



Work Based Project

Research Proposal

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Research Proposal

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1. Research Proposal Title

What impacts do Active Travel Routes have on the existing environment?

2. Summary

This research aims to develop an understanding of how Active Travel routes in Wales, under the Wales Transport Strategy, are impacting existing travel networks, the natural environment on which new routes are built and the Welsh public.

3. Background

The incentive for research on this topic arises from a recent adaptation to planned travel networks in Wales, with Active Travel being a priority. The act aligns with numerous principles to be considered set out in the Well-being of Future Generations (Wales) Act 2015. (WFG)

Active Travel is referred to as making journeys via preferred methods of travel, that promote improving health, reducing traffic on the roads and reducing environmental impacts.

The preferred methods of travel typically include: walking, cycling, and use of mobility assistive equipment.

In Wales, any information surrounding Active Travel and the provisions associated with it can be found in the Active Travel Act Guidance (2021).

The Active Travel Act Guidance assures local authorities in Wales hold a legal duty to design, build and maintain facilities for Active Travel users, and to continuously improve them in an effort to promote Active Travel as the preferred method of travel in Wales.

Provisions within the Active Travel Act Guidance include:

Active Travel Routes: The primary product of the guidance is the new developments through the means of Active Travel Routes. These routes typically involve widening of existing pedestrian footways either by building new ground or narrowing of carriageways. This method of developing new routes appears to be the least intrusive in regards to environmental effects, this is because usually sufficient space exists on existing infrastructure to incorporate the routes. The integration of the routes alongside carriageways can have undesired effects on the existing infrastructure. This may appear

in the form of additional crossings for pedestrians and cyclists, narrowing of carriageways / removing lanes for traffic.

Another type of development for Active Travel Routes is new full construction of shared use and cycle paths. These routes are new links, typically constructed to connect key areas within the Active Travel Network. As a result of the new construction, green spaces are often bisected and there is potential for habitats to be destroyed. Often before new routes are built within existing green areas, tree surveys and ecology reports must be completed in order to avoid destruction of habitats of protected species. Despite the environmental effects, construction of dedicated Active Travel Routes assures that there is minimal interference with existing infrastructure.

Active Travel Networks: Local Authorities are responsible for designing, developing and maintaining a network of Active Travel Routes. This network should connect residential areas with all major travel destinations such as town centres and commercial areas, schools, colleges, and workplaces.

Although the routes on the Active Travel Network may be used by any members of the public, there is a focus in the design of the network to link essential travel destinations that would likely otherwise be travelled to via public transport or personal vehicles.

Design Guides: Local Authorities are provided a guide for the design of Active Travel Routes. This guide assures that the routes are quality controlled through measures involving accessibility, safety, coherence, comfort and attractiveness. Specific criteria for the compliance of routes can be found in the auditing tools.

Sustainability, efficiency and accessibility (*Active Travel Act Guidance 2021*) are the focal points of the Wales Transport Strategy 2021. This research will analyse these objectives against existing Active Travel developments, to assure the provisions built within Active Travel align with the goals of the WFG Act.

Primarily the goal “A Resilient Wales” that addresses biodiversity and economic, ecological and social resilience, as well as “The capacity to adapt to change”. (*Well-being of Future Generations (Wales) Act 2015*).

Many of the WFG Act’s goals involve the health of the Welsh public. Goals “A Healthier Wales” and “A Prosperous Wales” – WFG (2015) directly address the physical and mental health of the Welsh public. These principles may align with the outcomes observed through the use of Active Travel routes as physical exercise has been shown to have health benefits. Evidence from multiple longitudinal population studies in the UK, show that Active Travel may help an individual improve both their physical and mental health across their lives. – Closer (2023)

Studies from The World Health Organisation (WHO) show that cycling and walking may save lives through the means of reducing physical inactivity and help aid in improving the quality of air. – WHO (2022)

The researcher has a year of design experience working on Active Travel schemes through local authority, and worked alongside Transport for Wales, Sustrans and Mott MacDonald carrying out audits on existing Active travel routes around South Wales using the Active travel walking and cycling audit tools. (*Active Travel Act guidance: walking and cycling route audit tools (appendix H) 2021*).

4. Objectives of This Research

The focus of this research will be to gather both quantitative and qualitative data surrounding existing and proposed Active Travel developments in Wales.

The research will aim to reveal the most impactful aspects of the developments, and to question the sustainability of such.

The impacts that are to be researched will all be relevant to the Active Travel Act and the principles outlined in the WFG Act. The research will aim to discover whether any of the existing or proposed routes funded by the Active Travel grants conflict with the WFG Act's principles.

