 Rounding and data presentation

Please note that percentages and numbers reported on graphs and in-text have been rounded to whole numbers in most cases. For annual trip estimates, where the estimated value is in the thousand, the figure has been rounded to the nearest 500, where a figure is in the 10 thousands it has been rounded to the nearest thousand, where a figure is in the 100 thousands, it has been rounded to the nearest ten-thousand. Numbers have only been rounded once, that is, the results for trip numbers for 2019 and 2021 have been rounded, and subsequent calculations (of differences between these figures and of totals) have not been rounded. Numbers have been presented according to this same rounding convention in figures, tables and in-text.

5.3 Planned monitoring not carried out

The delivery and construction of the project was affected by the Covid-19 pandemic, which consequently impacted the ability of Sustrans RMU to carry out all the monitoring planned for post-construction. The following monitoring tools were planned but not carried out:

5.3.1 Household survey

A household survey targeted at residents local to the reserve was planned to find out whether people are using the area, whether the reserve is more accessible, whether the changes have been sympathetic to the nature reserve, whether the area is working as a flood barrier for the town. Due to the cancellation of this survey and the focus group below, the evaluation depends heavily on results from the RUIS survey. The discussions around user perceptions of the paths is therefore not representative of the local community since perceptions of people who do not visit the reserve have not been included.

5.3.2 Focus groups

Focus groups were planned to gather qualitative data to complement the quantitative results from the RUIS survey and provide further insight particularly into user perception of the area and accessibility. The 2019 RUIS surveyors' noted that 'several respondents stated that the route is lacking in bins/ dog waste / trees' which are things that could be specifically asked about in a focus group.

5.3.3 Contextualising results in wider datasets

To help understand whether the changes in active travel levels at the reserve can be attributed it would be useful to be able to contextualise the data within wider travel behaviour trends. This is especially the case as the scheme construction coincided with the Covid-19 pandemic: while at the time of the post-construction survey in 2021 lockdown measures across Scotland had been lifted, the Covid-19 pandemic and associated lockdowns resulted in widespread changes in people's travel patterns which is an 'uncontrolled' factor in this evaluation.

Unfortunately a consistent dataset is not available at either the national or local authority level for the time period required. Possible datasets include the Scottish Household Survey (data is not yet available for 2021, though is available on a yearly basis until 2020) and the Walking and Cycling Index for Aberdeen (data is only available from 2021). Going forwards these two datasets could be used for legacy monitoring.

6.1 The 2021 Route User Intercept Survey form



Q8 If you did use another mode of transport how far have you travelled by this mode to enable you to make this journey? Please include outward and return distances. (Select one choice only)

- Under 1 mile ☐
- 1 - 2 miles ☐
- 3 - 5 miles ☐
- 6 - 10 miles ☐
- 11 - 15 miles ☐
- 16 - 20 miles ☐
- 20+ miles ☐

Q9 If you have NOT used a car, could you have used a car for this trip instead of cycling/walking? (Select one choice only)

- Yes, could have used a car but chose not to ☐
- No, car was not an available option ☐
- No, recreation by cycling/walking is the main purpose of this trip ☐

Q10 If you selected 'could have used a car but chose not to', which of the following factors influenced your decision? (Select one choice only)

- Someone else was using the car ☐
- Health benefits ☐
- Environmental concerns ☐
- Cost of fuel and/or running a car ☐
- Other ☐
- Other (Write in)

Q11 How often do you make this journey? (Select one choice only)

- Daily ☐
- 2 - 5 times per week ☐
- Weekly ☐
- Fortnightly ☐
- Monthly ☐
- Yearly ☐
- Less frequently ☐
- First time ☐
- Other ☐
- Other (Write in)

Q12 If you had been unable to access this route would you still have needed to make this journey to your given destination/ wanted to make a journey for this particular purpose? (For example by another/ alternative route?)

- Yes ☐
- No ☐
- Don't Know ☐

Q13 Which other modes of transport could you have used to make today's journey? (Tick all that apply if not on this route)

- Car / Van ☐
- Taxi ☐
- Bus ☐
- Rail ☐
- Don't know ☐
- Wouldn't have made the journey ☐
- Other ☐
- Other (Write in)

Q14 Have you heard of Sustrans' routes, programmes, projects or schemes?

