Designing for Children & Young People
Walking, wheeling, cycling

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Cover image: Balhousie playable routes to school

Art installation and play opportunity

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1. Setting the scene

In communities across Scotland, children and young people are asking for opportunities to connect and have fun.

As planners, designers and engineers, we have a shared responsibility to consider the views and meet the needs of children and young people to grow up in healthy, safe and sustainable environments.

What is this document and who should read it?

Designing for children and young people has been produced as part of our Places for Everyone programme, an active travel infrastructure fund backed by Transport Scotland. It is intended to help support Places for Everyone partners design the best possible projects for children and young people. The contents can be used by anyone working in the built environment, as well as those working to improve school travel and road safety.

This document showcases good practice in child-friendly design from across the UK, demonstrating how much better places can be if they are built with young people in mind.

The case studies included here reflect a diverse range of community types and active travel interventions. Each one has a story to tell of improving environments across all age groups.

Two foundations underpin this guidance:

- Improved access for walking, wheeling, and cycling
- More space to pause, stay, and play

These foundations are supported by twelve dimensions of good design for children and young people. These have been highlighted across our good practice case studies.

Terms in **bold** are defined in the *Glossary* at the end of this document.

Background

Since the 1970s, there has been a steady decline in the reported distances children are allowed to travel without parental supervision in the UK.[1] We have also observed several instances where teenagers have been specifically excluded and discouraged from using public spaces.[2,3,4]

At a time when private car use has been prioritised over the needs of people walking, wheeling and cycling for everyday journeys, this has only served to make neighbourhoods across the UK increasingly unsafe, inaccessible and unpleasant for play and socialising.

Planning and transport policies are now focused on reducing traffic volumes in many areas, including residential neighbourhoods, and providing spaces for young people to enjoy. This is in response to the climate emergency and the need to reduce emissions, to improve population health through encouraging greater mobility, and increasing community resilience as a response to the Covid pandemic.

Strategically, this is an important step in increasing children and young people's independent mobility and will play an important part in improving their active travel opportunities.

Children and young people have a right to use public space. Those of us involved in planning, design, and sustainable travel can enable this right by providing quality environments that are safe to access, reflect children and young people's needs and encourage them to thrive.

Radius of independence, Edinburgh #AndSheCycles

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Policy context

Children and young people have a [right](#) to use public space. As planners and designers, we have an opportunity to improve public spaces. Here we summarise some of the main local and national policy strands supporting better public space design for children and young people in Scotland.

The UN Convention on the Rights of the Child

The UNCRC will be incorporated into Scots law by 2024 including the right to gather and use public space; to play; to rest; and to access cultural life.

Getting It Right For Every Child (GIRFEC)

Shared framework for supporting children and young people across education, health, and social care. It promotes physical and mental development through activity. Health and wellbeing is at the heart of the GIRFEC approach – physical activity has an important role to play in child development. It also includes SHANARRI, the wellbeing focus for Scottish education, where all children should be Safe, Healthy, Achieving, Nurtured, Active, Respected, Responsible, and Included.

Equality Act 2010

Recognises age as discriminatory factor and a protected characteristic.

Public Sector Equality Duty

The PSED requires public bodies to have due regard to the need to eliminate discrimination, advance equality of opportunity and foster good relations between different people.

Play Strategy for Scotland

Articulates the importance of play and children's positive development to national outcomes.

Planning

National Planning Framework 4

Includes policies on developing sustainable 20-minute neighbourhoods; applies the sustainable transport hierarchy and enhanced provision for children's play.

Play Sufficiency Duty

New duty to expand opportunities for play and address unequal access to play spaces and facilities.

Informal play opportunities, Dundee Dragon

Local Place Plans

Encourage community areas to develop their aspirations and create great local places.

Transport

National Transport Strategy 2

Sets four national outcomes to take climate action; improve health and wellbeing; deliver inclusive economic growth; and reduce inequalities. Embeds the Sustainable Transport Hierarchy in decision making.

Scotland's Road Safety Framework to 2030

Aims to reduce by 60% the number of children killed or seriously injured on Scottish roads.

Health

A Healthier Future: Scotland's Diet and Healthier Weight Delivery Plan

Commits to halving childhood obesity by 2030 by promoting an active lifestyle with regular walking, wheeling and cycling.

Public Health Priorities

Public Health Scotland supports the role that vibrant, healthy and safe places play in reducing health inequalities.

Designing for Children & Young People - *Walking, wheeling & cycling*

2. Place and Travel choices

Foundation 1: Improved access for walking, wheeling, and cycling

Walking, wheeling, and cycling for everyday journeys benefits children and young people's health and development.

Active travel is also better for the environment than many other forms of travel.

Children and young families are disproportionately affected by unsafe or inaccessible street design when compared with other groups.[5] Some of the major barriers to walking, wheeling and cycling and the promotion of independent mobility include:

- High traffic volumes;
- Fast driving speeds;
- Poor network design;
- Dangerous parking; and,
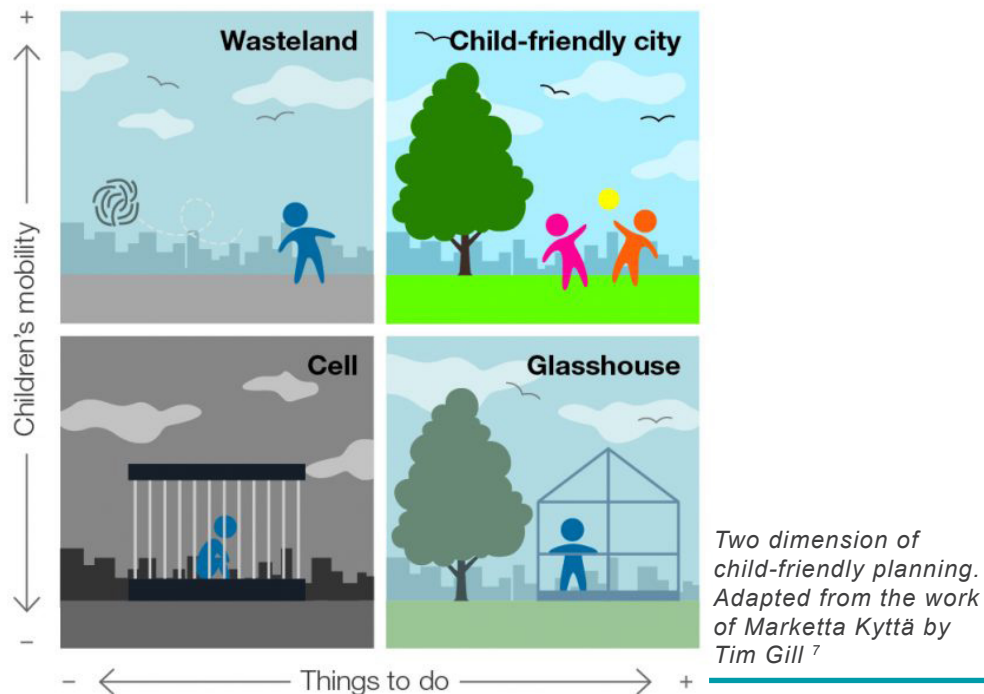- Inadequate road crossings.

Traffic and safety

Parent's fears around safety are one of the biggest factors in children not being allowed to independently walk, wheel or cycle.[6] Supporting the creation of safe and welcoming environments can give parents the confidence to allow their children to travel actively and independently, whether this is for travelling to school or other local journeys.

Reducing the volume and speed of motor vehicles, as well as improving crossings, pavements and cycling infrastructure are all key to creating safer and more welcoming environments. Interventions such as these can reduce both the perceived and real risks associated with traffic and safety, and can go a long way to helping foster a sense of independence and confidence in children when travelling actively alone.

Network design

Active travel networks need to link children and young people with where they want to go at a local level, not just along arterial routes to urban centres or long-distance leisure routes. Additionally, while journeys to school are a key focus, children also need to be able to travel independently in their wider local community.

Traffic free place to play, Newton Abbot

Parent watching over child cycling independently

Two dimension of child-friendly planning. Adapted from the work of Marketta Kyttä by Tim Gill [7]

Opportunity for independent mobility, Edinburgh #AndSheCycles

Play on the way and places to go

Child-friendly spaces offer children and young people a wide array of play and socialising opportunities, as well as the freedom to move between them without adult supervision.[7]

Independent mobility is closely connected to opportunities to play and socialise with friends. **Play on the way** encourages physical activity, curiosity and learning, and motivates children to travel actively.[8]

Good examples of this are children using features of the built environment in an engaged and playful way, such as jumping over bollards or balancing along a wall as they walk to school.

