Welsh Government Integrated Impact Assessment

Title of proposal:	Remote Working Policy
Official(s) completing the Integrated Impact Assessment (name(s) and name of team):	Gareth Pierce Remote Working Policy
Department:	Economic Infrastructure
Head of Division/SRO (name):	Lea Beckerleg, Head of Remote Working/ Steve Vincent, Director of Economic Infrastructure
Minister responsible:	Lee Waters MS, Deputy Minister for Climate Change
Start Date:	April 2021 (Finalised November 2021)

CONTENTS

Context

This Integrated Impact Assessment (IIA) relates to the Welsh Government's remote working policy. The purpose of the IIA is to review the impacts of the remote working policy in a holistic way, examining its potential social, cultural, economic and environmental impacts. This includes testing the rationale for the policy, the assumptions made, and the extent to which this is supported by evidence. The remote working policy is intended to deliver benefits for workers, businesses and employers, local communities and the environment, with a goal of enabling 30% of Welsh workers to work remotely. The Welsh Government has identified the following key benefits the policy expects to support the environment, local economies, businesses, individuals and communities:

- a reduction in travel time and expense
- more flexibility and better work-life balance
- increased productivity
- less traffic, especially at peak times
- less air and noise pollution; and
- the opportunity to redesign towns and city centres.[1]

The IIA examines the evidence and tests the assumptions underpinning each of the above aspects to help determine the extent to which these benefits are likely to be realised, establish where further evidence is required, and identify where potential mitigating measures are likely to be needed.

To deliver its ambitions, the Welsh Government is considering a number of supporting measures. These include enabling a network of remote working hubs located close to where people live (offering an alternative workspace to the traditional "company office"), guidance to businesses / third sector organisations in equipping their operations for remote or decentralised working, and support to individuals (advice, ICT services, equipment and well-being support).

The policy interlinks with other policy areas such as transport strategy, Fair Work Wales and town and city centre regeneration. This IIA identifies these connections and provides a cross cutting and comprehensive assessment across different areas of impact.

Integrated Impact Assessment (IIA)

---

[1] https://gov.wales/remote-working

The aim of this IIA is to consider both positive and negative impacts in order to guide the development and implementation of the policy. This includes consideration of how the policy:

- fits with the priorities and vision of *Prosperity for All*[2];
- can contribute to the social, cultural, economic and environmental well-being of Wales; and
- how the policy might affect the citizens of Wales, positively or negatively.

The Welsh Government IIA sets out to take a rounded view of the main impacts and provides the basis for future evaluation.

Structure

This IIA is structured under the following sections:

- Section 1. What action is the Welsh Government considering and why?
- Section 2. What will be the effect on social well-being?
- Section 3. What will be the effect on cultural well-being and the Welsh language?
- Section 4. What will be the effect on environmental well-being?
- Section 5. Record of full impact assessments
- Section 6. Conclusion

A number of full impact assessments have been undertaken to support the main report sections outlined above, which are included within this document as appendices:

- A: Children's Rights Impact Assessment
- B: Equality Impact Assessment
- C: Rural Proofing Impact Assessment
- D: Data Protection Impact Assessment screening
- E: Welsh Language Impact Assessment
- F: Biodiversity Impact Assessment
- G: Health Impact Assessment

As the remote working policy programme does not bring forward primary legislation a Regulatory Impact Assessment (RIA) is not required.

SECTION 1. WHAT ACTION IS THE WELSH GOVERNMENT CONSIDERING AND WHY?

1.1 Overview

---

[2] Prosperity for All: economic action plan | GOV.WALES

The Welsh Government's remote working policy has been set up to promote and support remote working (at or near to home) for a substantial part of the Welsh workforce. Our aim is for 30% of Welsh workers to work remotely for some or all of the working week.

In April 2020 the proportion of people working remotely in Wales during the first Covid-19-related lockdown reached 36.8%[3]. Due to Covid-19 pandemic restrictions working arrangements swiftly changed as workers and organisations changed their operations and behaviours to enable their workers to work at home. This was facilitated by the widespread availability of modern technologies including broadband, software and equipment that allowed office-based functions to be in a home setting.

This exceptional circumstance had shown that some workers can be effective and productive without being in a central office. It had negative and positive results. The Welsh Government is actively developing and promoting a policy to support continued remote working for a number of reasons:

- Evidence suggests the pandemic will lead to a permanent shift in working practices for many people, including higher levels of remote working. This is evident in surveys from both businesses and workers (as detailed in the gap analysis tables presented in the sections that follow).
- A number of potential benefits associated with remote working have been identified including social benefits (particularly associated with workplace flexibility, accessibility to jobs, work-life balance), environmental benefits (e.g. reduced commuting travel and related emissions), and economic benefits (productivity impacts, increased local economic activity).

The Welsh Government is developing a strategy to support remote working, by helping individuals and organisations adapt to this change. By taking a proactive policy stance, the Welsh Government is aiming to maximise the wider societal benefits and ensure sustainable, socially optimal changes to working practices that benefit all citizens of Wales and future generations, in line with the aims of the Wales National Strategy (Prosperity for All) and the Well-Being of Future Generations Act, which we discuss further below.

To guide the Welsh Government in its policy development, this IIA will also give extensive focus to the potential negative impacts, identifying how these can be identified and mitigated wherever possible. This includes, in particular:

---

[3] Based on research by Professor Alan Felstead, cited in "Remote Working Policy - Welsh Govt. Economy, Infrastructure and Skills Committee report", January 2021

- Identifying social / societal groups who may be adversely affected by increased levels of remote working, and what supporting measures can be taken to alleviate or prevent such impacts.
- Analysing segments of the economy / types of business likely to lose-out, identifying ways in which organisations can change or adapt.
- Assessing where remote working may lead to negative outcomes at specific locations, e.g. declining footfall in town or city centres, congestion from greater local / short-distance car trips, shortages in housing with suitable home-working space, etc. and measures to mitigate or offset such impacts.

1.2 Consequences of doing nothing

Higher levels of remote working are expected to endure in the Welsh workforce compared to those existing before the Covid-19 pandemic.

The disadvantages for the Welsh Government of taking a passive stance would be twofold:

- Opportunities to maximise levels of remote working and associated benefits could be missed. Without proactive support, some individuals or businesses may be unable or unwilling to implement or sustain remote working arrangements. Constraining factors could include a lack of suitable space for individuals, organisational challenges around adaptation of business operations, or insufficient incentives for businesses to change to a more sustainable model. In such cases, it is likely that work would return to a traditional "office-based" set-up. This would mean potential benefits for both individual workers and businesses, as well as society more generally, could be lost with lower levels of remote working in the long-term.
- In cases where workers and/ or organisations still choose to operate remotely (without any direct policy support or incentive), some individuals or groups could be adversely affected without appropriate support from the Welsh Government. This could include individuals unable to work from home, businesses dependent on demand from office-based activities or their employees, all of whom could face significant disadvantages that require a clear policy response.

In light of the above, a "do nothing" approach is not viable for the Welsh Government; in order to maximise the benefits of increased remote working and mitigate its potential disadvantages, a positive and proactive policy stance is needed.

1.3 Policy development and intervention options

The Welsh Government has set a target of 30% of workers to work away from a formal office setting on a regular basis. There is flexibility in this definition; for some workers it

may mean working 100% from home, for some 60%, for some 20% and so on. Furthermore, remote working refers not just to working at home, but also from working spaces close to home, for example from remote working hubs.

Prior to the onset of Covid-19 the proportion of the workforce working remotely in Wales was 3.8%[4]. Nevertheless, even with some workers preferring a return to the office-based environment, surveys indicate many workers,[5] as well as businesses,[6] are seeing benefits from continuing to work remotely. Estimates from the ONS' April Opinions and Lifestyle Survey[7] showed that during April 2020 40.3% of workers had worked at home during the previous 7 days. In light of this, the Welsh Government sees a target slightly below this level – at 30% - to be reasonable.

To support the policy, the Welsh Government is trialling a number of intervention measures, including:

- A network of remote working hubs in local centres available to people living in the community, with facilities to help improve productivity, connectedness and social interaction via new forms of co-working. A number of hub sites are being piloted across Wales.
- To support businesses / third sector organisations by providing guidance with Business Wales on how to best meet the needs of staff working remotely.
- To offer support to individuals by signposting to guidance such as Access to Work, ACAS and Trade Union advice services.

The Welsh Government is also coordinating the development of remote working proposals with other relevant areas of policy, including:

- **Transport policy**:

---

4 Based on research by Prof. Alan Felstead, cited in "Remote Working Policy - Welsh Govt. Economy, Infrastructure and Skills Committee report", January 2021

5 See for example the YouGov article, "Most workers want to work from home after Covid-19", Sept. 2020: https://yougov.co.uk/topics/economy/articles-reports/2020/09/22/most-workers-want-work-home-after-covid-19

6 See CIPD report, "Flexible Working, Lessons from the Pandemic" (April 2021):

Flexible working: Lessons from the pandemic (cipd.co.uk)

7 https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/coronavirusandthesocialimpactsonthecountriesandregionsofbritain/april2020

- o This includes the Wales Transport Strategy (2021), a key component of which is embedding changes in travel behaviour – including work-related travel – to support sustainability and carbon reduction.
  - o Other related areas of transport policy including active travel, local public transport measures, roads' infrastructure and integrated / flexible ticketing.
- **Town and city centre regeneration**: this includes the Transforming Towns programme, "spend-local" incentive schemes and other programmes to support local regeneration and sustainable development.
- **Digital policy** including the Digital Strategy for Wales, which focuses on both greater availability of digital technology (including broadband connectivity and 5G roll-out) and enhanced digital skills, capabilities and innovation. Other policies relating to digital, such as skills and the digital economy.
- **Business support** policy and delivery
- **Health policy**, including occupational health, mental health, and policies to support physical activity.
- **Climate Change**, Decarbonisation and Net Zero Policy
- **Welsh Language Policy**
- **Local Government**
- Policy relating to the **public sector estate and property solutions**
- Equality and inclusion related policies

1.4 Stakeholder engagement

The remote working policy has been subject to detailed review, scrutiny and debate by the Senedd's Economy, Infrastructure and Skills Committee. The Committee's report into the proposals was recently shared on the Welsh Government's website,[8] whilst details of the proceedings of committee meetings are fully publicly available.[9]

The Economy, Infrastructure and Skills Committee held a public consultation, via the Senedd website, which ran from 7 December 2020 to 17 January 2021. A total of 18 responses were received from a number of stakeholders, including business, academia and the third sector, along with evidence submitted by oral witnesses.[10]

---

[8] https://senedd.wales/media/nbbhxbrn/cr-ld14202-e.pdf

[9] https://business.senedd.wales/ieIssueDetails.aspx?IId=34945&Opt=3

[10]

https://business.senedd.wales/mgConsultationDisplay.aspx?id=414&RPID=1525532301&cp=yes

The Welsh Government has since run a public engagement exercise to elicit views on "Shaping the future of the Welsh Workplace", with a focus on remote working arrangements and views on potential local working hubs. Running from 11 February until 26 March 2021, the public survey included an interactive map on which individuals could highlight their preferred locations for a remote working hub.[11] Further engagement exercises will take place to monitor sentiment as the working landscape changes.