Such impacts on the environment would potentially be through the means of natural resources, existing infrastructure or through maintenance of the routes via budget concerns or urban decay.

The impacts that Active Travel routes have on the members of the public that use them will be addressed. This will be researched primarily through the effects that Active Travel has on the mental and physical health of the Welsh public.

4.1 Impact on Natural Resources

Gathering data from local authorities carrying out the schemes will provide an understanding into the physical changes to the environment.

Researching public feedback will provide qualitative data on how the developments are currently affecting the environment, and how often the developments are used, addressing how the public are using the routes, and how often.

The significance of local authority data will show what materials, and quantities of which are integrated into the natural environment, and provide quantitative information on the use of natural resources, and the effects of such, on animals, plants, soil and water. Natural Resources Wales consider these resources important for our society and economy through air quality, construction materials and tourism considerations -Natural Resources Wales (2016).

4.2 Impact on Existing Infrastructure

Researching data from existing and proposed Active Travel networks, will provide insight into to how they will integrate with existing infrastructure. The aim being to establish whether connections with new construction, and shared use of existing transport routes will present issues surrounding its current use.

Research will include:

- The safety of users, particularly where Active Travel routes merge with areas of high traffic volume.

- The impact on the existing travel network users, with an increase of active travel user provisions.
- How construction of routes bisecting green spaces may impose issues for properties surrounding, such as drainage, cooling, noise pollution and mental well-being – Natural Resources Wales (2023).
- The effects of the encouraged use of compulsory purchase orders for acquiring private land.

This research will evaluate the impacts of additional pedestrian and cycle provisions, carriageway crossing areas, path / carriageway realignments and road signs. The installation of additional signage instructing cyclists to dismount or rejoin carriageway will be investigated, specifically amidst the existing sign clutter on busy junctions, where information overload for drivers can dilute important communication - Department for Transport (2013) and divert attention from the road, increasing potential for hazard.

4.3 Impact on the Welsh Public

Where the impacts on natural resources and existing infrastructure may be looked in a less favourable light, there are potentially positive results projected towards members of the public by the Active Travel Act that do fit with the WFG's goals.

Given the evidence shown through WHO and Closer, it is possible that the health benefits involved with the use of Active Travel routes, will show a strong alignment with the goals of the WFG Act. Specifically, A Healthier Wales, where a focus on An active nation and community health is considered. The WFG Act's goal uses information from Public Health Wales, of that "Mental ill health costs society in Wales £7 billion a year." – WFG (2019)

Sustrans published a report suggesting that if investments into Active Travel continue, that economic benefits for the public and local businesses may increase. – Sustrans (2022) The report claims that walking and cycling has shown to increase spending on high streets and town centres, aided in reduced congestion and through physical activity of the public, reduced costs incurred by the NHS.

4.4 Maintenance Impacts

The maintenance involved in the volume of new construction regarding that of the Active Travel Networks is significant.

As of 2024, many of the newly constructed routes will have not yet required resurfacing, and the only maintenance in effect would be vegetation management, drainage and damage repair. However, over time as the infrastructure wears, additional, more costly maintenance will need to be

completed.

Minnis' report shows that there has been a minimal change in the public's travel methods, suggesting that non-Active Travel infrastructure will require development and maintenance, as well as the new Active Travel Routes, using maintenance funds from the Welsh Government.

Concerns have been known to arise through South Wales regarding flooding due to blocked drains due to lack of maintenance. Although all new developments in Wales larger than 100 square metres require sustainable drainage systems, where drainage maintenance is less required, - Welsh Government (2010) piped drainage is still often required in the form of swales and culverts where surface water drains from such large areas imposed with the new Active Travel Routes.

5. Methodology

Both secondary and primary data will be collected using an appropriate data pool reflecting the time allocated toward the project.

5.1 Secondary Data

Given the scale of the area in which this research will be conducted, and the availability of public record, secondary data will be collected. Secondary data of Active Travel routes will be collected through desk studies on information released by local authorities regarding locations of such developments, ecological data, road traffic collisions data at relevant locations and the maintenance of the routes.

A presentation of results based on government issued secondary data alone, considering the proposed positive results of the Active Travel developments, may result in statistics that do not align with the overarching answers that this research aims to present.

Data regarding the health benefits of the public through Active Travel can be gathered through reports by the WHO and public information released by Welsh Government organisations.

5.2 Primary Data

The time constraint of this research project will allow enough time for recording primary data.

Measurements of natural and private land acquired will be collected to present the impact Active Travel routes physically affect the environment. This can be measured using digital map databases and scheme drawings.