Play is also important for older children. As such it is important that opportunities to do so are considered at the earliest stages of route or project design and development. For example, widening paths and creating points of interest, such as engaging or playable art installations alongside a route.

> "Urban areas have more motivating destinations, but greater barriers posed by anti-social behaviour and traffic; rural areas have fewer motivating destinations, but greater access to leisure routes" [9]

Travelling further

As children get older, typically their **radius of independence** increases, but they may still rely on parental permissions which are frequently based on parents' perceptions of safety.

Safe and accessible options for walking, wheeling, and cycling can help young people to access leisure facilities near them, as well as job opportunities, education, and social events.

Designing for Children & Young People - *Walking, wheeling & cycling*

Foundation 2: Create space to pause, stay, and play

Benefits of play

Scotland's Play Strategy states that "Playing, throughout childhood, is not only an innate behaviour but also contributes to quality of life, sense of wellbeing and is a key element in effective learning."

Places to play and socialise are, therefore, important destinations for children and young people, and can encourage them to spend time actively outside.

Good practice for play

Play is important for under 18s and spaces for play should be designed to foster child development, without being too prescriptive. **Loose parts play** allow children of different ages to mix and interact, and can serve as valuable environments to encourage learning and new perspectives.

The charity A Place in Childhood has noted that "more adventurous play facilities, such as giant slides, swings, climbing equipment and flying foxes, facilitate this type of interaction and are also especially important for teenagers taking out young siblings".[10]

Risk taking as part of play is promoted across Scottish Policy as being crucial for child development and improving resilience in young people. Scotland's Play Strategy notes that play completely without risk deprives children of opportunities to develop confidence and skills needed for later life.

A 'risk-benefit' approach to play is recommended by the Play Strategy, and it is important that this approach to risk is designed into play spaces. In this context, an appropriate balance of risk can be struck between a child's sense of independence and their physical safety.

Informal street play

Connection to nature through risky play

Opportunities to socialise

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Interactive arts & young people, Glasgow

Loose parts play, St Luke's school, London

Remembering teenagers

Access to safe and welcoming public spaces is important to allow teenagers to connect with one another, as well as develop their sense of self and civic identity.[11,12]

The term 'out of placeness' has been created to describe how young people are seen in cities.[13,14,15]

Unaccompanied young people in the urban environment are often seen as disruptive. They can be the target of adult interventions, like surveillance police 'stop and search'[16], and electronic devices aimed at dispersing them from public spaces.[12] In fact, research indicates that teenagers are routinely excluded from public space for matters that do not constitute a threat to others.[15]

Contrary to common perception, teenagers generally want to be integrated into public spaces and want to see public spaces designed for everyone.[17]

Variety and adaptability often help to create spaces where young people can thrive. Key elements of such places are:

- good quality public transport;
- safe active travel options; and,
- a mixture of natural and developed play, sport and gathering spaces.

Barriers to young people using a space include heavy surveillance (but equally, places seldom used by others will not feel safe), poor lighting and poor signage.[10]

Intersectionality – designing for everyone (see intersectionality)

When designing places to pause, stay and play, it is useful to remember that children and young people do not fit neatly into one category and have varied needs depending on age, mobility, gender, ethnicity, and household income, amongst other factors.

When developing projects this should be considered, just as it would be for adults, and conducting a thorough Equality Impact Assessment can help lead discussions. See also The Equality Act (2010) and Public Sector Equality Duty (PSED).

Dimensions for children & young people: Icons key

The following dimensions are taken from key guidance resources *(Further reading)*. Each of these contributes to the two foundations of child-friendly design, outlined earlier in this resource. These icons can be found at the top right of each case study as a guide to what each project includes.

Improved and active independent mobility - principles

Neighbourhood scale - children and young people live in neighbourhoods, infrastructure needs to start at their door. Make sure neighbourhoods are connected to important social spaces (i.e schools, community centres, sport pitches, play parks, etc.). Sign networks around neighbourhoods well, and connect to public transport options. This need to be supported by senior leader action on land use planning to create **20-minute neighbourhoods**.

see *Child-friendly Newington*; *East Ayrshire School street*; *Ripple Greenway*; *Tullibody active travel & school streets; Garscube Road*

Walking & wheeling - ensure priority, with direct and shorter crossings, wider pavements and overall comfort and safety, separated from motorised traffic.

see *Child-friendly Newington*; *East Ayrshire school street; Kilbarchan Pocket Place*; *Ripple Greenway*; *Tullibody active travel & school streets*; *Garscube Road*

Traffic measures - lower speeds, increase driver awareness through driver behaviour change measures. Reduce the prevalence of motorised traffic to the benefit of people walking, wheeling and cycling.

see *East Ayrshire school street; Kilbarchan Pocket Place; Tullibody active travel & school streets; Garscube Road*

Play on the way - include accessible and motivating play opportunities for all under 18s to encourage activity along routes. Use informal or formal play equipment at regular intervals. See also **play on the way.**

see *Papdale park; Child-friendly Newington; Kilbarchan Pocket Place; Ripple Greenway*

Cycle travel - segregate cyclists from traffic, ensuring comfortable width for all types of cycles (i.e. cargo, trailer, **adapted** etc.) or social rides (i.e. parent with child, teenagers, etc.). Make routes legible, easy to recognise and follow.

see *Child-friendly Newington; East Ayrshire school street; Kilbarchan Pocket Place; Ripple Greenway; Tullibody active travel & school streets; Garscube Road*

Space to pause, stay & play - principles

Social safety - make use of overlooked spaces by residential properties and be aware of how busy areas are at different times of day. Include lighting, public art and safe space for teenagers. Design spaces with mobile coverage in mind, so socialising spaces feel connected and safe. See also **social safety.**

see *Papdale park; Ripple Greenway*

Connection to nature - include wild space, add trees, wild flowers, and community gardens, increase biodiversity, enable communities to care for spaces or plant their own, use natural building materials.

see *Papdale park; Child-friendly Newington; Kilbarchan Pocket Place; Ripple Greenway; Garscube Road*

Legacy - arrange a reliable maintenance plan to make sure spaces and routes are kept tidy, clean and litter-free after construction.

see *Papdale park; East Ayrshire school street; Ripple Greenway*

Space diversity - design spaces that bring different generations together, including teenagers, with opportunities for social connection. Include culture and heritage, make spaces flexible for different uses.

see *Papdale park; Child-friendly Newington; Ripple Greenway; Tullibody active travel & school streets*

Child development - create nurturing, playful environments that support learning and development from child to teenager and teenager to adult. Include risk and challenge, and opportunities for creativity.

see *Papdale park; Kilbarchan Pocket Place; Ripple Greenway; Tullibody active travel & school streets; Garscube Road*

Process

Engagement - listen, empower and give a voice to children and young people in projects. Include them in governance roles, establishing respect for children's needs and requirements.

see *Papdale park; Child-friendly Newington; East Ayrshire school street; Kilbarchan Pocket Place; Ripple Greenway; Tullibody active travel & school streets; Garscube Road*

Monitoring & Evaluation - collection of data to assess the performance of projects, and make the case for further changes

see *East Ayrshire school street; Kilbarchan Pocket Place*

Designing for Children & Young People - *Walking, wheeling & cycling*

Papdale Park

Location - Kirkwall, Orkney

Delivery team in partnership with Sustrans - Orkney Island Council, Papdale East Playpark Association, NatureScot, HITRANS