1.5 Alignment with Five Ways of Working and Well-being Goals

The table below sets out how the Welsh Government's development of the remote working policy aligns with the Five Ways of Working that underpin the Sustainable Development Principle, as defined in the Well-being of Future Generations Act.[12]

Five Ways of Working	How the proposal applies this
Long Term	The Welsh Government is proactively responding to a long-term behavioural change that has been accelerated by the need to work at home due to Covid-19 pandemic restrictions. The policy is being developed to maximise the long-term benefits of increased remote working and support sustainable long-term growth, whilst mitigating potentially adverse impacts.
Prevention	Higher levels of remote working are expected to occur as a result of underlying changes in the economy. The Welsh Government, in taking action and proactively engaging with this process to mitigate and prevent the negative impacts that would otherwise have occurred in a "do nothing" scenario.
Integration	The Welsh Government is aware that increased remote working has wide-ranging implications for other policy areas such as transport, planning and development, the labour market and the economy. This IIA gives specific consideration of how the policy relates to the Well-

---

[11] https://gweithioobellremoteworking.commonplace.is/about

[12] https://www.futuregenerations.wales/about-us/future-generations-act/

Five Ways of Working	How the proposal applies this
	being goals – discussed further below.
Collaboration	The Welsh Government has taken an open and collaborative approach to the development of the policy. This includes engaging with other areas of policy-making within the Welsh Government (see section 1.3 above), as well as collaboration with local authorities, universities, businesses, Third Sector organisations and other stakeholders.
Involvement	The Welsh Government has undertaken both public and stakeholder engagement (as outlined in section 1.4 above) and is continuing to develop the policy in a way that involves people and communities affected by the changes across Wales. This includes, for example, engagement with the public on proposed remote working hubs.

The Remote Working Policy intends to deliver positive outcomes in relation to each of the well-being goals set out in the Well-being of Future Generations Act, as outlined in the table below. This IIA will examine the evidence available to determine the extent to which these aims are fulfilled, and will identify where further analysis or evidence is needed in each area.

Well-being Goals	How the proposal helps to achieve the goals
A prosperous Wales	The Remote Working Policy aims to support Wales' growth as an innovative, productive and low carbon society, by supporting more flexible and productive working practices. The intention is to improve working conditions by allowing remote working that better fits individuals' circumstances, whilst improving access to job opportunities to all segments of the population, with less geographic dependency.
A resilient Wales	The Remote Working policy aims to support a more resilient and sustainable natural environment by reducing levels of commuting / work-based travel, and the associated carbon impact. More remote working

Well-being Goals	How the proposal helps to achieve the goals
	can also increase business or organisational resilience against future crises and incidents.
A healthier Wales	The Remote Working policy aims to enhance physical and mental health by supporting working arrangements that better fit to individuals' circumstances and non-work obligations, such as supporting those with childcare or other caring responsibilities. The policy aims to support improvements in work-life balance by reducing the time spent amongst the workforce for commuting.
A more equal Wales	The Remote Working policy is intended to enhance the ability of people across different communities to access employment and training opportunities, with less dependency on their geographic location. The ability to work remotely (including using remote hubs) is intended to lower potential barriers to employment amongst those for whom commuting longer distances is challenging, for affordability or other reasons (e.g. those a health condition).
A Wales of cohesive communities	The Remote Working policy aims to support more coherent local communities, by increasing the presence of workers in their residential area or wider locality during the working week. This can help support decentralised growth and regeneration of smaller population centres, with greater demand for locally provided goods and services.
A Wales of vibrant culture and thriving Welsh Language	The Remote Working policy aims to encourage greater engagement in cultural activities and increased usage of the Welsh Language, by advocating a more joined-up and digitally connected workforce with an improved work-life balance, allowing greater time for pursuit of cultural activities which can create new opportunities to use the Welsh Language.
A globally responsible Wales	The Remote Working policy intends to promote an innovative, open and adaptable workforce that is equipped to respond to changes in society and the wider world, which uses digital and other technologies to effect change and which engages positively and responsibly to future

Well-being Goals	How the proposal helps to achieve the goals
	challenges. This will enhance Wales' contribution towards global well-being, and its role in shaping it.

2.1 How (either positively or negatively), and to what extent (significant/moderate/minimal impact), will the proposal impact on people and communities?

The Remote Working policy will have a range of impacts which will vary across different groups of the population and in different communities.

The principal evidence comparing impacts of the policy across different groups in Wales is presented in the Equality Impacts Assessment – presented in Annex B of this IIA, and summarised in section 2.3 below.

The Health Impacts Assessment provides detailed analysis on how the policy will affect the physical and mental health of different segments of the population. This is presented in Annex G of this IIA (and summarised in section 2.5 below).

Additionally, this IIA provides an overview of the impacts of the policy on children's rights (presented in Annex A and summarised in section 2.2 below) and its impacts on rural communities through the Rural Proofing Impact Assessment (presented in Annex C and summarised in section 2.4 below).

2.2 Children's Rights

A full assessment of the impacts of the Remote Working Policy on children's rights is presented in **Annex A** of this IIA document.

In summary, the assessment of children's rights has identified the following articles of the UN Convention on the Rights of the Child as being relevant to the Remote Working policy proposals:

- **Article 3 – best interests of the child**
  - The best interests of the child must be a top priority in all decisions and actions that affect children.
- **Article 23 – children with a disability**

- A child with a disability has the right to live a full and decent life with dignity and, as far as possible, independence and to plan an active part in the community.
- **Article 27 – adequate standard of living**
  - Every child has the right to a standard of living that is good enough to meet their physical and social needs and support their development. Governments must help families who cannot afford to provide this.
- **Article 31 – leisure, play and relax**
  - Every child has the right to relax, play and take part in a wide range of cultural and artistic activities.

The Remote Working policy has the potential to support children's rights under Article 27 by increasing access to employment opportunities across Wales (including for disadvantaged groups).

Greater levels of remote working mean less geographical dependency and increased scope for those living in remote and, in some case, disadvantaged communities to access work. However, the impacts on household finances could vary, with potential negative impacts on housing and utility costs, but balanced with positive impacts on commuting costs. For children whose parents or guardians work in jobs which are dependent on spending from office-based sectors (such as coffee shops and office support services), they could be at risk of suffering adverse effects associated with less people in central workplaces or reduced household income.

The amount of sixteen and seventeen year olds who are in employment is small, according to data from the ONS, which shows that only 13% of young people in this age group are working. This increases to 60% for young people aged eighteen to twenty four.[13] For those young people who are either in, or looking for work, the impact is mixed as it may provide more opportunities for those in areas where it is otherwise difficult to access jobs or training. Young people are more likely to be employed in sectors that are dependent on spending from office-based sectors, and these jobs and opportunities may

---

[13]ONS, Employment and Employee Types, August 2021. Available online at:

 A05 SA: Employment, unemployment and economic inactivity by age group (seasonally adjusted) - Office for National Statistics (ons.gov.uk)

be at risk.[14] Growth in job vacancies (as of August 2021) saw a continual increase across the majority of sectors compared to pre-pandemic levels.

The role of Working Wales[15] is to support people looking to change the sector they work in. Additionally, Welsh Government are supporting town centre regeneration including its Retail Strategy, and Fair Work Wales are also helping to address challenges the sector faces.

The policy has the potential to support children's rights under Article 31 by enabling parents and guardians to spend more time working at home, by reducing time spent commuting enabling more opportunities to take part in leisure and activities together. There are important potential negative impacts for children in families at risk of domestic abuse, or family members with mental health and substance abuse issues, where the child or young person's exposure to negative situations or attitudes is amplified – for example due to the aggressor being at home more.

2.3 Equalities

A full assessment of the potential positive and negative impacts for protected characteristic groups (PCGs) and for low-income households is provided in the Equality Impacts Assessment, presented in **Annex B** of this IIA document.

The key points emerging from the analysis undertaken to date are as follows:

- There are a range of potential positive and negative impacts for different PCGs.
- Low income groups are generally less able to work from home.[16]
- PCGs are more likely to be employed in low-paid sectors, and therefore less likely to be able to work at home (women, young people, disabled people, some Black, Asian and minority ethnic groups).[17]

---

[14] Resolution Foundation (2020), Young workers in the coronavirus crisis: Findings from the Resolution Foundation's coronavirus survey. Available online at: https://www.resolutionfoundation.org/publications/young-workers-in-the-coronavirus-crisis/

[15] https://workingwales.gov.wales/

[16] See "UK Poverty 2020/21", Joseph Rowntree Foundation (full report downloadable under: https://www.jrf.org.uk/report/uk-poverty-2020-21)

[17] See, "Over-exposed and under-protected: the devastating impact of Covid-19 on Black and Minority Ethnic communities in Great Britain", Runnymede Trust (https://www.runnymedetrust.org/uploads/Runnymede%20Covid19%20Survey%20report%20v3.pdf)

- PCGs including younger people and people from some Black, Asian and minority ethnic communities are more likely to have been affected by job losses during the pandemic, and may also be disproportionately affected by any further job losses in the retail and hospitality sectors as a result of reduced footfall/spend in town/city centres. [18]
- Data from September to November 2021 shows that there are 1,219,000 job vacancies in the UK[19], which could suggest that the labour market may recover more quickly than was first assumed. Further monitoring is required in order to understand future trends.
- A potential risk of exacerbating existing inequalities in the labour market e.g. white-collar workers benefiting from the ability to work at home compared to blue-collar workers who may not be able to work at home.[20]
- A potential geographical disparity. For example, lower income areas or regions with fewer white-collar workers may be less likely to see benefits, with the related risk that regional inequalities are further entrenched
- Low-income areas with inadequate or poor broadband connectivity could be even more adversely affected by the policy.

Examining the above aspects in further detail, the **potential positive impacts** of the policy include the following:

- Barriers to office-based employment can be removed for some groups, including some disabled people, women, pregnant women and women on/returning from maternity leave.
- For young people, including those from lower-income households or in rural areas, who may be able to look for work or training opportunities over a wider geographical area than would otherwise be possible.
- For women and men with caring responsibilities
- For disabled people as a result of increased use of technology allowing greater participation and inclusivity in terms of events, networking etc. and reduced requirement / expectations around commuting which may be challenging or difficult for such groups.