Researching the use of the routes and seeking data on any potential conflicts with existing travel will be conducted through field research. The researcher frequents site visits to Active Travel schemes, and will make use of interviews and questionnaires directed at users of Active Travel routes and residents

surrounding the developments.

Further interviews may be conducted with any members of the public willing to provide accounts on health benefits involved with Active Travel. Given the nature of such questions involved, anonymous questionnaires would likely provide stronger findings.

6. Research Significance

The research on the environmental impacts of Active Travel developments through objective measuring, the independent accounts from the public, and secondary data from professionals in the industry, aims to establish if any detrimental results appear, and what the most significant impacts are.

Any positive results that are found as a result of Active Travel will be shown and contrasted with the goals of the WFG Act. A comparison can be made between any positive and negative findings, in attempt to reach a conclusion surrounding the researched impacts.

Establishing such will provide local authorities and the Welsh government with feedback on the covered changes of environment, of which can be considered in the development of the Active Travel guidelines and its contribution to the well-being goals of the WFG Act.

7. Literature Review

A research article by Andrew Minnis from the National Assembly for Wales Research Service, addresses the effects that the Active Travel Act has had on the public in regard to how often non-motorised methods of transport are used.

The research paper presents quantitative data from the Welsh Government's annual statistical bulletin of January 2018, showing proportions of how many adults and children walk and cycle for active travel purposes.

The data ranging from 2013 to 2017 shows that there has been a decline in active travel use over these years despite the implementation of infrastructure that would make such methods of travel more accessible. – Minnis (2018).

The findings of Minnis' research showed that consultation and engagement needed improving to assure that developments within Active Travel met the needs of the community – Minnis (2018).

Minnis' research aligns with the Act's impacts on existing infrastructure through the financial factors. The findings suggest that there is potential that funds may have been spent ineffectively, without addressing the needs of the community directly, and that funds may have been better allocated improving and maintaining existing routes on the travel network.

The funding for Active Travel schemes received an additional £266 million – Minnis (2018) in response to the undesirable results of the objectives set out by the act. Additionally, to present day, the Local Transport Fund continues to focus funding to Active Travel schemes allowing for new routes to be developed, however as shown in 2018, doing so may not necessarily influence use of such developments. Where Minnis' report addresses the financial response from the Welsh Government, it does not focus on the impacts of the continuation of funding the scheme, despite the report centring around the consequences of the drawn-out progression of the Act.

Minnis' report addresses the problems with the use of Active Travel between the years of 2013 and 2018 using reliable quantitative data from official government sources, and critiques a number of the responses laid out in the scrutiny inquiry at length.

Despite this, there are issues raised in the inquiry sourced in Minnis' report that go unmentioned that may have helped support its aims. One being the concern of route maintenance.

Only four years following the introduction of Active Travel, a survey concluded that 63% of Active Travel users believed that the condition of cycle routes were either poor or very poor. - NAW (2018) The Welsh Government had concluded that maintenance of routes would be crucial to the Active Travel developments.

The integration of research from primary and secondary sources surrounding impacts of Active Travel, and desk studies on topics highlighted in Minnis' report surrounding the financial concerns will be beneficial to the aims of this research.

The issue surrounding the lack of maintenance for Active Travel schemes should be further researched using quantitative data from local authorities, crucially with more up to date sources reflecting the current state of Active Travel routes.

An approach involving research from the community through qualitative data gathering would be beneficial to the aims of this report.

Surveys from Active Travel users, similar to those conducted by National Assembly for Wales in 2018, can assist in discovering if maintenance issues still exist within the developments, and whether the responses from the Welsh Government have remedied concerns raised in the scrutiny inquiry.

Following this research, data will be available for decisions to be made into what factors are most significant to the impacts of Active Travel developments to the existing environment.

An approach with research more focused on a single aspect of the existing environment and how it is impacted will ensure that valuable qualitative and quantitative data is not diluted, and that the objectives of the report can be backed up by multiple sources.

With the current level of understanding of the topic and concluding a literature review, a focus on maintenance and the funding of such appears to be a significant concern that may compound into an issue in the future. This being a major deviation from what is expected through the goals of the Wellbeing of Future Generation Act.

Following the proposed research and gathering of qualitative data, a final consideration will be made into what the greatest impacts of Active Travel developments are, and what will be presented in the final report.

Data presented can be used by the Welsh Government and local authorities to better improve the Active Travel network and assure it aligns with the Wellbeing of Future Generations Act's objectives.