Timescales - Phase 1 construction to complete by June 2022. **Local Place Plan** was created 2018
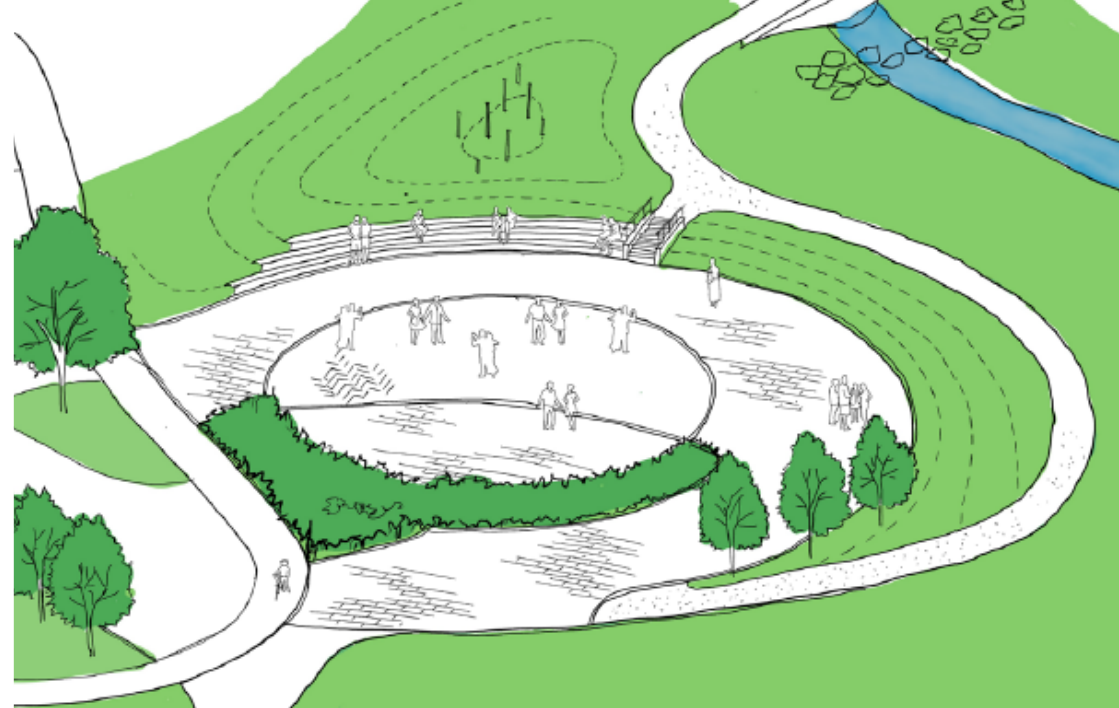
Principles - *icons key*

The Papdale Park project began with the *Your Kirkwall Local Place Plan* (2018), working with the Kirkwall community to shape the future of the places they live and spend time. The **Local Place Plan** team made links with the Leisure and Culture service within Orkney Islands Council, delivering the project across council services. Through the planning team, strategic goals around biodiversity and active travel were identified, with funding secured from NatureScot, HITRANS and the Scottish government through Sustrans Scotland's **Places for Everyone** programme. Through the Leisure and Culture team, linking to Active Schools and Orkney's Play Strategy, opportunities were identified to increase physical activity and reintroduce an element of risk and some challenge into play for children and young people. The local primary and secondary schools have participated in ongoing engagement through the design process, along with Papdale East Playpark Association.

> **"Planners tend to think of things in these strategic and categoric ways but it's actually then thinking about what opportunities come from that and how that links across to another service in the council and how you can work together to meet both of their remits." –** Planning Officer, Orkney Islands Council
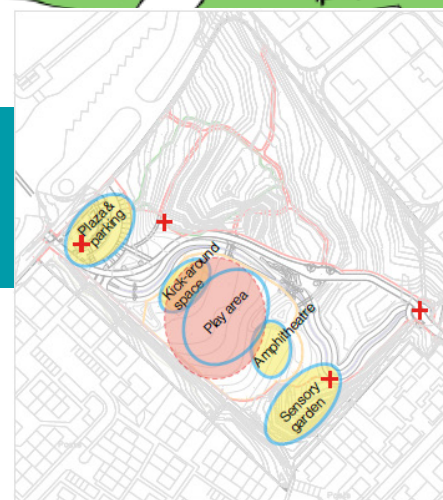
Engagement event

Artist impression of the amphitheatre and connecting paths

Entrance Plaza Axonometric

Plaza & parking

Kick around space

Play area

Amphitheatre

Sensory garden

Main play area

Event space

Cultural space

Interpretation / community noticeboard location

Note that some of these spaces will form part of Phase 2 of the park project.
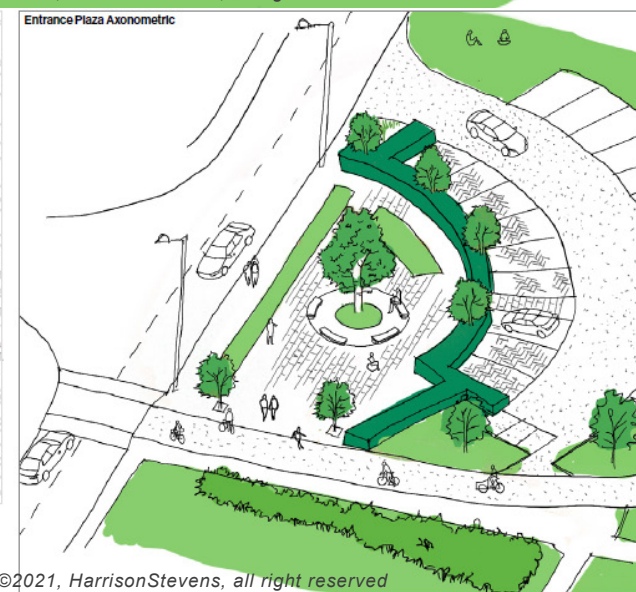
Sequence of spaces through the park and axonometric of the entrance plaza

Designing for Children & Young People - *Walking, wheeling & cycling*

Addressing local and national priorities, Papdale Park has been designed as a multi generational space, which is both a destination and part of a green network, connecting to future development, schools and workplaces in Kirkwall. A decision was made not to use 'traditional' playpark equipment (which can deteriorate quickly in coastal communities) and instead opt for a less defined and more natural space that can be used for play. The park will have biodiverse greenery and wild flowers, connecting communities to nature, while saving on grounds maintenance costs as compared to a mown lawn. The park is both revenue-saving and strategically aligned, delivered across council services, which helped secure elected member support.

"We've managed to create a fantastic park and slightly reduce revenue costs…which is a win-win." – Service Manager, Leisure and Culture, Orkney Islands Council
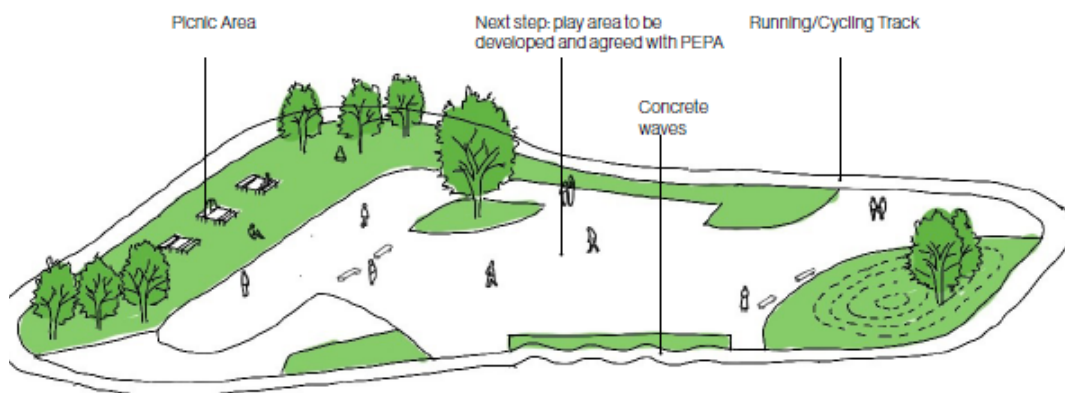
Diversity of spaces for people of all ages

Credit: ©2021, HarrisonStevens, all right reserved

Through a wide reaching engagement approach, Papdale Park has been designed with multiple users in mind. The path through the park widens at sections to provide people with spaces to meet and socialise, while boardwalk areas overlooking the water have been created as peaceful areas for reflection. Shelters have been incorporated to meet the needs of teenagers who often have few spaces to spend time; while a carefully planned planting strategy will keep the shelters overlooked by nearby residences, maximising opportunities for **passive surveillance.**

Detail plan of Papdale park

Credit: ©2021, HarrisonStevens, all right reserved

Path surfaces have been designed to suit the needs of those using wheelchairs or mobility aids, and wild flower planting will limit any movement close to the burn, with neurodivergent children and young people's safety in mind without resorting to fencing. In Phase 2, possibilities for an amphitheatre and storytelling area will be explored. Play areas will have **passive surveillance** while also providing opportunities for independent play. There will also be a sports pitch, primarily for the use of older children.

While addressing the needs of some groups, Papdale Park does not rigidly define the usage of space and is conceived of as a community open space that people of all ages can go and enjoy.

Designing for Children & Young People - *Walking, wheeling & cycling*

Child-friendly Newington

Location - Southwark, London

Delivery team in partnership with Sustrans - Guy's & St Thomas hospital / Southwark Council

Principles - *icons key*

Newington ward in Southwark, London, has been identified as an area with high levels of childhood obesity and a place where work needs to be done to promote physical activity.