---

[18] See for example, "Young workers in the coronavirus crisis", Resolution Foundation (https://www.cipd.co.uk/Images/flexible-working-lessons-from-pandemic-report_tcm18-92644.pdf)

[19] Vacancies and jobs in the UK, ONS, August 2021 available online at:

 Vacancies and jobs in the UK - Office for National Statistics (ons.gov.uk)

[20] See Senedd Research article: "Remote Working – the New Normal?" (https://research.senedd.wales/research-articles/remote-working-the-new-normal/)

- For religious groups as a result of increased flexibility to attend religious events, festivals etc.
- For low-income groups as commuting costs could decrease and they may be able to access a wider pool of jobs.
- For older workers, who have traditionally had a greater tendency to work at home, and for whom commuting may be a less attractive option because of a greater likelihood of health issues, disability or caring responsibilities.

The **potential negative impacts** include the following:

- For young people and people from some Black, Asian and minority ethnic communities who may be less likely to have suitable workspace in the home.
- Cost burden (fuel, broadband, equipment etc) for those in low-pay jobs, including young people.
- For some groups of disabled people, including autistic people and those with sight or hearing impairments, who may be more likely to experience communication difficulties associated with remote working technology.
- For some disabled people due to increased risk of loneliness and isolation.
- For LGBT+ people, particularly young people living in the family home, who may be at risk of isolation, loneliness or homophobia/transphobia at home.
- For people at risk of experiencing domestic abuse due to increase in isolation / loss of contact with colleagues, with women far more likely to be adversely affected than men.
- For those more at risk of digital exclusion, including older people, disabled people, lower income groups, and those residing in locations with poor broadband connectivity.

Data gaps and areas for further work

The assessment undertaken has identified a number of area where further monitoring would be useful:

- The demographic groups of people who are working from home, those who are unable to and the reasons for this.
- The number of Job Vacancies and the sectors these jobs are in.
- The ONS survey of the social impacts of coronavirus is updated each month; continuing to monitor this data as lockdown restrictions are eased will help to give a better understanding as to which PCGs may be more, or less likely, to continue working from home in the short to medium term.
- Specific data gaps that have been identified are around potential impacts for transgender people specifically, rather than for LGBT+ people as a group, and potential impacts for LGBT+ people from Black, Asian and minority ethnic communities.

2.4 Rural Proofing

The Rural Proofing Impact Assessment considers the impacts of the Remote Working policy on rural communities and how the policy will address the needs of rural areas.

Rural proofing is a government commitment, underpinned by the principles of social justice, sustainability, equality and fairness, and includes actions to improve the quality of life for those living in rural communities in Wales.

Remote working can make it easier for people in rural communities to connect, as people don't have to leave their local area to seek and secure work.

Increased localism in shopping and hospitality, leading to additional local spending in rural areas can also create jobs and spur business growth

Remote Working may be beneficial to the Welsh Language in rural areas, as Welsh speakers are able to live and work in the Welsh heartlands, and have more time to speak Welsh at home.

Conversely, this might mean that rural areas become more desirable and this could cause an increase in house prices. This has been seen in the last 18 months

Rural areas have lower availability of superfast and ultrafast broadband compared to urban areas, and the percentage of homes and businesses with indoor 4G and voice call coverage from all four network providers is lower. This will be an obstacle to working at home for those people; local work hubs, where available, can offer a workable alternative.

2.5 Health

The HIA for the Welsh Government's Remote Working policy is provided in **Annex G** of this document.

A Health Impact Assessment (HIA) considers how the health and well-being of a population may be affected by a proposed action, be it a policy, programme, plan, project or a change to the organisation or delivery of a public service.

The Public Health (Wales) Act 2017 places a duty on the Welsh Ministers to make regulations which require public bodies to carry out health impact assessments in specified circumstances which includes policies, plans and programmes which have outcomes of national or major significance, or which have a significant effect at the local level on public health. Therefore, it is considered best practice to identify the health effects linked with the proposal to introduce a remote working policy.

Public Health Wales produced an extensive Health Impact Assessment of the 'Staying at Home and Social Distancing Policy' in Wales in response to the COVID-19 pandemic. We have drawn heavily on this piece for evidence and identification of impacts.[21]

Some potentially positive impacts include**:**

- more time for planning meals and exercise
- having more time to spend with family and in the community
- easier access to green space and increased positivity and flexibility in the working day.

Some potentially negative impacts include:

- A risk of a more sedentary lifestyle, especially if the commute included exercise or active travel
- People working in housing that may not be appropriate for work due to lack of space, light, or lack of access to digital services/infrastructure.
- The risk of (particularly women) being overwhelmed by managing both work and the family or caring obligations.
- Musculoskeletal conditions may result because of homeworking in inappropriate living conditions.

With regard to Mental Health, there will be both potential positive and negative impacts which are considered in depth in the Health Impact Assessment. By and large impacts vary depending on the situation, condition and disposition of individuals.

Please refer to Annex G for the results of the HIA.

3.1 Cultural Well-being

3.1a How can the proposal actively contribute to the goal to promote and protect culture and heritage and encourage people to participate in the arts sports and recreation?

By reducing commuting time, people may have more leisure time to allow them to participate in arts, sports and recreation. Additional disposable income from commuting cost savings could also be spent on leisure activities and tourism.

---

[21] https://phw.nhs.wales/news/staying-at-home-policy-has-reduced-spread-of-coronavirus-

Culture and heritage associated with tourism could be positively impacted if people are able to be more flexible about time and place of work – allowing them to visit local and national heritage and culture centres.

Many businesses in cultural and sports sectors have moved content online, which has reached more people outside their local area, and even internationally - this could help increase the use of the Welsh language to different areas across Wales (and possibly overseas), and help the Welsh language user by participating in the language outside their usual communities.

It also raises the profile of Welsh culture internationally, providing new audiences and new revenues streams for these organisations and also creators of content.

> **3.1b Is it possible that the proposal might have a negative effect on the promotion and protection of culture and heritage, or the ability of people to participate in arts, sport and recreation? If so, what action can you take to avoid or reduce that effect (for example by providing alternative opportunities)?**

Arts, culture, heritage sites, sport and recreational organisations which benefit from their physical proximity to offices, may be negatively impacted if:

- Because of people visiting urban central workplaces less, they may spend less time and money at cultural organisations located near central workplaces. Conversely, workers that attend central workplaces less frequently may have extra disposable income (from reduced commuting costs), therefore could spend more time, and more money on recreational activities.

For instance, people may treat a trip into the central workplace as a social interaction day making use of hospitality and event venues. This will need to be monitored to understand how spending behaviours change.

3.2 Welsh language

A full assessment of the impacts of the Remote Working policy on the Welsh language is provided in **Annex E** of this IIA document.

In summary, by enabling workers to be flexible about their workplace location this could allow Welsh language users to spend more time in their local communities and with their families, which may benefit those communities by helping the language to flourish. The remote working hubs will enable the opportunity to promote the use of the Welsh language and allow for community gatherings.

Remote working alters how people interact and communicate at work, which may reduce the use of and exposure to the Welsh language in the workplace. Informal opportunities to speak Welsh with colleagues could be impacted in particular. The links between remote

working, technology and the Welsh language need further research and investigation to understand the full impacts and mitigations.

   Remote working may allow non-residents of Wales to work with Wales-based teams more easily and increase their exposure to Welsh language and culture online. Working remotely in hubs could provide an opportunity for people from different organisations and communities to share space and use the Welsh language.

SECTION 4. WHAT WILL BE THE EFFECT ON ENVIRONMENTAL WELL-BEING?

5.1 Natural Resources

The evaluation of the Remote Working policy's potential impacts on environmental well-being begins with a natural resources assessment.

This assessment has been undertaken in the context of the Welsh Government's commitment to supporting environmental well-being, reflected in the Well-being of Future Generations (Wales) Act 2015. This outlines seven national well-being goals, which are considered throughout this IIA (see section 1.5). Of particular relevance to the assessment of environmental well-being are the goals:

- "A resilient Wales'" (focusing on social, economic and ecological resilience and climate change adaptation),
- "A globally responsible Wales" (focusing on economic, social, environmental and cultural well-being of Wales and its resulting contribution to global well-being.")
- "A Healthy Wales" (focusing on people's physical and mental well-being)
- "A More Equal Wales" (focusing on enabling everyone to reach their potential).

Key to the delivery of the above Well-being Goals is Wales' Natural Resources Policy[22], which informs the assessment of the Remote Working policy's specific impacts on natural resources usage and sustainability. The Natural Resources policy focuses on improving the way natural resources are managed and used. It defines the principles for Sustainable Management of Natural Resources (SMNR), and sets out the following three National Priorities which, when implemented, will help to achieve SMNR:

1: Delivering nature-based solutions - Nature-based solutions are about taking approaches which transform many of Wales' big challenges into opportunities for innovative solutions and help deliver across all the well-being goals. They include a wide range of approaches that can be applied in lots of different situations, including:

- To support climate change adaptation and mitigation;

---

[22] Natural resources policy | GOV.WALES

- To improve infrastructure;
- To improve land and water management; and
- To support health and well-being.

2: Increasing renewable energy and resource efficiency - Increasing renewable energy and resource use efficiency help to reduce the pressures on Wales' natural resources and also provide new jobs and market opportunities. It also contributes to the reduction in climate change emissions through the use of clean energy.

3: Taking a place-based approach - This is about supporting the new ways of working (outlined in the Future Generations Act) by involving local communities in the design and development of proposals, so that they are able to benefit from the natural resources in their own local areas and deliver better results.

The three priorities described above are designed to tackle the national challenges for Wales' natural resources whilst also supporting opportunities for prosperity and well-being.

To evaluate the Remote Working Policy's contribution to the three National Priorities, analysis is needed in relation to the following:

- The extent to which increased levels of remote working might affect noise and air pollution
- The opportunities that remote working could bring to help reduce the pressures on natural resources, such as through resource efficiency and renewable energy.
- The extent to which remote working supports community cohesion.
- How far remote working supports preventative approaches to health outcomes. This includes:
  - Health implications of transport-related air and noise pollution and whether this could change as a consequence of increased remote working
  - The extent to which increased remote working could improve or worsen physical inactivity;
  - The potential impacts of increased remote working – both positive and negative – on mental health.

