

Children's Report Card: Environment

March 2020

Introduction

This report card is part of a set that present public health information on children and young people's health and wellbeing in the Glasgow City Region (GCR) across a range of indicators. The Glasgow City Region comprises eight local authorities: Glasgow City^a; East Dunbartonshire; West Dunbartonshire; Renfrewshire; East Renfrewshire; Inverclyde; North Lanarkshire; and South Lanarkshire.

This work builds on the previous [GCPH Children and young people's profiles](#), [ScotPHO children's profiles](#) and newer data sources. In particular, the format of the summaries has drawn on the [Active Global Healthy Kids Alliance work](#) which has published report cards for Scotland in 2016 and 2018¹. These provide an accurate, critical assessment of Scottish children's physical activity, health behaviours and outcomes, as well as commenting on settings and influences on physical activity and health.

The report cards are the product of a working group led by the Glasgow Centre for Population Health and supported by the Information Services Division (ISD), a division of National Services Scotland, part of NHS Scotland. Other group members included Glasgow Health and Social Care Partnership, NHS Greater Glasgow and Clyde and Glasgow City Council. The intention behind the report cards is to provide robust evidence and policy ideas to inform planning and future policy for children's services in the Glasgow City Region.

Why is the environment we live in important?

Our physical and social environments are the places where we live, grow, study, play, travel and work. These influence our health, both directly and indirectly, because where we live actively shapes our lives for better and worse.

Direct and well-known influences of the environment on our health include indoor and outdoor air quality, housing, high traffic volume and speed on residential roads, and access to, and availability of, alcohol and food. Indirect influences include how a degraded, littered environment impacts on our mental wellbeing. Our physical environment also affects our behaviour. For example, we know that the presence or absence of good quality, accessible greenspace influences our levels of physical activity and that parents are more likely to allow their children to walk or cycle to school if there are safe, segregated cycle routes, safe road crossings and lower traffic speeds. Publicly accessible outdoor spaces are important, not just for exercise, but for play, relaxation and socialising.

^a Glasgow is the term used to refer to Glasgow City (the local authority).

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We describe patterns and trends for a selected set of indicators that tell us about the quality of the physical and social environments in which children and young people live. The indicators included are: **proximity to derelict land and to greenspace; air quality; mothers smoking during pregnancy; asthma-related hospital admissions; active travel to school; child pedestrian road casualties; and houses in disrepair.** The data used to create these indicators are derived from a variety of sources, including: travel surveys; air quality estimates; police accident reports; and hospital statistics.

The indicator trends referred to in this report card are available as PDF files on the Understanding Glasgow website.

The following section provides summary headlines on each indicator and actions that are required to make progress. This is followed by the 'Where are we now?' section which provides more detail on each indicator and traffic light assessment of progress. The final 'what can we do about it?' section discusses in more detail approaches that can be used to make progress.

'Red Amber Green (RAG)' traffic light system

Each summary employs a 'Red Amber Green (RAG)' traffic light system to provide a sense of where the data indicate that good progress is being made in population health terms (Green); where there is cause for concern (Amber); and where there is more serious cause for concern (Red). A green light does not imply that further progress cannot be made but indicates that positive progress has been made.

Assessments of progress on an issue – as 'red', 'amber' or 'green' – are based on author judgements and are clearly subjective, albeit based on robust, available evidence.





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Headlines





Healthy and safe environments are crucial for the wellbeing and development of children and young people. Some aspects of the places where children live are improving but inequalities remain a stark feature.