Guy's and St Thomas' Hospital, in partnership with Southwark Council and Sustrans, aimed to create a child-friendly neighbourhood with a view to increasing physical activity levels in children. The area has a primary school nearby as well as greenspaces and play areas which were underutilised by children from independent play.

Sustrans led on a co-design process which involved children from the beginning, including neighbourhood mapping and **walkabouts**, artist workshops, **Minecraft** design sessions, and homework activity sheets : This was carried out in order to develop an understanding of what children like and don't like about the area, as well to illuminate any barriers and constraints children may face when accessing greenspaces.

Key points from engagement:

Traffic is a barrier to play and accessing greenspaces. There are not enough opportunities to play, apart from some fenced off and difficult to access play parks (some children were not allowed to cross busy roads by themselves to access play areas). Connection to nature – children engaged preferred natural areas to bright and colourful metallic play equipment.

Under emergency measures during the pandemic, Southwark Council introduced a **Low Traffic Neighbourhood** (LTN) in the project area. The Sustrans team took the opportunity to upgrade the LTN elements using outputs of the engagement with local children.

Key data from child-friendly Newington

Children taking advantage of the space

Planters were introduced as **modal filters** at junctions, with giraffe shaped chalkboards (and chalk) attached, connecting to the history of the Newington area as the former site of a zoo. Shapes, taken from the artist workshops with children, were added to the street. Greenery and planting were added to benches, as well as colourful road crossings. Proposals for a later project stage include removing fences from greenspaces and play areas – helping to make them feel more open, accessible, and for everyone.

> Urban Designer on the project **"We had people asking us 'What's the point of this? Kids won't play there or use the space: it's too busy.' Only one day after putting in the chalk and chalkboards we came back to find the whole area had been taken over by children's drawings…During our follow-up engagement sessions on Zoom, the children were saying things like 'this is now where I meet my friends as we're going to the park…we meet on this junction."**

As well as adding elements that appeal to children, this project provides opportunities to meet the needs of the children engaged in the design process: increased **independent mobility**, access to greenspaces, and unrestricted play.

As permanent infrastructure has not been built, we don't yet have data on how successful the project has been in increasing physical activity in children; however the project takes a child centred approach, addressing key concerns we see not just in Newington, but across the literature on child-friendly design.
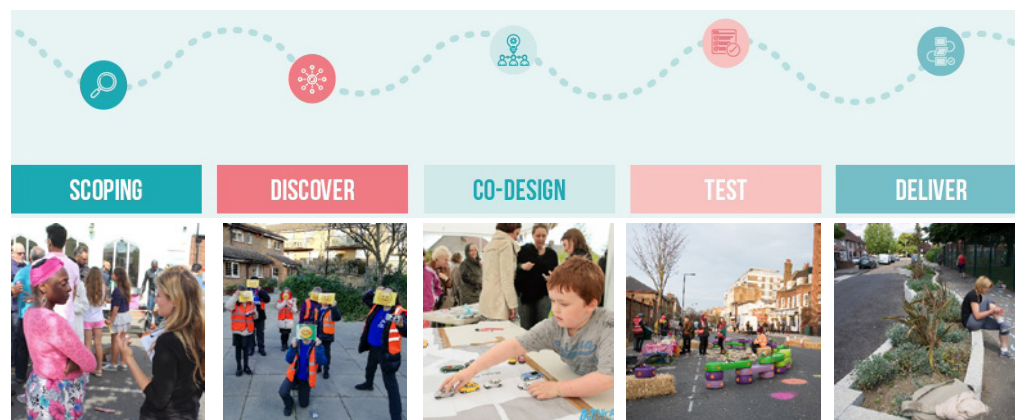
Engagement process through the project

Spaces created by children using Minecraft through engagement sessions
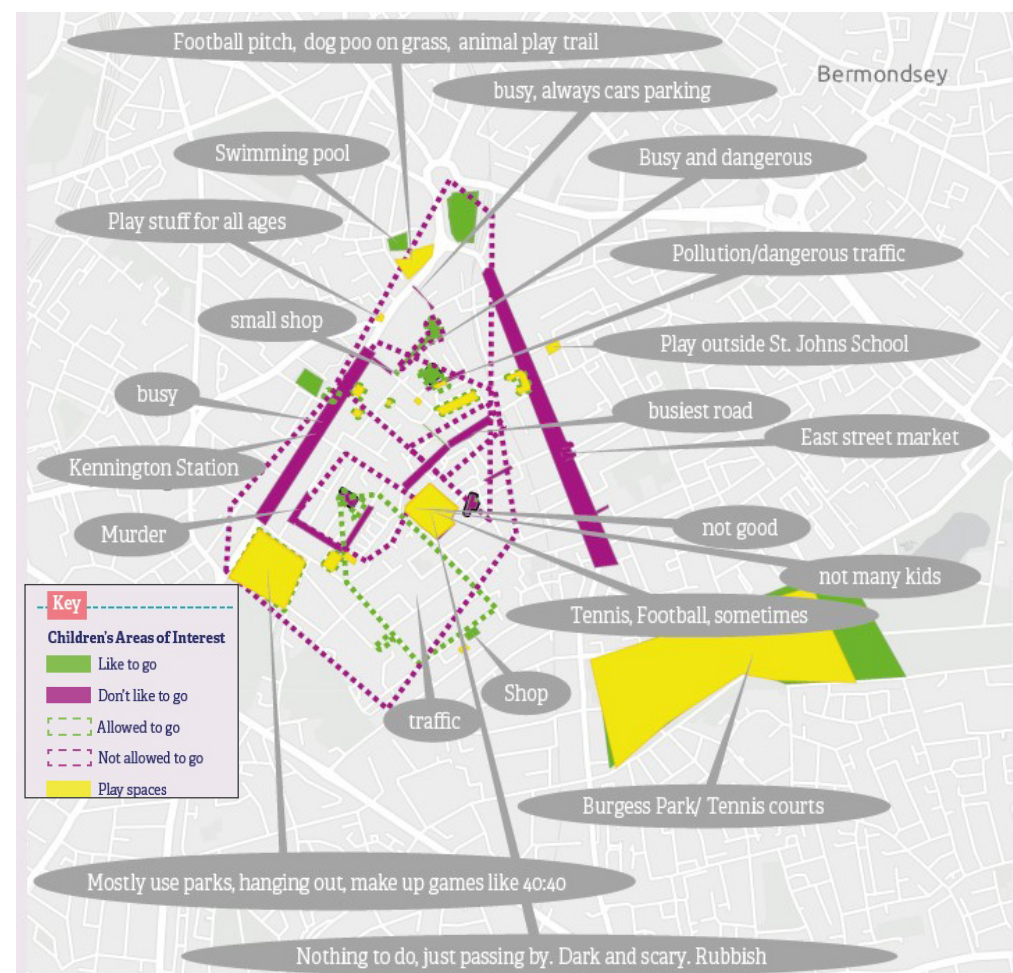
Neighbourhood map interventions

East Ayrshire School Streets

Location - East Ayrshire villages & towns

Delivery team in partnership with Sustrans - Ayrshire Road Alliance / East Ayrshire Council

Timescales - 1 year from inception to implementation on the ground (May 2020-April 2021); follow-up monitoring and route to permanence between May 2021 and March 2022

Principles - *icons key*

The **School Streets** Closures in East Ayrshire encourage schoolchildren to walk, wheel and cycle safely to school and reduce reliance on the private car for school drop-off and pick-up. They were delivered by Ayrshire Road Alliance/East Ayrshire Council in partnership with Sustrans via the **Spaces for People** programme.

The schemes include planters and signs placed at the entrances of the closure area, with vehicle access maintained for permit holders, blue badge holders, school transport vehicles, and other exempt vehicles. The closure is in effect at school drop-off and pick-up times, when the selected streets surrounding the schools become pedestrian and cycle only areas. Both the school communities and the local residents were extensively engaged in the months leading up to the trial implementation, to ensure an understanding of the new restrictions and to address any concerns early on. Police officers were involved in enforcing the restrictions in the first two weeks of the scheme with residents also able to report non-compliance.