5.2 Biodiversity

A Biodiversity Impact Assessment is included in Appendix F. In summary it is not considered that the policy for remote working would result in strongly positive or negative impacts for biodiversity across Wales. Key points include the following:

Biodiversity net gain - Where buildings are adapted into co-working hubs, opportunities exist for biodiversity gains where external space permits. This would likely only represent small scale improvements, but incrementally would contribute to net gains.

As more people potentially remain close to their residential homes, it is possible that local green areas become more valued by the local community (who now spend more time benefiting from them). This could present opportunities for community run gardens, open spaces, woodlands or other green spaces to develop which would benefit local biodiversity whilst also contributing to community cohesion and better health outcomes for local people.

Some remote working hubs also provide an opportunity for people to benefit from nature and green space. For example one of the first pilot hubs, Costigans in Rhyl, has a community gardening project which includes such things as hanging baskets, bird boxes and an e-bike enclosure with a wildflower roof.

The Valleys Regional Parks well-being hubs specifically aim to connect the world of work with green space. They are located in attractive natural settings and aim to introduce new audiences to these sites where remote workers will be exposed to natural habitats and on-site information about conservation. It is hoped this will increase 'ecoliteracy' as well as foster a greater appreciation of nature and biodiversity generally.

Travel patterns and emissions – Travel patterns are not yet known post-Covid. Commuting frequency is likely to decrease if 30% of Wales' workforce work remotely - however, people may also undertake less frequent, but longer commutes and more local journeys, the combined effects of which may actually mean a greater level of travel in total. Emissions as a result would therefore adversely impact biodiversity through nitrogen deposition. More research is needed in this area and tracking of trends and statistics will be required.

5.3 Climate change

Prosperity for All: A Low Carbon Wales (2019)[23] sets out the Welsh Government's approach to cut emissions and increase efficiency in a way that maximises wider benefits for Wales, ensuring a fairer and healthier society. It sets out 100 policies and proposals that directly reduce emissions and support the growth of the low carbon economy. In the section below, we consider the impacts of this policy against A Low Carbon Wales.

5.3a Decarbonisation

The Environment (Wales) Act 2016 sets a legal target of reducing emissions by a minimum of 80% by 2050 and places a duty on the Welsh Ministers to set a series of interim targets (for 2020, 2030 and 2040) and carbon budgets. The budgets will set limits

---

[23] Welsh Government. (2019). Prosperity for all: A Low Carbon Wales. Available online at: https://gov.wales/prosperity-all-low-carbon-wales

on the total amount of emissions emitted in Wales over a five-year period, act as stepping stones and ensure regular progress is being made towards the long term target.

The need to reduce our carbon footprint is a key driver for our remote working ambitions. Reducing commuting and business travel and 'softening the peaks' of rush hour helps to reduce carbon emissions, pollution and congestion and meeting the challenges of the climate emergency.

More research is required to determine whether post pandemic behaviour will actuallya result in less traffic overall, or whether this would instead become distributed across the day as fewer people need to travel during peak times, but instead choose to make journeys (for other purposes) in off peak times.

The benefits of this policy can be maximised when working in concert with other carbon reduction policies and plans such as those for active travel, modal shift and home energy improvement schemes.

Working locally in a hub space rather than at home has the potential to create some economies of scale in energy use while also not commuting. Although there are no studies on this matter as yet, the pilots we are running are collating data on modes of travel to and from the hubs.

The policy for remote working is therefore likely to have mixed impacts in regard to levels of emissions from different sources, due to changes that are likely in a number of areas. These are outlined below:

Land use –An increase in remote working could result in less demand for town and city centre office use and a shift to higher density uses outside of these areas. It may affect retail and hospitality sectors in urban centres as less people may visit these areas during the traditional working week[24]. In the short to medium term this is unlikely to lead to new development, but rather repurposing existing buildings for use as co-working hubs. Such changes in land use offer the opportunity for space in urban centres to be reallocated to other things, while local neighbourhoods in non-central locations may experience an increase in demand for new services, potentially in the vicinity of remote working hubs. At this stage it is not anticipated that there would be significant land use changes and therefore negligible decarbonisation impacts relating to land use.

Transport patterns – emissions resulting from private car use constitutes a high proportion of people's carbon footprint. Where commuting is cut by 30%, there tends to be an expectation that emissions would also be reduced by this amount. However, the outcomes are not as straightforward due to numerous other factors involved.

---

[24] https://www.centreforcities.org/blog/why-working-from-home-hurts-the-high-street/

In 2020 the COVID-19 pandemic and the resulting restrictions brought in across the UK had a major impact on greenhouse gas emissions during this period[25]. Carbon dioxide (CO_2) emissions in the UK are provisionally estimated to have fallen by 10.7% in 2020 from 2019, to 326.1 million tonnes (Mt), and total greenhouse gas emissions by 8.9% to 414.1 million tonnes carbon dioxide equivalent (MtCO2e). Total greenhouse gas emissions were 48.8% lower than they were in 1990[26].

This large fall in 2020 is primarily due to the large reduction in the use of road transport during the nationwide lockdowns and the reduction in business activity. CO2 emissions from transport fell 19.6% in 2020, accounting for over half of the overall fall from 2019, and in the business sector they fell by 8.7%. Conversely, CO2 emissions from the residential sector increased by 1.8% as more people stayed at home. CO2 emissions from the energy supply sector fell by 11.9% following lower demand during the pandemic and the continued reduction in fossil fuel use in power stations[27].

Newer statistics and estimates are not yet available and ongoing monitoring is required to track emissions, travel patterns and behaviour and energy use.

Arup consulting undertook a study for Welsh Government to estimate the carbon savings from increased remote working.[28] This study concluded that the potential cumulative emissions saved from all car trips that would be foregone with different levels of remote working between 2021 and 2040 could be between 1.07 and 2.61 $MtCO_2$ dependent on the chosen remote working scenario.

Towards the end of the time period modelled, in the Wales Carbon Budget Period 5 (2036-2040) the cumulative carbon saving would be the equivalent of between 2.53% and 8.59% of the total tailpipe carbon emissions from cars in Wales depending on the chosen scenario. The upper estimate for total carbon savings over the 20 year period is equivalent to heating all homes in Wales for around 300 days. However the calculations within the study assume any time saved by remote working will not result in increased travel demand for other purposes, for example leisure.

---

[25] 2020 UK greenhouse gas emissions, provisional figures (publishing.service.gov.uk)

[26] Ibid

[27] Ibid

[28] Arup, 2021. Carbon Savings from Remote Working in Wales

However, other research suggests that remote workers actually make more car trips in total[29]. This is a result of making shorter, more frequent local trips that are non-commute journeys, for example trips to local shops during breaks from work, or making use of time not spent commuting participating in leisure activities accessed by car. With a car at home during the day, there is also the possibility that more family members now have access to the vehicle.

Buildings and infrastructure – An increase in remote working could lead to higher residential heating needs - the current picture is not yet clear on this matter, as there are many variables to be considered, including the type and size of housing stock and office properties in Wales, average distances of commuting, modes of transport, age of cars and so on all playing a part.

A 2020 study from WSP[30] positions that whilst buildings-based emissions can be reduced by working at home during the summer, during the winter the opposite is true if the whole house is heated. This study uses commuting data from England which may be skewed by commuting patterns for London and the South East, and it would be useful to see the methodology applied to the situation in Wales.

Other studies project that emissions savings are possible,[31] while a 2020 literature review[32] notes that:

Despite the generally positive verdict on teleworking (otherwise known as remote working or working at home) as an energy-saving practice, there are numerous uncertainties and ambiguities about its actual or potential benefits. These relate to the extent to which teleworking may lead to unpredictable increases in non-work travel and home energy use that may outweigh the gains from reduced work travel.

There are a number of ways in which the carbon benefits of remote working can be maximised. Working locally rather than at home has the potential to create some economies of scale in energy use while not commuting, although there are no known studies on this matter as yet.

---

[29] He, S.Y. and Hu,L. (2015) Telecommuting, income, and out-of-home activities. *Travel Behaviour and Society*, Volume 2, Issue 3, 2015.

[30] WSP, 2020. Office vs Home working. How we can save our carbon footprint. Available at: https://www.wsp.com/en-GB/insights/office-vs-home-working-how-we-can-save-our-carbon-footprint

[31] Working from home can significantly cut CO2 emissions – EnvironmentJournal

[32] A systematic review of the energy and climate impacts of teleworking - IOPscience

Making homes more energy efficient can offset the impact of working at home. UK housing stock is among the least energy efficient in Europe[21]. While new homes could follow specific thresholds of heat retention, older properties including those that are listed or within conservation areas could struggle to meet required standards.

Some corporate businesses are offering schemes for staff to improve the energy efficiency of their homes as part of their commitment to achieving net zero and government's offer incentives, loans and grants such as the Domestic Renewable Heat Incentive[33]

Energy demand and use – Extra resources, while limited, are needed for fitting out of co-working hubs. We are encouraging the use of low cost and repurposed options to minimise unnecessary impacts on natural resources

If entire central workplace offices are kept open while underused as well as running local work hubs, energy demand will increase, with co-working spaces having a similar impact on the environment as traditional workplace offices. The choice of location for these co-working spaces is important if energy demand is to be reduced as well as organisations and businesses changing how they run central workplace offices. In the short term, this may mean 'mothballing' floors or areas to keep energy use and costs down.

5.3b Adaptation

The Environment (Wales) Act 2016 requires the Welsh Government to reduce emissions of greenhouse gases in Wales to net zero by 2050, with a system of interim emissions targets and carbon budgets. Under Section 39 of the Act Welsh Ministers must prepare and publish a report for each budgetary period setting out their policies and proposals for meeting the carbon budget for that period.

In December 2020, Welsh Ministers accepted advice from our statutory advisors, the Climate Change Committee (CCC) and committed to achieving 100% emission reduction by 2050. In March this year we increased the ambition of Carbon Budget 2 (2021-2025) and set Carbon Budget 3 (2026-2030) in line with the CCC advice, ensuring Wales is now on a net zero trajectory. Welsh Decarbonisation plan on 28 October 2021, setting out how we will meet Carbon Budget 2. [34]

5.4 Environmental Impact Assessment (EIA)

Where the impacts of a development have the potential to significantly affect the environment, Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations (2017) require that an Environmental Impact Assessment (ENIA) must be

---

[33] BEIS Domestic RHI Calculator (renewable-heat-calculator.service.gov.uk)

[34] Welsh Government, New Zero Wales plan (2021) available online a Net Zero Wales | GOV.WALES

carried out to determine the significance of these effects. The ENIA Regulations set out a procedure that must be followed for certain types of project before they can be given consent. This helps to ensure that the public and the relevant authority understand the potential effects, and the scope for reducing them.