Traffic light	Indicator	Recommended actions
	<p>Greenspace Four out of five children in Glasgow live close to a park, play area or accessible greenspace, but far fewer live close to high quality greenspace and access differs greatly.</p>	<p>We should create maps of children's access to high quality greenspace and use these to stimulate action by local authorities on the creation of equitably distributed, high quality, accessible greenspaces that children can use.</p> <p>Nurseries and schools should be encouraged to make greater use of greenspace for teaching and exercise, to support the development of social skills and to develop understanding and appreciation of nature, the outdoors and importance of biodiversity.</p> <p>We need to create more opportunities across all local authorities for outdoor play in urban environments including safe street play.</p>
	<p>Derelict land Nearly 75% of North Lanarkshire's population currently live within 500 metres of derelict land, while in Inverclyde and Glasgow 60% of people live close to derelict land.</p>	<p>Local authorities and regeneration/enterprise companies need to prioritise resources that can tackle the legacy of derelict land in GCR. This is not only important from a social/environmental justice perspective but will also support inclusive economic and housing-led regeneration.</p>
	<p>Air pollution Air pollution affects child development and contributes to low birth weight, asthma, risk of cancer and poorer lung development in childhood.</p>	<p>Consideration should be given to the introduction of congestion charging and/or a workplace parking levy in appropriate urban areas where there is vehicular congestion and poor air quality.</p> <p>Transport authorities need to shift investment to support affordable and sustainable public transport for all communities.</p>
	<p>Smoking during pregnancy While smoking rates in pregnancy are still too high, they have been decreasing steadily over the last 20 years in affluent and deprived communities. However, inequalities in smoking during pregnancy remain.</p>	<p>The NHS needs to continue current actions to reduce smoking in pregnancy and to provide inequalities-sensitive smoking cessation support for pregnant women including, where possible, time during working hours to attend relevant services.</p>

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	<p>Asthma Over 600 children are admitted to hospital annually due to asthma across the GCR region. Asthma is strongly associated with exposure to tobacco smoke and to air pollution.</p>	<p>The NHS needs to continue current actions to reduce smoking in pregnancy and take action to address air pollution (see above).</p>
	<p>Active travel Levels of active travel – walking, cycling or skating/scooting – to school show little change and levels of walking to school have reduced in many areas.</p>	<p>Government, both nationally and locally, needs to invest more in active travel and support measures to make walking and cycling safer and more attractive, including:</p> <ul style="list-style-type: none"> • legislation to establish default 20mph speed limits in all urban areas in Scotland • introduction of segregated cycle routes near all primary and secondary schools as well as vehicle exclusion zones • an increase in and incentivisation of car-share and bike-share schemes, car pools, business cycle mileage, workplace showers/changing facilities in all workplaces.
	<p>Pedestrian road traffic injuries Child pedestrian road traffic injuries are steadily reducing but striking inequalities remain.</p>	<p>Local authorities and transport authorities need to prioritise reductions in road speed and the provision of safer infrastructure.</p>
	<p>Housing in urgent disrepair The proportion of housing in urgent disrepair has reduced across GCR apart from in South Lanarkshire where levels are the highest and have not improved over the last 15 years.</p>	<p>Government, both nationally and locally, needs to work to improve the affordability and quality (including energy efficiency) of housing.</p>

Where are we now?

Access to greenspace

 **AMBER – we need to provide every child with access to good quality, natural, outdoor environments. At present, although many children in Glasgow live close to accessible greenspace there are clear disparities in the quality of greenspace across the city.**

There are health, developmental and recreational benefits in ensuring children have access to good quality, natural, outdoor environments. However, currently, there is no consistently used indicator of children's access to greenspace across Scotland.