13% increase in active travel

3% increase in active travel

12% increase in active travel
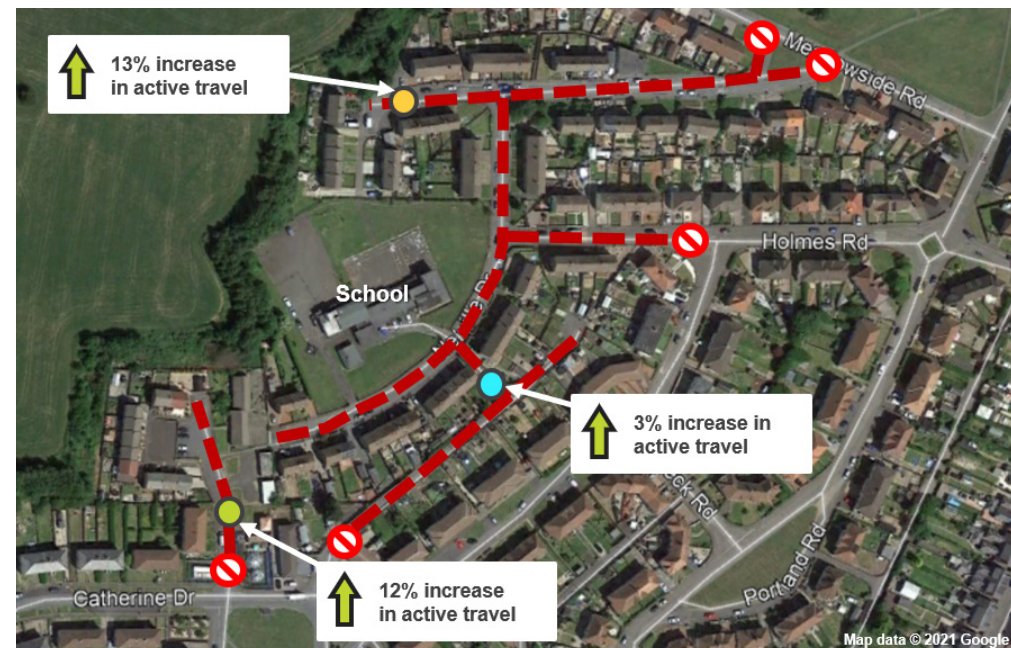
School

St Sophia's PS school street map and Video Manual Count (VMC) data information

St Sophia's PS school street, Glaston

Credit: ©2021, H. Underwood / Ayrshire Road alliance

- 🔵 **Unnamed Lane VMC location***
- 🟠 **Goatfoot Road VMC location**
- 🟢 **Shield Road VMC location**
- 🚫 **School Street closure point**
- ▪▪▪ **Streets within closure**

School Street closure periods:
08:30-09:15
14:30-15:15

VMC data collection periods:
Pre-intervention - August 2020
Post-intervention - May 2021

VMC results reported are between the times of 08:00-10:00 and 14:00-16:00

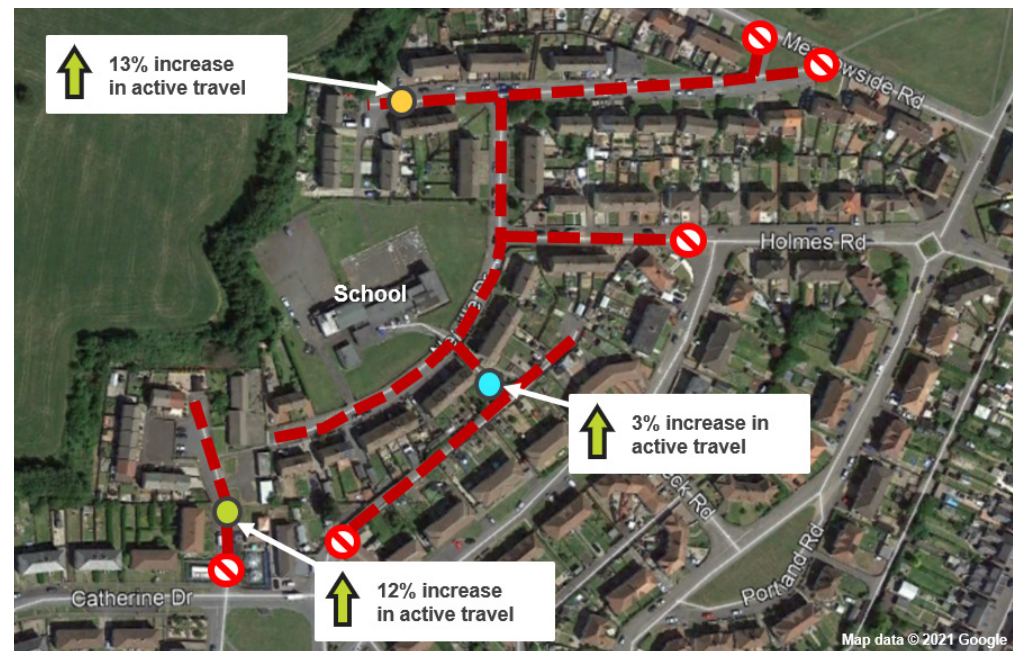*this site does not have a separate carriageway and pavement

Delivering the scheme as a trial was a key factor in its success, as it enabled the community to openly participate in shaping the outcome by providing feedback on the intervention as the trial progressed. Another key factor was the partnership approach to the delivery, which brought in a wide range of expertise from the Council, from Sustrans, and from the design consultant engaged. In particular, support from Sustrans' Research and Monitoring Unit was essential, as the data collected helped support the case for the trials to be continued and dispel any misconceptions (e.g. fears of vehicle speeds increasing in the closure area).

13% increase in active travel

3% increase in active travel

12% increase in active travel

Map data © 2021 Google

Catrine PS school street map and Video Manual Count (VMC) data information

Credit: ©2021, Z. Armstrong / Ayrshire Road alliance

Catrine PS: planters and signs

- 🔵 John Street VMC location*
- 🟠 James Taylor Avenue VMC location
- 🚫 School Street closure point
- ▪▪ Streets within closure

School Street closure periods:
08:45-09:30
14:30-15:20

VMC data collection periods:
Pre-intervention - August 2020
Post-intervention - May 2021

VMC results reported are between the times of 08:00-10:00 and 14:00-16:00

*no pedestrian location data is available at this site

The analysed data shows reductions in traffic speed and volumes at both sites as well as increased active travel volumes. Perception surveys further indicate that the aims of the schemes have broadly been met, with respondents reporting a greater feeling of safety on the streets as well as more ease socially distancing at the school gates. This data has been included in a report to Committee to support recommendations related to keeping the schemes in place. As a result, the School Streets closure at Catrine Primary School has now been approved by council members to be made permanent, and the temporary trial at St Sophia's Primary School has been extended for one year, with the potential for permanence the following year. The school communities continue to support the interventions by involving schoolchildren in maintenance activities such as gardening the planters.

A broader legacy of this success can be seen by elected members having approved a rolling programme of School Streets in East Ayrshire. Fifteen schools have already been identified as potential sites, with plans to implement two to four schemes per year. Early engagement with the first schools has already started.

Designing for Children & Young People - *Walking, wheeling & cycling*

Kilbarchan Pocket Place

Location - Kilbarchan, Renfrewshire

Delivery team in partnership with Sustrans - Renfrewshire Council / Kilbarchan Community Council

Timescales - Co-design and trialling lasted one year with move to permanence following

Principles - *icons key*

Sustrans partnered with Renfrewshire Council and Kilbarchan Community Council in June 2019 to June 2020 through the **Pocket Places** programme to co-design and trial changes to the street outside Kilbarchan Primary School. The project encouraged walking and wheeling through the creation of a safer and more pleasant urban environment. The community were involved in on-site events and remote activities throughout, as and when possible due to changing lockdown restrictions.

> **"The pupils have been involved from the start; identifying and discussing what could be improved, moving on to designing and planning for change, resulting in the finished product of which we are all so proud!"** - Fiona Mackenzie, Head Teacher, Kilbarchan Primary School

Engagement with children was core to the project, evidenced by the fact that children were formally listed as a key stakeholder group. The co-design process was led by a Sustrans Community Engagement officer, supported by the council and the community council. Aligning the engagement to the STEM curriculum was crucial in being able to access class time. Workshops were delivered to allow children to look in detail at the designs, discuss sustainability, and delve into which materials might be suitable for different uses. There were also intergenerational workshops to bring together the different needs from the community and foster relationships between different groups.

Engagement event

Permanent build-outs after trials

Temporary build-outs installed for trials (street kit)

Designing for Children & Young People - *Walking, wheeling & cycling*

Pocket park with shelter and seating

Credit: ©2021, Amelia Rowe

Permanent build outs for the crossing were installed following a successful trial. The monitoring of the traffic speed and volume of the trial build outs produced notable findings, highlighting a decrease in average traffic speeds and a slight decrease in traffic volume. The post-monitoring survey for the trial was taken just prior to the first lockdown in March 2020, before schools closed, however, traffic volumes may still have been influenced by the pandemic.