Based on the 2017 regulations, the current Remote Working policy proposals (including the development of a network of remote working hubs and other measures to support remote working) would not require an ENA.

5.5 Strategic Environmental Assessment (SEA)

A Strategic Environmental Assessment applies to plans, programmes and strategies required by legislative, regulatory or administrative provisions, which are either subject to preparation and/or adoption at a national, regional or local level, or are being prepared by an authority for adoption through a legislative procedure (for example an Act of Parliament or regulation). An SEA is required if the plan, programme or strategy is likely to have an impact in certain key areas – agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, tourism, town and country planning or land use.

To determine whether a SEA is required, consideration is given to the following questions:

- Is what is being developed either a plan or programme?
- Will it have implications either for future land-use planning decisions or other development consents?
- Will it require an assessment under the Habitats Directive or have significant effects on the Environment?

The Remote Working policy is a policy and therefore not a plan or a programme. As a policy it does not have direct implications for future land use planning since the expectation is for remote working hubs to be developed using existing buildings and community facilities, and is not expected to result in new-build properties, at least in the short- to medium-term. This does not preclude the possibility that new buildings could be developed through private funding, as funding mechanisms are not yet known. In the event that such planning approval is sought they would be subject to appropriate environmental assessment as required (e.g. Environmental Impact Assessment under the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations, 2017).

The policy would not require HRA (see Section 5.6 below) or have significant effects on the environment and therefore no SEA is required.

5.5 Habitat Regulations Assessment (HRA)

The purpose of an HRA is to avoid a plan or project having a significant effect on European sites, either alone or in combination with other plans or projects. European sites are designated under the Nature Directives as either Special Areas of Conservation

(SACs) and Special Protection Areas (SPAs) – collectively known as Natura 2000 (N2K) sites. HRAs also apply to Ramsar wetland sites (designated under the 1971 Ramsar Convention for their internationally important wetlands), candidate SACs (cSAC), proposed Special Protection Areas (pSPA), and proposed and existing European offshore marine sites.

The proposals would not affect European designated sites and therefore do not require a Habitats Regulations Assessment (HRA) by virtue of the Conservation of Habitats and Species Regulations 2010 (Consolidated in 2017).

** Evidence Table and Gap Analysis **

The table below summarises selected key evidence used in the assessment of impacts on environmental well-being, and highlights key gaps.

Evidence/data required	Source
A systematic review of the energy and climate impacts of teleworking (University of Sussex)	https://iopscience.iop.org/article/10.1088/1748-9326/ab8a84
Community gardens – use of and management options ** Data gap: More evidence needed to assess community participation.	Witheridge, J. and Morris, N. J. 'An analysis of the effect of public policy on community garden organisations in Edinburgh', *Local Environment*, 21(2), pp. 202–218, 2016.
Energy Use comparisons between remote and office-based workers.	Arup, 2021. Carbon Savings from Remote Working in Wales WSP, 2020. Office vs Home working. How we can save our carbon footprint. Available at: https://www.wsp.com/en-GB/insights/office-vs-home-working-how-we-can-save-our-carbon-footprint Rietveld, P. Telework and the transition to lower energy use in transport: On the relevance of rebound effects. *Environmental Innovation and Societal Transitions, Vol 1 issue 1, pp146-151, 2011.*

Evidence/data required	Source
Total travel by telecommuters Travel Emissions Data gap: more review of similar research looking at total travel of telecommuters – to include non work travel.	He, S.Y. and Hu,L. Telecommuting, income, and out-of-home activities. *Travel Behaviour and Society, Volume 2, Issue 3, 2015.* Does working from home reduce CO_2 emissions? An analysis of travel patterns as dictated by workplaces. *Transportation Research Part D* (83) 2020 Zoomshock: the geography and local labour consequences from working remotely http://www.repec.bham.ac.uk/pdf/20-31.pdf
Data gap: Infrastructure requirements/improvements to meet the requirements of remote working	Literature review
Data gap: climate adaptation options for remote working hubs	Literature review
Data gap: longitudinal assessment is required to monitor changing attitudes and expectations amongst both employers and employees post Covid	Whilst there is significant research on this topic currently, it will be important to monitor opinions long term as we come out of the pandemic.
Data gap: nitrogen deposition data	NRW are doing research on impacts from nitrogen deposition.
BEIS Daily Life Household Survey 2021	Wales Boost to this BEIS survey looking at home energy use and net zero related behaviours during the pandemic. Two waves of qualitative survey and one wave of

Evidence/data required	Source
	qualitative fieldwork. Wave 1 findings due to be published post-election

SECTION 6. RECORD OF FULL IMPACT ASSESSMENTS REQUIRED

The table below identifies which full impact assessments are required for the proposals.

Table 1 Full impact assessments

Impact Assessment	Yes/No
Children's rights	Yes
Equality	Yes*
Rural Proofing	Yes
Health	Yes
Privacy	No
Welsh Language	Yes*
Economic / RIA	No
Justice	No
Biodiversity	Yes*
Climate Change	Yes
Strategic Environmental Assessment	No
Habitat Regulations Assessment	No

Environmental Impact Assessment	No

* Mandatory for all proposals in order to meet statutory obligations.

Involvement

In keeping with the Well-being of Future Generations (Wales) Act 2015 and the five ways of working, the Welsh Government has sought to collaborate with and involve children and their representatives, people with protected characteristics under the Equality Act 2010, Welsh speakers and Welsh language specialist groups and other people who may be affected by the proposals.

To help achieve this, the Welsh Government has undertaken significant engagement with partners, local authorities and advisory groups to provide stakeholders with a platform to feed in relevant evidence to the policy. The details of previous and more recent engagement are set out throughout this IIA.

Impacts

A range of impacts have been identified throughout this IIA document and the full impact assessments as presented in Annexes A-G. These have considered:

a) What action the Welsh Government can take to promote biodiversity, children's rights, equalities, the Welsh language and the other areas covered by the impact assessments;
b) What action the Welsh Government can take to strengthen its contribution to a particular well-being goal or to contribute to additional goals; and
c) What action the Welsh Government can take to avoid, reduce or mitigate a negative impact.

Impact Group	Summary of impacts	Contribution to the WFGA	Measures to avoid, reduce or mitigate any negative impacts
	Parents/guardians will have the opportunity to spend more time with their children		To work with partners to increase digital participation
	Parents and guardians will have more flexibility to choose residential location closer to support networks		To create remote working opportunities in unconventional sectors such as retail, hospitality and construction
	More flexibility to arrange care for children		Matching skills and training of young people to relevant sectors in a changing employment landscape
	Potential to save money by reducing/ eliminating commute		
	Impact on children of parents or guardians at experiencing domestic abuse if this is exacerbated by spending more time at home		To make Remote Working hubs an affordable option for those struggling to work at home and on a low income
	Young workers likely to work in sectors that are less likely to offer remote working, or who may suffer job losses as a result		To consider remote working as part of wider flexible working/ Fair Work agenda
	Possible rise in household expenditure if working from home which may contribute to deprivation		

Equality	There is the potential for groups who experience barriers to employment to benefit, including disabled people, women, pregnant women and women on/returning from maternity leave who may be able to access a larger pool of opportunities. People with caring responsibilities can benefit from extra flexibility Low or no commuting costs will be beneficial for people in low-income groups as the cost of travelling to a job can be prohibitive for some Risks have been identified in three notable areas for both young people and people from some Black, Asian and minority ethnic communities, who may be: o at greater risk of job losses associated with reduced spend in town/city centres o be less likely to have suitable space to work at home o be more likely to work in sectors not traditionally associated with remote	Positive contribution to: A resilient Wales A more equal Wales A Wales of cohesive communities A globally responsible Wales	To develop more equitable ways of working where everyone feels valued during this 'learning phase' To promote Remote Working Hubs as third option to home and the traditional office To work with colleagues on the retail strategy To monitor employment data by sector and demographic groups To monitor broadband provision and IT literacy

	working and therefore potentially less likely to directly benefit from this policy. There may be a potential cost burden (fuel, broadband, equipment etc.) for those in low-pay jobs, including young people, if they are required to pay additional costs as a result of working at home. Any PCGs may feel lonely and isolated being away from the office		
Welsh Language	More opportunity to use Welsh in the home More opportunity to use Welsh in the community Some people will have more job options without leaving Welsh speaking areas An opportunity to support the economies of rural Welsh speaking communities Less opportunity to speak welsh in work, and to benefit from office based Welsh language campaigns	Positive contribution to: A prosperous Wales A resilient Wales A more equal Wales A Wales of cohesive communities A wales of vibrant culture and thriving Welsh language	To promote the Welsh Language in remote working hubs, and to work with other hub service providers to achieve best practice. To work with partners such as The National Centre for Learning Welsh to explore possibilities such as Welsh Language Classes in hubs, or mentor schemes where learners have the opportunity to practise speaking Welsh with fluent Welsh Speakers

	People without reliable broadband may be excluded from participation Immigration into Welsh speaking heartlands may impact the language Increase of house prices in Welsh speaking areas		Promotion of online Welsh language training
Rural Proofing	Easier to connect – people don't have to leave rural areas to seek work Increased localism in shopping and hospitality, leading to additional local spending in rural areas will create jobs and spur business growth There is the potential to make it easier to do business from rural areas as virtual meetings become widely accepted. Remote Working may be beneficial to the Welsh Language in rural areas, as Welsh speakers are able to live and work in the Welsh heartlands, and have more time to speak Welsh at home.	Positive contribution to: A prosperous Wales A resilient Wales A more equal Wales A Wales of cohesive communities A wales of vibrant culture and thriving Welsh language	Promote welsh language housing communities action plan which aims to help first time buyers stay in their communities Welsh Government's business support may have a role to play in helping businesses in rural areas adapt to new ways of working. To promote remote working hubs in rural areas To promote the Local Broadband Fund, an Access Broadband Cymru grant scheme and an approach to topping up the value of UK Government gigabit vouchers.