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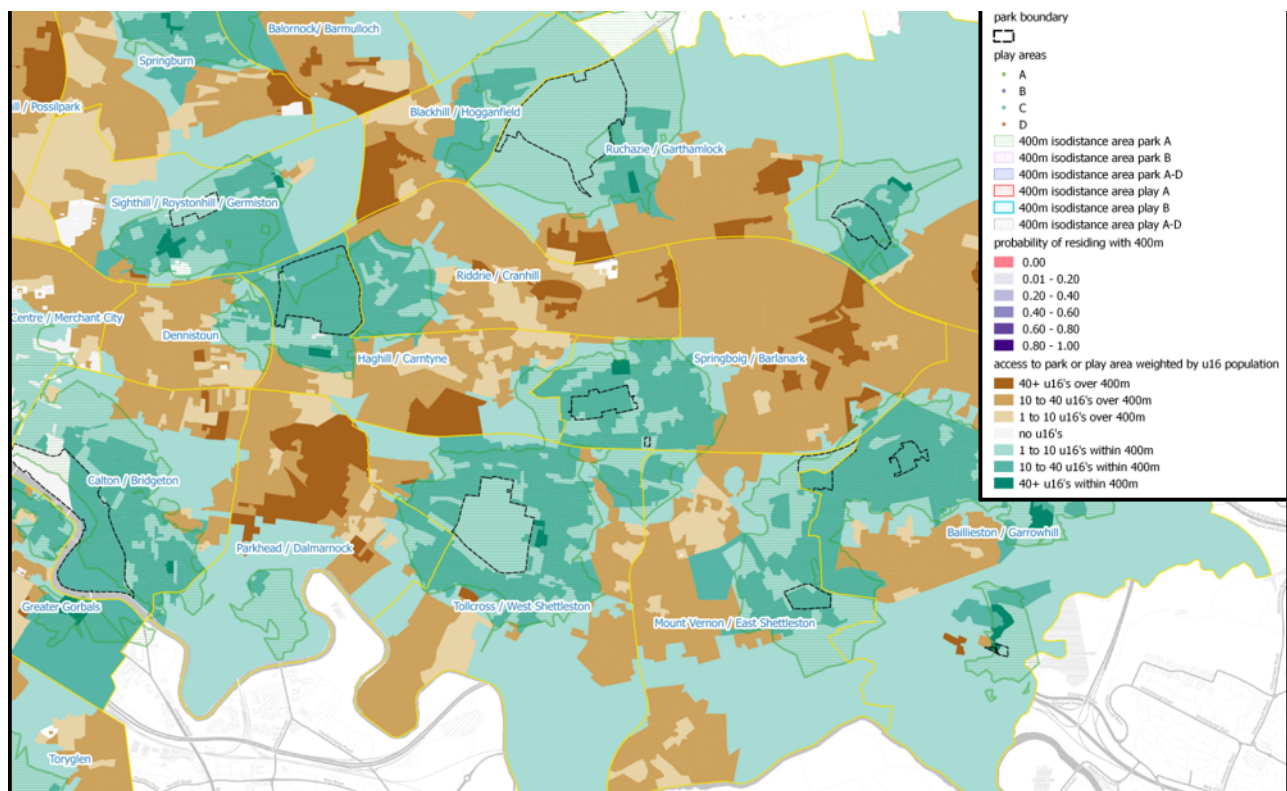
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In a recent project, the GCPH worked with the [University of Glasgow's Urban Big Data Centre](#) and Glasgow City Council, to create a new indicator showing the proportion of children within each of Glasgow's 56 neighbourhoods living within 400 metres of publicly accessible greenspace. In an additional piece of work, a refined indicator was created that took account of the quality of the greenspace.

In 2014, 80% of children in Glasgow lived close to accessible greenspace, but this varied across Glasgow and was below 50% for children in some communities. When the quality of greenspace is taken into account, disparities in access to good quality greenspace become more apparent. For example, the percentage of children living close to the highest quality (A-graded) parks and play spaces varied between nearly 100% in some neighbourhoods to less than 10% in others.

The map below (Figure 1), illustrates access to A-graded parks in the east of Glasgow. In areas coloured green children live within 400m walking distance of an A-graded park, while the areas shaded brown indicate where children have to walk further than 400m to access such an A-graded park.

Figure 1: Access to A-graded parks in the East of Glasgow.



Further information on this indicator and how it was created is available on a [blog written for the Urban Big Data Centre](#).