> **"The approach of matching up our activities with curriculum learning objectives, meant we could get a lot more time with the children; they were meeting their learning objectives through the work with us"** – Sustrans Pocket Places Project Lead

A pocket park was developed at the corner of the street for residents and parents in order to increase accessibility, particularly for people with restricted mobility who may need a rest stop at the top of the hill (e.g. people with smaller legs or traveling with pushchairs). The pocket park was constructed using reclaimed materials by a local social enterprise. A canopy shelter was also installed for waiting parents and children, creating a colourful spot to meet whilst discouraging vehicle use for school pick ups. The trial was a success and most elements, including the planters and the shelter, have been kept in place.

Amelia Rowe, a local artist, was commissioned to work with pupils to create a playable route to school (see **play on the way**). The children's artwork on the theme of active travel has been used on banners along the school fence. The children's art was also included on the canopy of the shelter and the pocket park, instilling a sense of ownership. Pupils also took part in setting up the street kit as part of a demonstration of what the build-outs could look like.

Example of a pupil artwork on the playable route to school

Credit: ©2021, Amelia Rowe

Designing for Children & Young People - *Walking, wheeling & cycling*

Ripple Greenway

Location - Barking, London

Delivery team in partnership with Sustrans - London Borough of Barking and Dagenham

Timescales - Full process took between 2 and 3 years

Principles - *icons key*

The Ripple Greenway project transformed a disused industrial greenspace into a key link and park for the community. It was delivered by Sustrans in partnership with the London Borough of Barking and Dagenham.

The project team engaged early on with local children and young people, with a holistic placemaking approach looking at play features, biodiversity enhancement and accessibility for all. On-street surveys were used to connect with groups who might not attend traditional workshops, particularly teenagers. The team made links with the Transport, Parks and Ecology departments within the Council, and connected with local Councillors, headteachers, developers and businesses to reach as many stakeholders as possible. A steering group was created alongside local community leaders to facilitate communication with residents.

"This project was developed with local young people: children and teenagers who recognised the local barriers to walking, wheeling and cycling were involved in developing designs around the path, and there was also a co-design process for play on the way and planting." – Sustrans Officer.

The Ripple Greenway was co-designed with local communities, using charrettes to ensure maximum feedback from residents was received. It was imagined as a multi generational space from the early stages with disabled and additional mobility support needs groups engaged with throughout. The street furniture height was adapted to be more accessible, and the new path surfaces are suitable for all users. The path connects future developments with schools, places of worship, as well as a proposed future train station.

Wayfinding signs and poem

Natural material to explore and learn

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High value 'play on the way' in a 14-acre park

An extensive planting policy was chosen to maximise benefits for local biodiversity. New trees and hedgerows were planted, and the charity Trees for Cities agreed to look after them for three years. New mowing regimes were introduced to allow meadows to develop, benefiting insects and flora. Council officers agreed that the Housing department would oversee the maintenance for the whole space, as opposed to the Parks department, saving time and money.

The space was also imagined as both a destination and a route, with a focus on placemaking, landscaping and public art. Play was central in the project's design and "**play on the way**" features were installed throughout the space. A controlled approach to **risk** within play was taken, and the features installed use natural materials to allow children of all ages explore and learn safely.

"**The project encourages independent childhood mobility: it's safe to use in terms of traffic but also in terms of natural surveillance. It was disused land that no one used with issues around antisocial behaviour, and now we've changed the perception of this space by making it more accessible and that means parents now let their children use it.**" – Sustrans Officer.

Accessible 1.3 km traffic free route

Teenagers were engaged with on the seating, sports equipment and lighting, and were among the groups that raised antisocial behaviour as an issue (sometimes from a minority of other young people). Redeveloping the abandoned space drastically reduced this behaviour; the police now check in on the path on their rounds and neighbouring houses offer **passive surveillance**. The park is now a destination for all users, and somewhere parents know their children and teenagers can play and socialise in a safe, inclusive environment.

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Tullibody Active Travel Network & School Street

Location - Tullibody

Delivery team in partnership with Sustrans - Clackmannanshire Council

Timescales - Full process took 3 years and was delivered in phases. First round of planning kicked off in 2018

Principles - *icons key*

The new South Tullibody Community Campus relocated Abercromby and St. Bernadette's Primary schools, Abercromby Nursery and the community leisure centre and library to a single community campus in the Abercromby area of Tullibody. Clackmannanshire Council took a holistic approach and used this as an opportunity to review travel to and from campus. As the campus itself was changing, it was a good time to support people to approach their travel behaviour in a fresh way. Clackmannanshire had already successfully piloted a **school street** project at Clackmannan Primary, and so were able to demonstrate that a similar approach had already worked well.

The project was initially funded by the Scottish Government through Sustrans' infrastructure programmes supporting everyday walking, wheeling and cycling: Community Links and, subsequently **Places for Everyone**. Later in the project, Clackmannanshire Council utilised **Spaces for People** funding in the area in response to the Covid-19 pandemic. They implemented temporary measures for people to socially distance while travelling actively.

> **"The project has improved the neighbourhood for the whole community; it's better to be hearing children having fun at the end of the school day, rather than idling engines" –** Sustrans Officer

New benches, trees and wider pavements were added to The Orchard, outside the new entrance to the community campus. The end of existing paths were realigned to match with new crossings, and widened pavements provided more space for walking and parents to wait. By reallocating road space away from cars to people, traffic was deterred, crossings were made easier and the pavements made wide enough for running, jumping and **playing on the way** into and out of school.
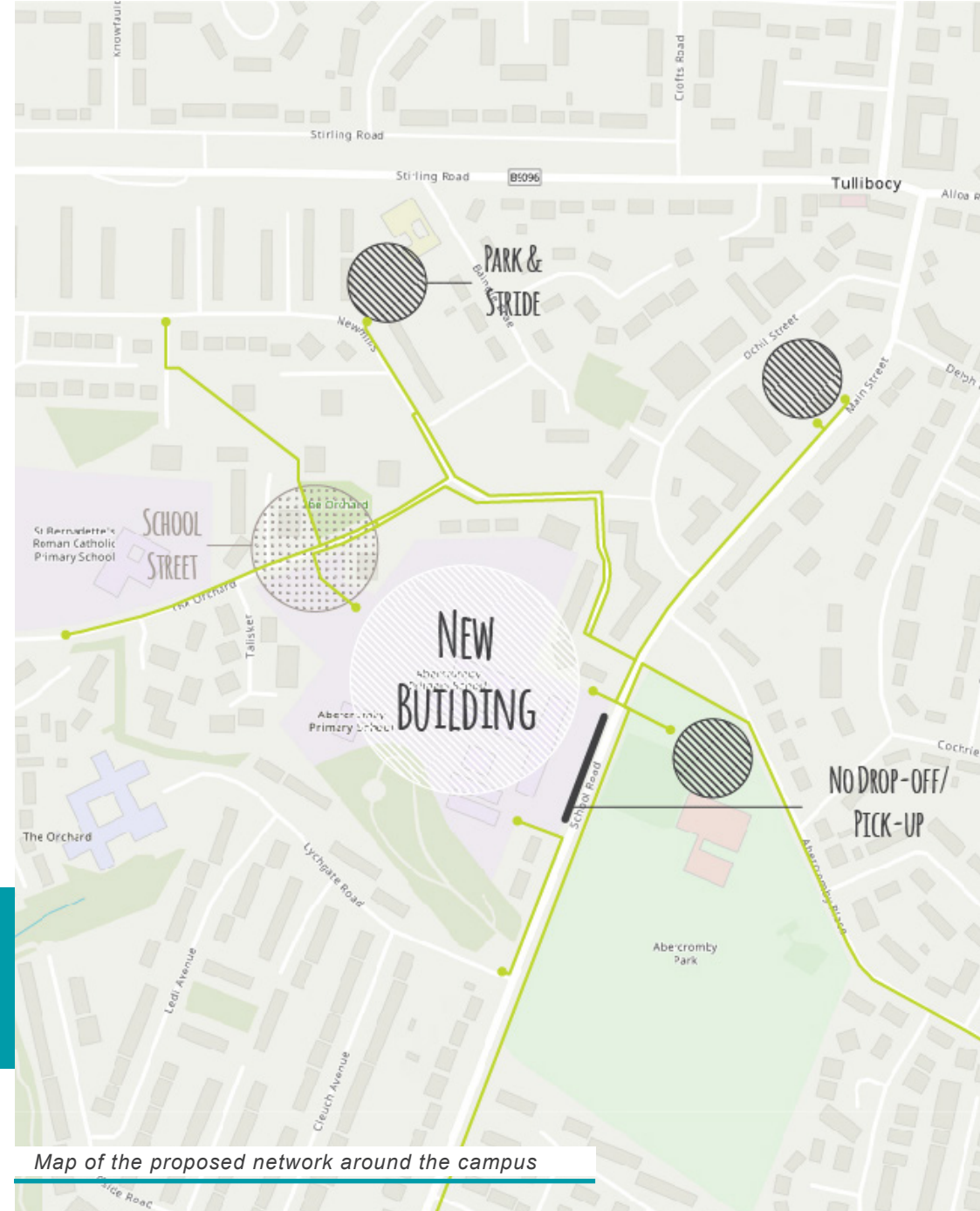
Map of the proposed network around the campus

Red asphalt and playful bollard preventing pavement parking

The project team also addressed the issues of pavement parking and congestion outside the school gates during the school run. They reduced traffic volume and speed by restricting access to 'bus and cycle only', and narrowing the carriageway. To prevent parking, double yellow lines were introduced throughout, and bollards were included at key points.