	Living in rural areas could be more desirable and evidence to show increase in house prices Rural areas have lower availability of superfast and ultrafast broadband compared to urban areas, and the percentage of homes and businesses with indoor 4G and voice call coverage from all four network providers is lower. Poor public transport in some areas to get to a hub		Promote Digital Strategy Wales The Wales Transport Strategy 2021 aims to '…extend the geographical 'reach' of public transport into every community, especially in rural Wales.'
Biodiversity/ Environmental	More time to spend in green space Potential to reduce emissions from vehicles due to less commuting – especially to reduce congestion and emissions in built up areas People may be willing to make longer journeys if travelling less often Increase in residential heating	A positive contribution to: A resilient Wales A healthier Wales A more equal Wales A Wales of cohesive communities A globally responsible Wales	Encourage hubs to work with partners in the community such as gardening projects to promote green space near remote working hubs to promote active travel and modal shift
Health	More time for planning meals and exercise	A positive contribution to: A healthier Wales	Signposting to guidance that promotes healthy eating, for

	More time to spend with family and in the community	A more equal Wales	example Public Health Wales Eating Well at Home.
		A Wales of cohesive communities	
	More opportunity to access to green space		Promote physical activity interventions and/or policies for example the Time to Move Scheme to mitigate negative effects on physical activity
	Increased productivity and flexibility		
	Increase in substance misuse as a coping mechanism -social norms within workplace may be a protective factor and when removed this may create the risk of addictive behavioural patterns		Circulate guidance on best practice
			Promotion of remote working hubs to reduce isolation and offer safe and heathy space in which to work
	Risk of (particularly women) being overwhelmed by managing both work and the family or caring obligations		
	Musculoskeletal conditions may result because of homeworking due to inappropriate living conditions and equipment for agile working if not managed		

How will the policy be monitored?

The Welsh Government will monitor the progress of the policy openly as the remote working landscape in Wales develops. This is a rapidly developing area, and a high level monitoring framework has been developed to collect data, track trends to help understand the impacts of remote working on the workforce and employers. There is currently less remote working employer data available than that for workers. It will be necessary to identify and develop appropriate opportunities to fill these data gaps.

Remote working questions are being included in national surveys for the first time, including the Labour Force Survey and the National Survey for Wales. The results of these surveys will help create further understanding of remote working.

The following high level indicators will be tracked over time to monitor progress:

- percentage of people who work remotely on a daily basis
- average distance travelled per person
- percentage of journeys by purpose
- average cost per KM travelled
- percentage of people moderately or very satisfied with their job
- percentage of people satisfied with their
- levels of nitrogen dioxide (NO_2) pollution in the air
- emissions of greenhouse gasses within Wales
- centre for cities – high street recovery tracker

The Remote Working team will also develop key performance indicators and continue to horizon scan for emerging threats and opportunities.

SECTION 8. DECLARATION

Declaration

I am satisfied that the impact of the proposed action has been adequately assessed and recorded.

Name of Senior Responsible Officer: Steve Vincent

Signed: Steve Vincent

Department: Economic Infrastructure

A. CHILDREN'S RIGHTS IMPACT ASSESSMENT

1. Describe and explain the impact of the proposal on children and young people.

We have gathered available evidence on potential impacts on Children and Young People (CYP), which is presented at the end of this Annex. This evidence has helped

us to identify how CYP in differing situations and positions can be affected by these changes to the way we work in the future, as identified below.

Impacts

Evidence shows that there was a rise in domestic abuse during lockdowns, with victims being forced to spend all of their time with their abusers. This would naturally also affect children and young people in the same way – both in terms of experiencing abuse directly or seeing a parent subjected to violence. As we move to a situation where restrictions are lifted, we would advocate that workers are given choice and support in where they work.

There may be impacts on a parent or guardian's mental health including feelings of isolation as a result of working from home, indirectly affecting their children.

There may be positive impacts for children due to a parent or guardian's ability to have more flexibility on their residential location due to working remotely. This has the potential to make it easier for them to live near family and other support networks.

The policy could impact positively for children with an incarcerated relative who may be able to live closer to the relative due to a parent or guardian's ability to work remotely and have more flexibility on their residential location.

Key points

Research suggests some people will find a hybrid-working scenario more beneficial to their mental health. This policy actively promotes a hybrid or blended model of work and will not enforce full-time home working.[35]

We are developing a network of local work hubs to offer an alternative to working at home or commuting to a central workplace.

We are producing and promoting guidance and support for ways to stay connected to colleagues when working remotely.

As part of our future stakeholder engagement, we hope to directly engage with children and young people and groups representing them. We sought the views of the Children's Commissioner and the Well Being of Future Generations Commissioner during phase 1 of our stakeholder engagement.

We have worked with Welsh Women's Aid to produce guidance for employers on how to support people at risk of domestic abuse[36]

2. Explain how the proposal is likely to impact on children's rights.

---

[35] Business and individual attitudes towards the future of homeworking, UK - Office for National Statistics (ons.gov.uk) June 2021

[36] Supporting employees at risk of domestic abuse | Business Wales (gov.wales)

Article 3 – The best interests of the child must be a top priority in all decisions and actions that affect children. **Article 23 –** *A child with a disability has the right to live a full and decent life with dignity and, as far as possible, independence and to plan an active part in the community.*

There are potential positive impacts for parents or guardians with caring responsibilities in terms of greater flexibility, reduced commuting time, and greater access to a wider range of employment. This may also benefit the care and education of disabled children – giving more flexibility for parents to plan their time and manage caring arrangements.

Additionally parents may have more flexibility to live or work closer to appropriate childcare facilities or schools.

There is the potential to have a positive impact on disabled children as a result of increased use of technology allowing greater participation and inclusivity.[37]

Children in employment (aged 16-17)

Some groups of disabled young people in the workforce, including neurodiverse people and those with sight or hearing impairments, may be more likely to experience communication difficulties associated with the use of remote working technology

There is the risk of negative impacts for young people in the workforce due to an increased risk of loneliness and isolation, or digital exclusion, however the picture here is not yet clear and needs better evidence and future monitoring.

Mitigation

Provision of guidance on how to implement accessible or assistive technology[38].

To work closely with Digital Communities and to engage with Digital Wales: Digital Inclusion Forward Look: towards a digitally confident Wales Strategy

Article 27 – adequate standard of living

Every child has the right to a standard of living that is good enough to meet their physical and social needs and support their development. Governments must help families who cannot afford to provide this.

Children with parents or guardians who are able to work remotely

---

[37] Technology promotes inclusion for the world's largest minority group: people with disabilities | LSE Business Review

[38] Practical steps to support disabled employees – equipment | Business Wales (gov.wales)

The policy may negatively affect parents or guardians working from home where this may lead to cramped conditions or mental health issues due to lines being blurred between work and home. This is more likely to affect some Black and Minority Ethnic groups.[39]

There could be some negative impacts on utility costs in some locations, which could adversely affect resident children; conversely there may be a positive impact if families are able to move to locations with lower housing costs as a result of being able to work remotely. There can also be positive impacts on household finances if parents and guardians are able to reduce their commuting costs.

If parents or guardians are more able to access work or different types of work that are better paid, this would benefit the children's standards of living. The Social Mobility Foundation research shows inequality between those who move away from home to pursue career moves and those who stay at home; jobs that allow for Remote Working have the potential to open up the job market to more people, without them having to move to more expensive areas.[40]

Mitigation

The provision of local work hubs in communities across Wales will provide suitable workspace for workers who find it difficult to work from home. These pilot hubs will allow us to consider what actions can be taken to ensure that the cost of use is not prohibitive to those in low-paid jobs, including younger people.

Provision of guidance on how to maintain work life balance and improve wellbeing, and to monitor this as the policy develops

Children with parents or guardians who are not able to work remotely

People from lower income families and some Black and Minority Ethnic groups are less likely to be able to work remotely and are therefore less likely to experience the direct benefits from a shift to remote working.[41]

---

[39] Runnymede trust (2020), Over-exposed and under-protected: The devastating impact of Covid-19 on Black and Minority Ethnic Communities in Great Britain. Available online at: https://www.runnymedetrust.org/uploads/Runnymede%20Covid19%20Survey%20report%20v3.pdf

[40] Social Mobility Foundation (2020), Moving out to move on: Understanding the link between migration, disadvantage and social mobility. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/902943/Moving_out_to_move_on_report.pdf

[41] ONS, Home working in the UK (April 2021) available online at:

Homeworking in the UK, work from home status - Office for National Statistics (ons.gov.uk)

People with limited broadband will also be limited in what they can do in terms of working remotely, without any intervention.

There may be negative impacts for families with low-paid jobs, including young people, women and people from some Black, Asian and minority[42] ethnic communities in particular, who may be at greater risk of job losses associated with reduced spend in town/city centres, although there are indications that the job market has maintained some resilience with record numbers of vacancies available at the time of writing.[43]

Mitigations

Monitor data and demographics of those who are not able to remote work, and the reasons for this.

Explore opportunities to promote job pooling, rotation and similar schemes such as remote training and knowledge days, for example the Timewise Construction Pioneers' Programme which trials remote working patterns in an unconventional setting [44]

To work closely with Digital Communities and to engage with the Digital Wales: Digital Inclusion Forward Look: towards a digitally confident Wales Strategy.

Young people in work (ages 16-17)

There the potential for a positive impact for young people, including those from lower-income households or in rural areas, who may be able to look for work or training opportunities over a wider geographical area than would otherwise be possible[45].

A widely recognised issue is that young people at an early stage in their career may miss out on opportunities for face-to-face learning and career development opportunities in a remote-first scenario.

Any job losses associated with reduced footfall in town/city centres and reduced spend in retail and hospitality sector are likely to be borne disproportionately by low-paid workers, and younger workers in particular, however the first quarter of 2021 showed an increase in

---

[42] Coronavirus (Covid-19) and the Black, Asian and Minority Ethnic (BAME) population in Wales

[43] UK job vacancies at record high as wages pick up - BBC News

[44] Making Construction a Great Place to Work, Timewise 2021, available online at:

TW-Making-construction-a-great-place-to-work-report.pdf (timewise.co.uk)

[45] Social Mobility Foundation (2020), Moving out to move on: Understanding the link between migration, disadvantage and social mobility. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/902943/Moving_out_to_move_on_report.pdf

employment and decrease in unemployment in young people aged 16 – 24.[46] This situation has the ability to change quickly and constant monitoring of figures is required.

Mitigation

As recommended by the Equality and Human Right Commission, Remote working is considered as part of wider flexible working proposals, recognising that remote working may not be suitable for everyone, but may remove barriers to work for some groups (EHRC Wales).[47]

Work with partners in order to help influence policies that aim to support younger people with employment and progression.

Article 31 – leisure, play and relax

Every child has the right to relax, play and take part in a wide range of cultural and artistic activities.

Potential impact of parents working more flexibly, closer to home, or from home:

Children with parents or guardians who are able to work remotely

There is the potential to impact positively on children and family life generally. A 2021 report from Working Families states that many parents who had access to flexible work through the pandemic saw benefits, reporting more quality time with their children (61%). [48]

There is the potential to negatively impact if remote working leads to longer working hours, and balancing childcare at the same time. The same report states that 50% of parents fear a less flexible approach will have a negative effect on their family life.