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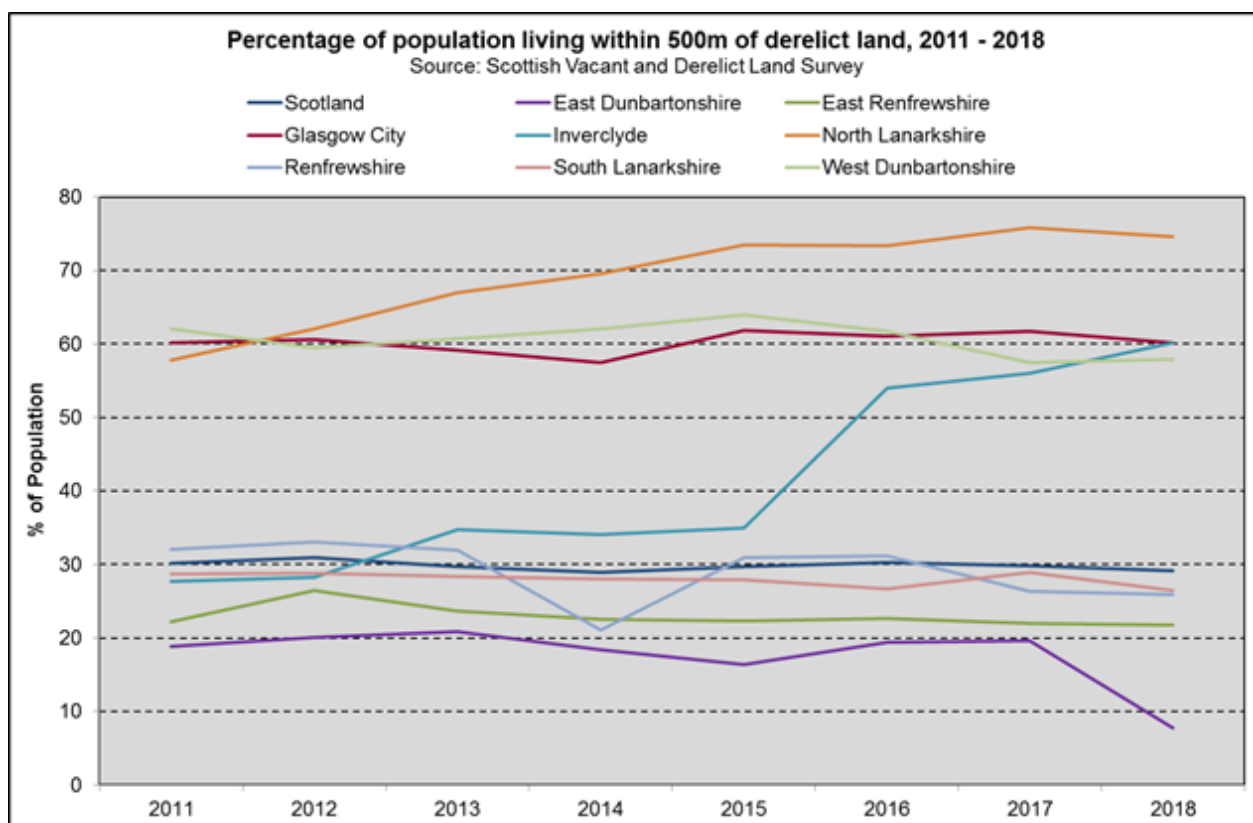
Living near derelict land



AMBER – Planning policies at all levels (national, regional and local) should promote the productive reuse of derelict land especially in areas within GCR where high proportions of the population live in close proximity (500m) to derelict land.

The term 'derelict' land broadly applies to land that has fallen into disuse often after the loss of industry. It may have been left neglected for a long time, be in a poor state of repair and require remedial work, including de-contamination, for it to be used in future. Living in proximity to a degraded, neglected and/or potentially dangerous environment is unpleasant and may feel unsafe and this situation affects many people in the region.