Park and stride was a key part of the project. The team improved walking routes and crossings to and from the designated car parks, and the bus stop, which was also aimed at helping secondary school students who travelled by bus to get to school. Where these walking routes were next to the road, parking was controlled, and red-coloured raised tables were introduced on The Orchard and connecting roads. The raised tables at side road junctions improved these crossings and helped children walking to school. Raised tables along the road ensure traffic speeds are kept below 20mph by design. Red asphalt is used outside schools all through Clackmannanshire, creating a road design language so drivers know they are entering an area where there are likely to be children.

It was essential to the success of the **park and stride** that council officers worked closely with the school to communicate where parents should park, if necessary. The schools also participated in Living Streets' WOW programme to encourage children to walk to school, and record walking levels.

"This project isn't just a space outside a school, there's a wider network approach" – Sustrans officer

Restricted access and carriageway narrowing

The final phase of the project involved addressing traffic speeds on School Road, the busier road on the other side of the campus. Single way pinch points created by build outs with tree planting and red raised tables made it easier to cross to get to the park and stride carparks.

Garscube Road

Location - Glasgow

Delivery team in partnership with Sustrans - Glasgow City Council

Timescales - 3 to 4 years

Principles - *icons key*

Garscube road is a cycle corridor project delivered by Glasgow City Council as part of the Connecting Woodside project. It was funded by Transport Scotland through Sustrans Scotland's **Places for Everyone** programme.

Motor traffic poses a considerable barrier to children and young people's **independent mobility**. Glasgow City Council has taken an ambitious approach to addressing this barrier, proposing a city-wide active travel network that separates pedestrians, cycles and motor traffic and helps connect the city centre to neighbouring communities. The 1.1km bi-directional cycle track along Garscube Road is one of the first sections of the proposed network which has now been constructed. Further phases are proposed to be delivered in the next few years as part of Connecting Woodside and Avenues projects, as well as other schemes.

Map of project overlap

Bi-directional cycle track segregated from the carriageway
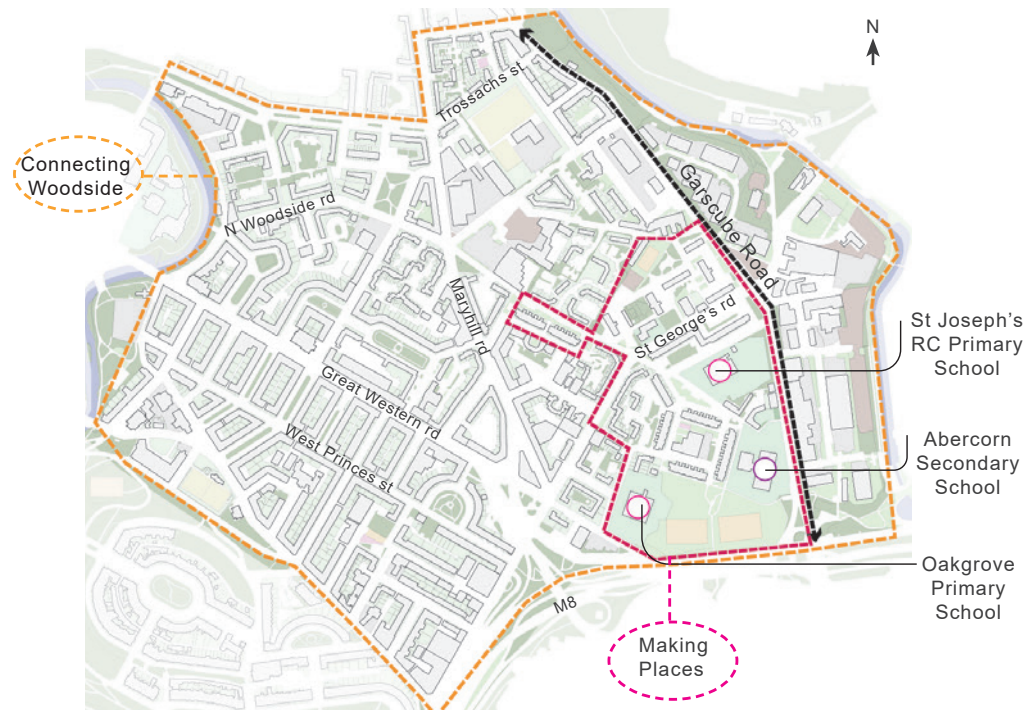
The Garscube road corridor was previously a car-centric space with four lanes of traffic creating long crossings and an intimidating environment to walk, wheel, or cycle. The scheme was not designed and built with children and young people specifically in mind, but by designing it for everyone and following Places for Everyone and Cycling by Design's principles, the newly constructed route has created an environment where it is safer to cycle away from traffic. New direct crossings have been built to replace the previous staggered design

The width of the cycle track enables various types of cycles to cross each other, as well as for parents to ride alongside their children and teenagers to ride side by side. Opportunities were taken to reallocate road space and create social places as well as adding green borders with low height planting, wild flowers and shrubs.

Before the introduction of the segregated infrastructure, many parents were hesitant about allowing their children to cycle along the road. The improved routes run outside Abercorn secondary school, an Additional Support Needs establishment, and proposed future connections will soon link the new infrastructure with two nearby primary schools, St Joseph RC PS and Oakgrove PS.

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As part of Connecting Woodside and a parallel project led by Queens Cross Housing Association, schools were engaged specifically to rethink their playground spaces in order to make them more suitable for those traveling actively and spending time outside of the school buildings. The full benefits of the route for children and young people will be realised when the rest of the network is constructed. Once the active travel network is expanded, the routes will cater to other school journeys within the catchment area, as well as other everyday trips.

Possil park junction improvements with green infrastructure and social spaces

Garscube Road connects to the nearby Making Places project led by Queens Cross Housing Association, which has also taken an active role in engaging with young people and schools in the design. The project includes renewed pedestrian areas, cycling facilities and routes, biodiverse gardens and street trees, sustainable rainwater drainage, varied opportunities for play and leisure, and edible landscapes.

This project will also incorporate artwork and murals with input from school and nursery pupils, adding to a sense of ownership in the project. Combined with Garscube Road, the projects provide space to pause, stay and play as well as improve active independent mobility: making it safe for children of all ages to travel how they would like to, and providing a destination to travel to.

Engagement workshop with children from Abercorn Secondary School

An important lesson learned from an **independent mobility** perspective is to consider side road crossings for routes at early project stages, looking specifically at which side roads could be closed off and which could be converted to one-way streets to improve user safety and further reduce car dominance.

In general, getting young people involved in the project designs as early as possible, and making use of diverse frames of reference to think about the project from different perspectives, was a learning point regarding engagement methods. Feedback from young people, parents and carers throughout the design process to help shape the look and feel of the project routes could have made the project even more impactful.

Once car-centric, Garscube Road has now become a more welcoming and attractive place to walk, cycle, or wheel, connecting destinations and facilitating new places to pause, stay and play.

3. Putting theory into practice

Just as with adults, there is no one size fits all when it comes to designing for children and young people. All design work should be carried out alongside, and informed by, a full Equality Impact Assessment which should be kept live and updated throughout the course of the project. Delivery teams and policy makers should consider the following as part of best practice design.

Engaging children & young people

Why and how

Involving children and young people in all stages of a project life-cycle provides them with a meaningful opportunity to participate in decision-making. A sense of ownership can give a project legacy.