- Yes ☐
- No ☐

Q15 To what extent have the following factors influenced your decision to walk, cycle or use wheelchair today? (Tick the appropriate boxes)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I can go straight to my destination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's the best transport option	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This is the most convenient route	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I save money by using this route	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like the surroundings on this route	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This route feels safe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To get exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have environmental concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q16 Has the presence of this route helped you to access any of the following? (please tick all that apply)

- Workplace ☐
- Education ☐
- Retail ☐
- Health services ☐
- Other public services e.g. bank, post office etc ☐
- Transport e.g. train station, bus station etc ☐
- Family or friends ☐
- Other ☐
- Other (write in)

Q17 How much do you agree or disagree with the following statements about the path? (Tick the appropriate boxes)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Is well lit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is well maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is easily accessible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It enhances the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It feels safe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is fit for purpose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encourages me to walk and cycle more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meets the needs of the community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q18 ASK CYCLISTS ONLY. What sort of cyclist would you say you were? (Select one choice only)

New to cycling ☐

Starting to cycle again ☐

Occasional cyclist ☐

Experienced, occasional cyclist ☐

Experienced, regular cyclist ☐

ABOUT YOU

(Please explain that the respondent can decline to answer any or all of these questions)

Q19 Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last at least 12 months?

A) Yes, limited a lot ☐

B) Yes, limited a little ☐

C) No ☐

D) Prefer not to say ☐

Q20 Overall how would you rate your general health over the last four weeks? (Select one choice only)

A) Excellent ☐

B) Very Good ☐

C) Good ☐

D) Fair ☐

E) Poor ☐

F) Very Poor ☐

Q21 Has the presence of this route helped you to increase the amount of physical activity that you regularly take? (Select one choice only)

A) Yes, by a large amount ☐

B) Yes, by a small amount ☐

C) No ☐

Q22 In the past week on how many days have you completed 30 minutes or more physical activity that was enough to raise your breathing rate? (This may include sport, exercise and brisk walking or cycling for recreation)

Days

0	1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q23 To what extent do you agree or disagree with the following statements? (Tick the appropriate boxes)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
A) I intend to walk more in the next 12 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) I intend to cycle more in the next 12 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) It is likely I will walk more in the next 12 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D) It is likely I will cycle more in the next 12 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q24 What is your gender?

A) Male (including trans male) ☐

B) Female (including trans female) ☐

C) Non-binary/third gender ☐

D) Prefer not to say ☐

E) I prefer to self describe ☐

Self description

Q25 Is your gender identity the same gender you were assigned at birth?

A) Yes ☐

B) No ☐

C) Prefer not to say ☐

Q26 Which age group do you fit into? (Select one choice only)

A) 16 - 24 ☐

B) 25 - 34 ☐

C) 35 - 44 ☐

D) 45 - 54 ☐

E) 55 - 64 ☐

F) 65+ ☐

G) Prefer not to say ☐

Q27 Which of the following best describes your working status? (Select one choice only)

A) Employed full-time (30+ hours) ☐

B) Employed part time ☐

C) Looking after home/family ☐

D) Unemployed/sick leave ☐

E) Retired ☐

F) Studying ☐

G) Voluntary worker ☐

H) Other ☐

I) Other (write in)

Q28 To which of these groups do you consider you belong? (Go through overall category names first before listing sub-groups)

A) White

- a1) British ☐
- a2) Irish ☐
- a3) Polish ☐
- a4) Lithuanian ☐
- a5) Romanian ☐
- a6) Other Eastern European ☐
- a7) Any other White background ☐
- Please describe

B) Mixed race

- b1) White and Black Caribbean ☐
- b2) White and Black African ☐
- b3) White and Asian ☐
- b4) Any other Mixed background ☐
- Please describe

C) Asian

- c1) British ☐
- c2) Indian ☐
- c3) Pakistani ☐
- c4) Bangladeshi ☐
- c5) Sri Lankan Tamil ☐
- c6) Any other Asian background ☐
- Please describe

D) Black

- d1) British ☐
- d2) African ☐
- d3) Caribbean ☐
- d4) Nigerian ☐
- d5) Somali ☐
- d6) Ghanaian ☐
- d7) Any other Black background ☐
- Please describe

E) Chinese

- e1) British ☐
- e2) Chinese ☐
- e3) Any other Chinese background ☐
- Please describe

F) Other ethnic group

- f1) Irish Traveller ☐
- f2) Roma Gypsy/Traveller ☐
- f3) Any other ethnic group ☐
- Please describe

G) Prefer not to say ☐

I hereby consent to the information provided on this questionnaire to be processed by Sustrans for the purpose of monitoring the impact of their projects.

I agree with this statement

Please Tick ☐