** Evidence Table and Gap Analysis **

The table below summarises selected key evidence used in the Equality Impacts Assessment, and highlights key gaps.

---

[46] ONS, Employment in the UK: August 2021

https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemploeetypes/bulletins/employmentintheuk/latestFed

[47] EHRC Wales (2018), Is Wales Fairer? Available online at: https://www.equalityhumanrights.com/sites/default/files/is-britain-fairer-2018-is-wales-fairer.pdf

[48]

Evidence/data required	Source
"Research into perceptions of modern working practices", Chwarae Teg / Mott Macdonald	https://chwaraeteg.com/projects/commission-on-modern-working-practices/
Employment and Education	The Retail Appointment: UK Retail, Facts and Figures. Available online at: https://www.retailappointment.co.uk/career-advice/talking-shop/uk-retail-facts-and-figures
	ONS, Employment in the UK: https://www.ons.gov.uk/employmentandlabourmarket/peoplein work/employmentandemployeetypes/bulletins/employmentinth euk/latest
	Welsh Government – Employment
	Labour market overview	GOV.WALES
	People and work (gov.wales)
	Resolution Foundation (2020), Young workers in the coronavirus crisis: Findings from the Resolution Foundation's coronavirus survey. Available online at: https://www.resolutionfoundation.org/publications/young-workers-in-the-coronavirus-crisis/
	TUC, Young workers are bearing the brunt of the jobs crisis. 23rd February 2021. Available online at: https://www.tuc.org.uk/blogs/young-workers-are-bearing-brunt-jobs-crisis
	Kabeer (2020), cited in WCPP (2021), *Remote working*.
	University of Southampton (2021), Welsh Committee on Economy, Infrastructure and Skills.
	Universities and Colleges Union (UCU) Wales (2021), UCU Response – Remote Working: Implications for Wales. Available online at: https://business.senedd.wales/documents/s111799/10.%20UC U%20Wales.pdf

Evidence/data required	Source
	Social Mobility Foundation (2020), Moving out to move on: Understanding the link between migration, disadvantage and social mobility. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/902943/Moving_out_to_move_on_report.pdf
Disability	Wales Co-operative Centre (2021), Remote Working: Implications for Wales, Economy, Infrastructure and Skills Committee. Wales Co-operative Centre response. Available online at: https://business.senedd.wales/documents/s111798/09.%20Wales%20Co-operative%20Centre.pdf

EHRC Wales (2018), Is Wales Fairer? The state of equality and human rights in 2018. Available online at: https://www.equalityhumanrights.com/sites/default/files/is-britain-fairer-2018-is-wales-fairer.pdf

WCPP (2021), Remote working.

EHRC Wales (2018), Is Wales Fairer?

EHRC Wales (2021), Consultation response: The implications for Wales of the WG's proposals on remote working. Available online at: https://business.senedd.wales/documents/s111795/06.%20Equality%20and%20Human%20Rights%20Commission%20Wales.pdf

Legally Disabled (2021), Submission to the Committee for Economy, Infrastructure and Skills 'Remote Working: Implications for Wales.' Available online at: https://business.senedd.wales/documents/s111801/12.%20Legally%20Disabled.pdf

Disability Wales (2021), Disability Wales Consultation Response.

Disability Wales (2021), Consultation Response to Economy, Infrastructure and Skills Committee on Remote Working: Implications for Wales. Available online at: |

Evidence/data required	Source
	https://business.senedd.wales/documents/s500006342/15.%20Disability%20Wales.pdf
Race (include different ethnic minorities, Gypsies and Travellers and Migrants, Asylum seekers and Refugees)	Resolution Foundation (2020), Ethnic minorities in the hospitality sector: Comparing the experiences of hospitality workers from different ethnic backgrounds. Available online at: https://www.resolutionfoundation.org/app/uploads/2020/12/Ethnic-minorities-in-the-hospitality-sector.pdf

Joseph Rowntree Foundation (JRF) (2021), UK Poverty 2020/21. Available online at: https://www.jrf.org.uk/report/uk-poverty-2020-21

TUC (2021), Jobs and Recession Monitor – BME workers. Available online at: https://www.tuc.org.uk/research-analysis/reports/jobs-and-recession-monitor-bme-workers

Runnymede trust (2020), Over-exposed and under-protected: The devastating impact of Covid-19 on Black and Minority Ethnic Communities in Great Britain. Available online at: https://www.runnymedetrust.org/uploads/Runnymede%20Covid19%20Survey%20report%20v3.pdf

ONS (2012), Census 2011, Occupancy rating (bedrooms). Overcrowding in the Census is recorded using the occupancy rating. An occupancy rating of -1 or less means that a household has at least one fewer bedroom than required

Runnymede Trust (2020), Over-exposed and under-protected.

Joseph Rowntree Foundation (JRF) (2021), UK Poverty 2020/21. Available online at: https://www.jrf.org.uk/report/uk-poverty-2020-21 |
| **Adverse Childhood Experiences** | Women's Budget Group, cited in Chwarae Teg (2020), Women and Covid-19. Available online at: https://chwaraeteg.com/wp-content/uploads/2020/04/FINAL-UK-Briefing-on-Women-and-Covid-19.pdf

ONS, Domestic abuse during the coronavirus (Covid-19) pandemic, England and Wales: November 2020. Available online at: |

Evidence/data required	Source
	https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/domesticabuseduringthecoronaviruscovid19pandemicenglandandwales/november2020#:~:text=As%20the%20lockdown%20measures%20eased,domestic%20abuse%2Drelated%20decreased%20slightly.&text=The%20police%20recorded%20206%2C492%20violence,in%202019%20(Figure%202).
	Welsh Women's Aid (2021), Remote working: Implications for Wales. Available online at: https://business.senedd.wales/documents/s111796/07.%20Welsh%20Womens%20Aid.pdf
	The Guardian, "Remote working is not going away: who wins and loses when workers stay home" 5th July, 2020. https://www.theguardian.com/lifeandstyle/2020/jul/06/remote-working-is-not-going-away-who-wins-and-loses-when-workers-stay-home
	Royal Society for Public Health (2021), Disparity Begins at Home: How home working is impacting the public's health. Available online at: https://www.rsph.org.uk/our-work/policy/wellbeing/disparity-begins-at-home.html
	Mind (2020) *The mental health emergency: How has the coronavirus pandemic impacted our mental health?*.
	Available online at: https://www.mind.org.uk/media-a/5929/the-mental-health-emergency_a4_final.pdf
	Jacobs, E. (2020) 'Homeworking: isolation, anxiety and burnout', *Financial Times.*=. 16 April. Available online at: https://www.ft.com/content/315095c0-7da0-11ea-8fdb-7ec06edeef84
	Further evidence source to be identified: Evidence of impact of separation from divorced or incarcerated parents and relatives
Children in poverty / standards of living	Cardiff University (2021), Written evidence submitted by Professor Alan Felstead
	The Guardian, '"It's heartbreaking": inequality reaps high Covid toll in south Wales valleys', 8th February 2021.

Evidence/data required	Source
	https://www.theguardian.com/world/2021/feb/08/inequality-high-covid-toll-south-wales-valleys
	WPPC (2021), Remote working
	Wales Co-operative Centre (2021), Remote Working: Implications for Wales, Economy, Infrastructure and Skills Committee. Wales Co-operative Centre response. Available online at: https://business.senedd.wales/documents/s111798/09.%20Wales%20Co-operative%20Centre.pdf
	BBC, "Covid-19: Working from home leads to house price rise in Wales", 28th November, 2020. https://www.bbc.co.uk/news/uk-wales-55085184
	North Wales Live, "Second homes 'crisis' putting 'futureo fWelsh speaking communities at stake'. 12th August, 2020. https://www.dailypost.co.uk/news/north-wales-news/second-homes-crisis-putting-future-18754517
	Welsh Government (2020, Statistical First Release. https://gov.wales/sites/default/files/statistics-and-research/2020-05/summary-statistics-regions-wales-2020-629.pdf
	Singh, A. et al. (2019), *Housing Disadvantage and Poor Mental Health: A Systematic Review*, American Journal of Preventative Medicine: 57(2):262−272.
	Also see: Section 4 Economic Well-being Evidence Table
	Relative Income Poverty: Relative income poverty: April 2019 to March 2020	GOV.WALES
	Material Deprivation and low income: Material deprivation and low income	GOV.WALES
	Fuel Poverty: Fuel poverty estimates for Wales	GOV.WALES
Leisure, play and relax	The Guardian, "Home workers putting in more hours since Covid, research shows" 4th February, 2021.

Evidence/data required	Source
	https://www.theguardian.com/business/2021/feb/04/home-workers-putting-in-more-hours-since-covid-research
	Further evidence source to be identified: Evidence of the benefits of play, leisure and parent interaction for children

B. EQUALITY IMPACT ASSESSMENT

A. Introduction

The Equality Act 2010 legally protects people from discrimination in the workplace and in wider society. Under the Act, all Welsh public authorities, including the Welsh Government have to consider all individuals when carrying out their day-to-day work – in shaping policy, in delivering services and in relation to their own employees. It also requires that public bodies have due regard to the need to:

- eliminate discrimination
- advance equality of opportunity
- foster good relations between different people when carrying out their activities

The requirement to have due regard to these matters is reinforced in Wales through the Well-being of Future Generations (Wales) Act 2015. One of the seven well-being goals included within the Act is the aspiration to create a 'More Equal Wales' defined as 'a society that enables people to fulfil their potential no matter what their background or circumstances'.

An Equality Impact Assessment (EIA) is a process by which analysis is conducted of any policy, service or proposal for change to help identify and address potential impacts or unintended consequences of decisions. In Wales EIAs are part of the statutory requirements placed on public bodies in relation to the General Duty of the Equality Act 2010.

The Equality Impact Assessment in Wales Practice Hub has identified that when conducting an EIA, there are four possible outcomes[49]:

1. No major change. The EIA demonstrates that the policy is robust, there is no potential for discrimination or adverse impact and all opportunities to promote equality have been taken.

---

[49] http://www.eiapractice.wales.nhs.uk/what-is-an-equality-impact-assessment-

2. Adjust the policy. The EIA identifies potential problems or missed opportunities. Adjust the policy to remove barriers or better promote equality.
3. Continue the policy. The EIA identifies the potential for adverse impact or missed opportunities to promote equality. Clearly set out the justifications for continuing with it. The justification should be included in the EIA and must be in line with the duty to have due regard. For the most important relevant policies, compelling reasons will be needed.
4. Stop and remove the policy. The policy shows actual or potential unlawful discrimination. It must be stopped and removed or changed.