Engagement with children and young people is best delivered on their own terms, using a medium they are familiar with. An online consultation is unlikely to be helpful, engagement that is playful or creative is likely to be much more welcoming.

The Scottish Government has developed a Children and Young People's Place Standard Tool, enabling conversations about place quality that are comparable to sessions run with adults. Engagement sessions like these can link well to the Curriculum for Excellence, where young people are enabled to be successful learners, confident individuals, responsible citizens and effective contributors.

For teenagers, some of the biggest barriers to active travel and access to public space are social. For example, the perception that teenagers behave anti-socially can mean they feel excluded from public space by default, and self-image and social norms can be a significant barrier to travelling actively.[10] Engaging with teenagers as a distinct group gives space to explore and address these issues.

You can read more about engaging with children and young people in *the appendices.*

Marmalade lane, Cambridge, co-housing development

Ripple Greenway: example of children empowerment

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Union Street, Dundee

Art installation in the Gorbals, Glasgow

Monitoring and evaluation

Engaging with children and young people can also be extended to monitoring and evaluation.

Hands up surveys (HUS) or focus groups held along a route or at a piece of existing infrastructure, both of which collect views and experiences on site, are great examples of effectively gathering data from children and young people.

Next steps

By adapting project planning, design and delivery, taking a holistic approach, delivery teams can facilitate projects centred on children and young people.

Project planning

- Agree a project vision to improve places in relation to the *two foundations of child and young person friendly design*: 'independent and active mobility' and 'space to pause, stay and play.'

- Use an engagement strategy which:
    - » involves or engages children and young people in project design
    - » involves parents as the ultimate decision-makers for children's travel

- Incorporate monitoring and evaluation in the process to understand the impact of current and proposed design on children and young people's use of outdoor space and travel choices.

- Ask about key destinations and routes for children and young people and develop a design strategy around them.

- Use local context to maximise design opportunities that will incorporate as many child and young person friendly design dimensions into projects as possible.

- Consider experiences relating to ethnicity, disability, gender and how many children and young people's experiences are impacted by protected characteristics in combination (**intersectionality**).

- Get down to the child's level! For example, consider how your design will impact a three year old child (average height of 95 cm).

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- Consider softer measures that will enable infrastructure to be more successful: access to bikes (including adapted and cargo bikes), skills sessions, provision of equipment (clothing, locks, mobility aids) and increasing knowledge (of active travel, routes, Highway Code, road safety etc).

- Consider wider measures to enable independent walking, wheeling and cycling such as driver behaviour change to ensure they are respectful of other road users.

Strategic Actions

- Incorporate the designing of places for children and young people into Local Outcome Improvement Plans and Locality Plans through Community Planning Partnerships.

- Use supportive tools such as Play Scotland's 'Getting It Right for Play' to plan for increased play and physical activity.

- Provide opportunities for children and young people to take decision-making roles, especially at early project stages (for example, through Review Panels or Participatory Budgeting).

- Use the Local Development Plan process to develop a local **20-minute neighbourhood** policy that optimises active travel to connect homes with schools, local facilities such as shops or libraries, open spaces and green spaces.

Big Pedal event

Sauchiehall street, Glasgow

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Appendices

A. Glossary

20-minute neighbourhood: neighbourhoods where people can meet most of their everyday needs via a short, convenient and pleasant 20-minute return walk. 10 minutes there, and 10 minutes back. Learn more about 20-minute Neighbourhoods from Sustrans.

Adapted cycles: cycles that are adapted to assist people with additional mobility to cycle with more confidence. There are a wide variety of types of adapted cycles to meet different needs depending on the user. Examples of adapted cycles are hand cycles, tricycles, tandems and trishaws.

Hands Up surveys: asking children to raise their hands to answer how they normally travel to school. Learn more about Hands Up Scotland Survey from Sustrans.

Independent mobility: children's ability to get around without the supervision of an adult

Intersectionality: an approach to inclusion that recognises people are part of multiple categories or protected characteristics (e.g. sex, race and age), which create overlapping and interdependent systems of discrimination and disadvantage.

Local Place Plan: a relatively new aspect of the Scottish Planning system that allows local communities to identify their priorities for action to improve the local area. These feed into local authority development plans.

Loose parts play: example of a popular approach with play practitioners in Scotland, which involves providing a variety of moveable objects with no set rules for play. Learn more about Loose parts play from Play Scotland.

Low Traffic Neighbourhood: holistic approach which looks at prioritising active travel and local motorised traffic in a defined residential area by removing through motorised traffic and directing it to existing major roads on the boundary. Learn more about Low Traffic Neighbourhood from Sustrans.

Minecraft: a popular computer game that allows players to create new environments with streets, buildings and other constructive elements.

Modal filters: on-road barriers that allow some transport options access and blocks others. For example bollards or planters (containing trees or plants) that allow people walking, wheeling and cycling access to a street whilst restricting entry for motor vehicles.

Park and stride: the ability to park a vehicle in one spot and continue the journey further by walking. These schemes can be particularly useful in low population density areas where school catchments are bigger and people have further to travel, or as a behaviour change measure towards travelling actively for the whole journey.

School street, Walnut tree walk

Social spaces for teenagers

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South City Way, Glasgow

Credit: © John Linton 2018

Passive or natural surveillance: providing the opportunity for people on nearby pathways or buildings to overlook a public space, increasing the perceived safety of users. For example, orientating windows of well used rooms (e.g. kitchen) from nearby buildings towards the space, providing good lighting or reducing hidden corners

Places for Everyone: a grant funding programme providing advice, support and funding for the creation of infrastructure that makes it easier for people to walk, wheel and cycle for everyday journeys. Funded by Transport Scotland and administered by Sustrans Scotland. Learn more about Places for Everyone from Sustrans

Play on the way: opportunities for play outside of designated "play areas". For example, pavement or greenspaces, particularly located along well used routes.

Pocket places: programme offering the opportunity to local communities to shape their neighbourhood and take the lead in making their local area a better place to walk, wheel and cycle. Funded by Transport Scotland and delivered by Sustrans. Learn more about Pocket Places from Sustrans.

Protected characteristics: in the Equality Act (2010), it is against the law to discriminate against someone because of 9 protected characteristics, which are: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation.

Radius of independence: the distance children and young people can travel from home of their own, or with friends, without adult supervision. This will likely be supported by permission from adults and discussions with adults to agree boundaries or plan journeys.

Risky play: a thrilling and exciting activity that involves a risk of physical injury, and play that provides opportunities for challenge, testing limits, exploring boundaries and learning about injury risk.

School Street: a road outside a school with a temporary restriction on motorised traffic at school drop-off and pick-up times.

Social safety: a perception of safety from antisocial behaviour or crime. Distinct from physical safety from collision with motorised vehicles, for example.

Spaces for People: a temporary infrastructure programme launched in May 2020 as an emergency response to the Covid-19 pandemic. The programme aimed to deliver rapid temporary walking, wheeling and cycling measures in order to allow safe physical distancing. Learn more about Spaces for People from Sustrans.

Walkabouts: walking around a neighbourhood with a group and observing aspects of the neighbourhood that are good or may need improvement.

B. Further reading

- Global Designing Cities Initiative, as part of NACTO 'Designing Streets for Kids'
- ARUP 'Cities Alive: Designing for Urban Childhoods'
- Tim Gill 'Urban Playground: How child friendly planning and design can save cities'
- Publica 'Making London Child Friendly'
- Education Scotland 'Getting It Right For Every Child' (SHANARRI)
- Urban95 'Creating cities for the youngest people'
- 8-80 cities
- The Bench project
- Make space for girls
- Play for disabled children
- Behaviour Change Models and Urban Design for C&YP

Engagement:

- Sustrans Scotland, Places for Everyone: Community Engagement and Behaviour Change
- Scotland's Commissioner for Children and Young People: Golden Rules for Participation
- Children in Scotland: Engagement with children and young people
- A Place in Childhood: Children and Young People's Participation Through Crisis
- Sustrans: 'Big Street Survey' blog post
- Voice, Opportunity, Power: A toolkit to involve young people in the making and managing of their neighborhoods
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About Sustrans

Sustrans is the charity making it easier for people to walk and cycle. We are engineers and educators, experts and advocates. We connect people and places, create liveable neighbourhoods, transform the school run and deliver a happier, healthier commute. Sustrans works in partnership, bringing people together to find the right solutions. We make the case for walking and cycling by using robust evidence and showing what can be done. We are grounded in communities and believe that grassroots support combined with political leadership drives real change, fast.

Join us on our journey.
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