Figure 2: Percentage of the population living within 500m of derelict land, 2011-2018.



The proportion of the population^b living close (within 500m) to derelict land (Figure 2) varies markedly across the GCR region with lowest proportions at 8% in East Dunbartonshire and highest at 75% in North Lanarkshire. The proportion of Inverclyde's population living close to

^b In this case the indicator relates to the whole population, rather than specifically to children.

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derelict land has increased sharply recently, rising from 28% in 2011 to 60% in 2018. This increase is partly due to the addition of new sites close to residential areas and changes made to site types for several older (pre-2001) sites from vacant to derelict, as well as increases in the size of some older sites. Elsewhere in the region, proportions have remained fairly static. In Glasgow and West Dunbartonshire, the proportion of people living near derelict land currently stands at 60% and 58%, respectively – approximately double the Scottish average. In East Renfrewshire, Renfrewshire and South Lanarkshire proportions are slightly less than the Scottish average.

Air quality



RED – poor air quality is damaging children and young people's health in urban areas. Impacts of air pollution are forecast to worsen unless action is taken to reduce emissions, particularly from vehicles. Further immediate action needs to be taken to reduce numbers of vehicles on the roads and to increase walking, cycling and use of public transport.

The adverse effects of air pollution include: respiratory and cardiovascular morbidity, such as aggravation of asthma, respiratory symptoms and an increase in hospital admissions; mortality from cardiovascular and respiratory diseases, and from lung cancer. There is emerging evidence of other potential adverse effects of air pollution including: dementia; low birth weight; diabetes; and, for children, who are especially at risk in their early years, asthma, and poorer lung development. Exposure to traffic-related air pollution is also associated with an increased risk of childhood leukaemia.

The Committee on the Medical Effects of Air Pollutants (COMEAP) estimated the annual mortality burden of human-made air pollution in the UK to be between 28,000 and 36,000 deaths². A more recent academic paper suggested that the health impacts of air pollution have been significantly underestimated and that air pollution reduces mean life expectancy in Europe by about 2.2 years³. Modelling studies of long-term exposure to PM_{2.5} among adults have estimated attributable annual death rates of between 40 and 50 per 100,000 population across the GCR region with a slight increase in mortality between 2015 and 2016. In 2016, it was estimated that there were over 600 deaths attributable to anthropogenic PM_{2.5} among adults over 25 in the region. Air pollution levels are higher than legal limits in many UK cities. Nitrogen dioxide (NO₂) and fine particulate matter (PM_{2.5}) are the prime culprits and are largely related to motorised vehicle emissions. In Glasgow, NO₂ standards have been breached, and Scotland has set a lower PM_{2.5} standard level than other areas in the UK.

Worryingly, recent survey findings show that two-thirds of parents are concerned about the effect of air pollution on their children's health and that many parents are put off walking their children to school because of air pollution⁴.

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Smoking during pregnancy



GREEN – smoking during pregnancy has been decreasing steadily during recent decades. However, smoking during pregnancy is still more common in low-income groups, and inequalities-sensitive smoking cessation support for pregnant women is vital.

Smoking in pregnancy contributes significantly to premature births, babies that are small for gestational age, infant deaths (in the first year of life) and increased hospital admissions for respiratory infections, bronchiolitis, asthma and bacterial meningitis in early childhood⁵.

Over the last 20 years there has been a steady reduction across GCR in the proportion of women who smoke during pregnancy. Levels in Glasgow fell from 38% in 1998 (the highest in the region at that point) to 13.4% in 2017 and are now lower than the average for Scotland (14.8%) and are also lower than the neighbouring areas of North Lanarkshire (17.2%) and West Dunbartonshire (14.9%). According to 2017 data, the lowest levels in GCR are in East Renfrewshire at 4.9%. However, a deprivation gradient persists – the proportion of women smoking in pregnancy in Glasgow from the most deprived deprivation quintile is nearly 20 times higher than those from the most affluent deprivation quintile despite a reduction of over 30 percentage points in this population group between 1998 and 2017 (from 50% to 19%).