Another Senedd research article published in 2023 by Francesca Howorth approaches the same topic with recent data, as well as a focus on the benefits of Active Travel surrounding the health impacts on the public and the potential economical benefits. – Howorth (2023)

8. Analysis

The research for this report addressed different impacts of Active Travel use in Wales. Minnis' report showed quantitative data on the physical use of Active Travel routes, as well as a focus on the financial concerns raised, such as an ineffective spending of funds.

Howorth approaches the same topic with recent data, as well as focusing on the data backed health and economic benefits. – Howorth (2023)

The findings that showed drawbacks to the Active Travel Act were:

Natural Resources: The potential for loss of green space and disruption of habitats from developments of Active Travel routes would be present where new paths are chosen as opposed to improving existing carriageways. The WFG Act's goal A Resilient Wales puts a focus on a biodiverse natural environment. As with each impact analysed, the use of the Active Travel routes should be contrasted against what it will cost in natural resources. If the benefits in other areas justifies the use of the provisions then new routes should be considered.

Existing Infrastructure: The effects of Active Travel routes on the existing built environment may not as great an impact as the others. Although an increase of routes within the travel network may have issues through clutter and shared use of provisions. If the Active Travel Act's goals are met, it would be possible that the benefits of reduced congestion on the roads and better health, outweigh the issue of additional network routes.

Although these potential impacts would affect the Welsh public, there is little reason to believe that there is any link them with the WFG Act.

Maintenance: The ongoing need to maintain existing Active Travel routes would become an increasingly large impact to local authorities and the Welsh Government as a whole. There is the financial impact where not only is it required that local authorities continue to develop new routes, but also must maintain them alongside all other existing infrastructure.

If there is a lapse of maintenance of Active Travel routes, other concerns may arise. Areas become unsafe following a lack of maintenance, especially unlit areas where public lighting has failed. Additionally fear of crime may increase within areas where it is clear that no maintenance has been carried out.

One of the greater impacts that showed positive findings was the impact on the Welsh public directly.

Welsh Public: Howorth's report from 2023 referenced two important studies highlighting some of the health benefits that come from Active Travel. The reduction in emissions from the public walking and cycling has been shown to have positive effects on public health.

Health benefits both physical and mental are also directly linked to a more active lifestyle. Additionally local businesses on high streets and town centres have seen economic growth. The benefits Active Travel has on the Welsh public have been shown to have a greater positive impact that is strongly linked with the goals of the WFG Act.

Although the drawbacks appear more in numbers, they do not show to impact the goals of the WFG Act in such a great capacity. The long term positive results shown by the studies in Howorth's report appear to align with the WFG Act goals.

Where Minnis' report five years after the Active Travel Act was introduced didn't include the impacts on the Welsh public, Howorth's included a more in depth analysis covering different topics, similarly to the research in this report.

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10. Reflection

The research proposal exercise has provided a different perspective on research in a continuous project. New skills have been developed through refining the project over three submissions following feedback, and amending aspects of the project such as the title, objectives and research.

Despite that the researcher had worked on Active Travel schemes in Wales, the research involved in this project has provided new opportunities to become further educated on certain aspects involved in the project. These include the legislation surrounding the Active Travel Act and the WFG Act, different individuals' accounts involving the pros and cons surrounding Active Travel routes.

The use of Active Travel impacts as the topic of the research appeared to be a strong focus for the report given the requirement for the WFG Act relevance, and the Active Travel Act being a product of WFG.

In future research projects, a clearer goal set out in the beginning of the report will save editing the research aims and findings later in the project. Additionally using a wider variety of research material from varying sources will provide a more diverse range of qualitative and quantitative data, that will better strengthen the findings presented.

The goals of this research project were achieved through gathering data, primarily from reputable organisations and authorities surrounding the issues regarding Active Travel routes.

The research succeeded in covering most of the potential issues surrounding the topic, and in so used strong sources to reinforce these claims.

An issue towards the beginning of the project was that the objectives of the research were too broad and needed a greater focus on a single subject. Following feedback, the title of the research project was changed to a single focus on Environmental impacts. This required amendments to be made to the report, showing that finalising a clear goal earlier on will save making amendments throughout the project.

If the project were to be started again, the focus of the research would be on a single topic surrounding Active Travel. A focus on the impacts of Active Travel on the Welsh public, without a focus on the routes specifically, would allow for more opportunity to use quantitative data within the project. A single focus would allow for a better analysis of different sources and a better quality comparison between them.

This research project has allowed the researcher to develop a greater understanding of the reasoning behind the development of Active Travel routes. The initial objectives of the research were to attempt to discover drawbacks of new routes. However, following the initial research, the report was better suited for analysing the impacts as a whole and to gather data on the benefits and drawbacks.

Data and accounts gathered through this project will aid in future projects, and in future Active Travel route design in the researcher's work.