Smoking within the home also impacts on indoor air quality and can expose any children in the household to second-hand smoke. The 2014-15 Glasgow Schools Health and Wellbeing survey highlighted that of pupils who lived with a smoker, 64% reported this person smoked within the home or in the car⁶.

Asthma



AMBER – reducing asthma in childhood remains a key health priority. This will be achieved through improvements to air quality – particularly addressing traffic-related pollution – and further concerted efforts to reduce smoking prevalence.

Asthma is a respiratory condition that has many potential causes but is strongly associated with exposure to tobacco smoke and to air pollution. Admissions to hospital for asthma represent the most acute cases of asthma and so represent the tip of a much larger iceberg of asthma prevalence in communities.

Just over 600 children are admitted to hospital with asthma-related complaints annually across the Glasgow City Region with the highest numbers of admissions and highest admission rates per head of population coming from Glasgow and North Lanarkshire. Asthma admission rates are lowest in East Renfrewshire and East Dunbartonshire. (Figures cover the period from 2005-06 to 2016-17.)

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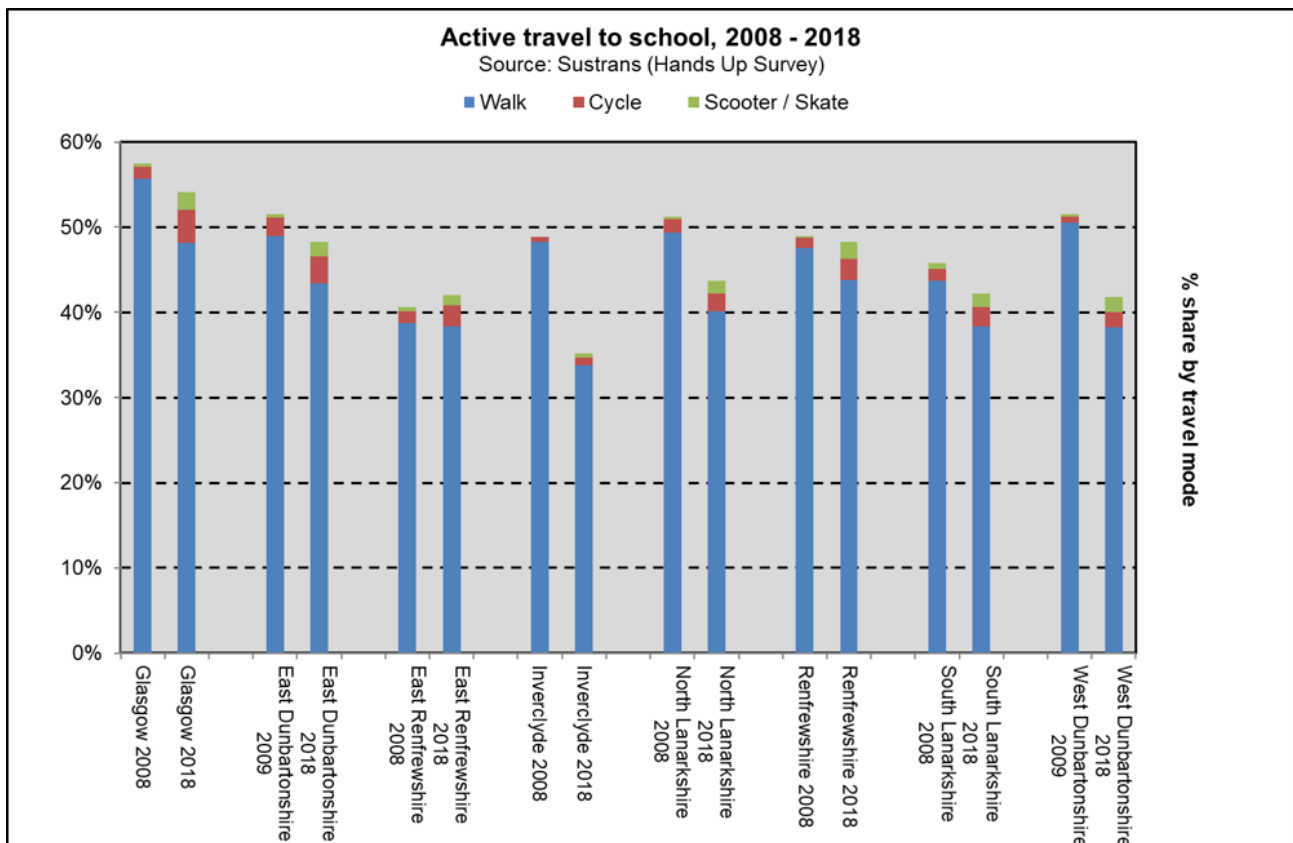
Active travel to school

RED – Local authorities, working with their partners, should introduce measures that encourage active travel to school as levels of walking to school among primary school pupils in GCR have been static or have decreased in recent years while levels of cycling remain very low.



Walking, cycling and scooting/skating to school can contribute to achieving the levels of physical activity that our children and young people need to be physically healthy. Physical activity can also contribute positively to mental health. The graph above illustrates trends in active travel to school across the region's local authorities.

Figure 3: Active travel to school, 2008-2018.



Across the Glasgow City Region, approximately half of all school children travel to school actively although this varies considerably between local authorities. The majority of active pupils are walking to school and relatively low proportions cycle (1-4%) or skate/scoot to school (up to 2%). However, levels of active travel to school are notably lower in East Renfrewshire, Inverclyde and

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South Lanarkshire and appear to be on a downward trajectory in many other local authorities. Particularly low proportions of children walk to school in West Dunbartonshire, East Renfrewshire, South Lanarkshire and Inverclyde, which has the lowest level of walking (34% in 2018) and where there has been a downward trend in walking to school since 2008.

Child pedestrian injuries



GREEN – rates of child pedestrian injuries have been decreasing across the GCR region although there are differences between GCR local authorities.

Real and perceived safety on and around roads has a direct impact on whether people in general feel safe walking and cycling and whether parents are happy letting their children walk or cycle to school. Inverclyde has the highest number of child pedestrian injuries at 132 per 100,000 population; Glasgow, East Dunbartonshire and East Renfrewshire have the lowest levels of injury in the region at 54 per 100,000 population (2012-16).

It is worth noting that a recent study estimated that the true rate of road casualties to be around five times higher than rates recorded in police statistics⁷, mainly due to under-reporting. Previous GCPH research showed that child pedestrian casualty rates in Scotland were over two-and-a-half times higher than adult rates and that the child pedestrian casualty rate was three times higher in the most deprived quintile compared with the least deprived⁸.

Houses in disrepair



GREEN – proportions of houses in disrepair have reduced steadily across the GCR region over recent years apart from in South Lanarkshire where they have been static.

Access to a well-built, insulated, dry and affordable home is a prerequisite for families and for healthy child development.

Proportions of houses in disrepair have reduced steadily across GCR over recent years apart from in South Lanarkshire where they have been fairly static at just over 40% of all houses. There is marked variation across the region. West Dunbartonshire housing shows the greatest improvement with proportions of houses in disrepair falling from 44% in 2010-12 to 19% in 2014-16. Current proportions are similar to those of East Dunbartonshire which stood at 20% in 2014-16, 10 percentage points lower than current figures for Scotland as a whole (31%). Proportions of houses in disrepair in Glasgow and North Lanarkshire (both at 28%) are slightly lower than the Scottish average.

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What can we do about it?

Public health has achieved great successes in the past, by building understanding of how our environment nurtures or harms us, and then by changing the environment to enhance the nurturing features while reducing the harms. There is increasing recognition of the importance of 'place based' approaches to improving public health.

In a call to action, nearly a decade ago, '[Good Places Better Health for Children](#)'⁹ set out a vision of a good place for children to grow up. The report called for a Scotland where:

- homes are warm and dry with good quality space for children to play indoors and outdoors
- children play, explore and relax outdoors in streets, parks, green places, open spaces and have contact with nature in their everyday lives
- the presence of children outdoors is welcomed, supported and valued by parents and the wider community
- neighbourhoods are well maintained, safe, appealing, support healthy food choices and have a strong sense of community.

To achieve this vision, the report authors recommended the following actions:

- 'Bend the spend' – identify how to bend existing programmes and policies to encompass the creation of healthy places for children.
- Provide the policies – create new and direct programme and policy interventions where needed.
- Consider the consequences – identify and amend policies which have unintended consequences that would counteract the vision.
- Build the capacity – to ensure local communities and the public sector work together for effective change. This could often be achieved by simply giving permission for something to happen and supporting initiatives.

Similarly in 2009, the [Glasgow Health Commission](#)¹⁰ called for the creation of a child-friendly city making specific recommendations for changes to the physical environment within the city to improve opportunities for healthier choices as well as tackling violence and alcohol-related harm.

Specifically, in respect to play, all local authorities should be encouraged to get involved in national environmental and child play initiatives. Street Play is one such initiative run by Play Scotland, which is supported in Glasgow, but could have wider benefits elsewhere.

Glasgow's city centre is now covered by a 20mph limit. A Private Member's Bill (recently rejected) aimed to introduce a national 20mph limit on restricted (urban) roads across Scotland¹¹. The introduction of a 20mph limit would reduce average road traffic speed and thus reduce the number and severity of road traffic accidents. We know that road traffic accidents are one of the most common causes of death in UK children (aged 11-16) other than disease. The most recent evidence on the newly introduced city-wide 20mph limit in Edinburgh is that average speeds have decreased, collisions and casualties have reduced substantially (although it is too early to

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say whether the new speed limit has reduced casualties beyond what might be expected) and a majority of residents support the scheme; those with children in the household tended to be most concerned about safety and were also more supportive of the speed limits¹².

Glasgow's new low emission zone is being introduced in phases (from 2019-2023) to address poor air quality in the city centre, while other projects and schemes aim to increase walking and cycling levels in the city by providing safer routes and more attractive urban environments. Bikes for All¹³ is an example of a bike inclusion project; based in Glasgow, the project aims to increase access to cycling by breaking down barriers related to ability, lack of confidence or low income through the provision of shared bikes and personal support to use them.

The [Place Standard tool](#) illustrates an approach that aims to support the delivery of high-quality places in Scotland. The tool provides a simple structure for conversations on issues and outcomes linking physical and social aspects of place-making.

Overall, the information in this section shows that there are still big differences in the quality of children and young people's physical and social environment within GCR local authorities and across the region. If we are serious about the importance of our environment to our current and future population health, we need to take steps to improve it. Improvements to the environment we live in should contribute to better health and wellbeing, help reduce inequalities (if designed properly) and mitigate some of the impacts of climate change which represent an unprecedented threat to human health and that of the planet, now and in the future. More concerted action in these areas is crucial for future generations.

The climate emergency

The Scottish Government have acknowledged that there is a global climate emergency and have set a target for Scotland to reach net zero emissions by 2045¹⁴. More recently, Glasgow City Council has committed to reach net-zero emissions by 2030¹⁵. These announcements highlight the gravity of current climate trends and the need to reduce emissions drastically and rapidly. Many of the recommendations in relation to active travel and greenspace made in this report have a part to play in reaching these targets.

Authors: Fiona Crawford, Bruce Whyte

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CONTACT

Bruce Whyte
Public Health Programme Manager
Glasgow Centre for Population Health
bruce.whyte@glasgow.ac.uk
0141 330 2747