In consideration of the above, this EIA analyses the impacts of Welsh Government's Remote Working policy and its delivery and assesses both for the possibility of discrimination and opportunities to promote equality and foster good relationships between different groups.

The aim of the assessment is to identify whether people with protected characteristics would be disproportionately or differentially affected by the policy. This can be defined as:

- **Disproportionate**: there may be a disproportionate equality effect where people with a particular protected characteristic make up a greater proportion of those affected than in the wider population.
- **Differential**: there may be a differential equality effect where people with a protected characteristic are affected differently from the general population as a result of vulnerabilities or restrictions they face because of that protected characteristic.

Research has been undertaken in order to understand the impact of the policy on those with protected characteristics as defined by the Equality Act 2010 (Age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex (gender) and sexual orientation). Following the socio-economic duty coming into force, evidence gathering and identification of socio-economic impacts has been undertaken as an adjunct to the statutory EIA.

In addition to this assessment we have considered data gathered through a public engagement exercise undertaken in early 2021 which received over 1,000 responses from members of the public across Wales. This is the subject of a separate report.

This EIA has been carried out in accordance with the Welsh Government's Equalities Impact Assessment Guidance and best practice. The results of the assessment are presented around the following key themes:

- The barriers faced by people who share protected characteristics and how these barriers could be reduced or removed by the Remote Working policy and its delivery;
- The impact the policy and its delivery could have on those with protected characteristics;
- The possible negative impacts on people in protected groups and how these could be reduced, removed and/or mitigated; and
- How the proposals would promote equality.

Impacts of the policy on people with protected characteristics as described in the Equality Act 2010.

The pandemic has changed how many individuals, authorities and businesses view the world of work. Our ambition to increase the number of people working remotely (for all or part of the week) aims to support businesses and individuals to adapt and adopt more agile working practices in a fair and equitable way.

The Remote Working policy and our commitment to greater local working in coworking hubs in communities will give workers, public bodies and private businesses greater choice in their workplace and workforce models.

We have already begun work to include remote working questions in national surveys and official statistics, thereby improving the data available which bodies can use to aid their decision making.

The impact of the policy and its delivery on those with protected characteristics has been addressed in turn and the results of this analysis are presented in the following sections of this EIA.

This section considers the key impacts on those with protected characteristics in relation to the Remote Working policy and assesses how the proposals would mitigate, resolve or exacerbate these issues with appropriate references to existing data and academic literature on the subject. Many of these impacts – both negative and positive - are potential rather than actual given that the policy is relatively new and the fast-moving nature of the landscape.

The assessment also considers how the proposals would promote equality in line with section 149 of the Equality Act 2010. The evidence is presented in detail in the 'Record of Impacts' at the end of this EIA.

Potential positive impacts

- There is the potential for groups who experience barriers to employment to benefit, including disabled people, women, pregnant women and women on/returning from maternity leave who may be able to access a larger pool of opportunities. This could include young people, and those from lower-income households or in rural areas, who may be able to look for work or training opportunities over a wider geographical area than would otherwise be possible.
- People with caring responsibilities can benefit from extra flexibility and evidence that more carers are women.
- As a result of increased use of technology some disabled people have benefitted from increased participation and inclusivity at work in terms of events, networking etc. and reduced requirement / expectations around commuting which may be challenging or difficult for such groups.
- There are potential benefits in relation to religion and belief as a result of increased flexibility to attend religious events, festivals and also to pray (if in a local hub or coworking space, dependent on facilities available).

- Low or no commuting costs will be beneficial for people in low-income groups as the cost of travelling to a job can be prohibitive for some and therefore they may be able to access a wider pool of jobs
- Older workers, who had a greater tendency to work from home pre-pandemic may benefit, as commuting may be a less attractive option due a greater likelihood of health issues, disability or caring responsibilities[50].

Potential negative impacts

- Risks have been identified in three notable areas for both young people and people from some Black, Asian and minority ethnic communities, who may be:

  - at greater risk of job losses associated with reduced spend in town/city centres
  - be less likely to have suitable space to work at home
  - be more likely to work in sectors not traditionally associated with remote working and therefore potentially less likely to directly benefit from this policy.

- There may be a potential cost burden (fuel, broadband, equipment etc.) for those in low-pay jobs, including young people, if they are required to pay additional costs as a result of working at home. However there are also potential household savings that can be made from cutting a commuting journey and working at or near to home. This may include cheaper car insurance and associated private car running costs as well as reclaiming time for oneself – which in itself has a value.
- Those at an early stage in their career, which would be dominated by young people may miss out on opportunities for face-to-face learning, networking and career development opportunities if they are required to work remotely.
- Similarly there is evidence that higher numbers of young people are feeling isolated and are experiencing anxiety, well-being and mental health difficulties.
- This may also hold true for some disabled people who are at increased risk of loneliness and isolation.[51]
- LGBT+ people, particularly young LGBT+ people living in the family home, may be at risk of isolation, loneliness or homophobia/transphobia at home.
- Increased remote working could also lead to a potential loss of social networks and social capital associated with diverse groups of people mixing in a workplace environment. Some groups of disabled people, including neurodiverse people and those with sight or hearing impairments, may be more likely to experience communication difficulties associated with remote working technology if employers do not make the right adjustments for their needs.

---

[50] Living longer: impact of working from home on older workers - Office for National Statistics (ons.gov.uk)

[51] COVID-19 and disabled workers: Time for a homeworking revolution? Unison. August 2020. https://www.unison.org.uk › uploads › 2020

- People at risk of, or currently suffering domestic abuse are at greater risk when required to work at home. They may lose a safe space away from home and become more isolated with loss of contact with colleagues - women are more likely to be adversely affected than men[52], however this is a problem for both, with 2.3 million adults aged 16 to 74 years experienced domestic abuse in the 12 month period to March 2020 (1.6 million women and 757,000 men)[53]

- Those who are digitally excluded, including older people, disabled people, lower income groups, and those residing in locations with poor broadband connectivity will be less able to capitalise on opportunities presented by more remote working.

- Groups that are less likely or able to work remotely, or more likely to experience digital exclusion, may be less likely to benefit from an increase in remote working, including women, young people, older people, some Black, Asian and Minority Ethnic groups, and low income households. There is the risk of exacerbating existing inequalities in the labour market by benefiting white collar workers in better paid jobs.

---

[52] Domestic abuse in England and Wales overview - Office for National Statistics (ons.gov.uk)

[53] Ibid.

Remote working policy and protected characteristic groups: evidence review & record of Impacts by protected characteristic

The table below includes a description of potential positive and negative equality impacts of the proposal. Recommended actions to mitigate potential negative impacts and support delivery of potential positive impacts are also included, drawing on the responses of relevant organisations to the Economy Infrastructure and Skills Committee Inquiry into Remote Working.[54]

Protected characteristic or group	What are the positive or negative impacts of the proposal?	Reasons for your decision (including evidence)	How will you mitigate Impacts?
Age (think about different age groups)	Potential negative impacts for younger people (16-24) who may be more likely to be affected by job losses in sectors such as retail and hospitality that could be associated with decreased	It is estimated that around a third of UK retail employees are aged under 25[55]. ONS data for the UK shows that people in the 16-24 age group experienced the largest annual fall in the rate of employment of any age group in the three months to December 2020, a	To monitor national statistics and research disaggregated by age in order to track the impacts on younger people's employment. To work with partners in order to help influence policies that aim to support

---

[54] Remote Working - Spatial Implications in Wales. The Welsh Parliament, February 2021. Available online at:

https://business.senedd.wales/documents/s500006851/Adroddiad%20gweithio%20o%20bell%20Dr%20Darja%20Reuschke%20Saesneg%20yn%20unig.pdf

[55] The Retail Appointment: UK Retail, Facts and Figures. Available online at: https://www.retailappointment.co.uk/career-advice/talking-shop/uk-retail-facts-and-figures

footfall in town and city centres.	decrease of 3.8 percentage points[56]. Research by the Resolution Foundation found that a third of people aged 18-24 lost work due to furlough, job losses and hours reductions during the pandemic, considerably higher than any other group. This is partly attributable to higher rates of employment in sectors such as hospitality, entertainment and retail, which were shut down by lockdown restrictions[57], and which could continue to be impacted by shifting patterns of spending associated with the move to remote working. The TUC has found that 20% of workers aged under 25 are employed in accommodation and food or arts and entertainment, compared with 6% of workers older than 25[58]. Young people who experience job losses or unemployment early in their	younger people with employment and progression.

---

[56] ONS, Employment in the UK: February 2021.
https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/employmentintheuk/latest

[57] Resolution Foundation (2020), Young workers in the coronavirus crisis: Findings from the Resolution Foundation's coronavirus survey. Available online at: https://www.resolutionfoundation.org/publications/young-workers-in-the-coronavirus-crisis/

[58] TUC, Young workers are bearing the brunt of the jobs crisis. 23rd February 2021. Available online at: https://www.tuc.org.uk/blogs/young-workers-are-bearing-brunt-jobs-crisis

		careers can be susceptible to long-term unemployment and pay 'scarring'[59]. Some young people however would use the service and retail sectors as entry level positions in order to work in other sectors, and as such may find it easier to adapt to the changing employment landscape.	
	Potential negative impacts for younger people (16-24) who may be more likely to live in shared accommodation and therefore less likely to have access to suitable workspace. Younger people may also be more likely to experience negative impacts as a result of the cost implications of working from home as they are more likely	Research by the Resolution Foundation has found that people in younger age groups generally live in less spacious accommodation than older age groups. In England, people aged 16-24 have on average 26 square metres of liveable room in their homes per household member, compared with 50 square metres for those aged 65 and over. Younger age groups are also the least likely to have enough desk space for everyone in their household to work	Support for employers around intelligent job design to allow organisations to understand their employees' needs and to design flexible working models (University of Southampton). Provision of remote working hubs in communities across Wales to provide suitable workspace for all workers. Consider what actions can be taken to ensure that the cost of using remote working hubs is not prohibitive to those in low-paid jobs, including younger people.

---

[59] Resolution Foundation (2020), Class of 2020: Education leavers in the current crisis. Available online at:
https://www.resolutionfoundation.org/app/uploads/2020/05/Class-of-2020.pdf

	to be employed in relatively low-paid jobs.	from home[60]. People under the age of 25 are also among the groups found to be more likely to be employed in low pay sectors[61].	Remote working to be considered as part of wider flexible working proposals, recognising that remote working may not be suitable for everyone (EHRC Wales).
	Potential impacts on young people at an early stage of their careers due to impacts, or concerns around perceived impacts, on career development.	The University of Southampton noted in its consultation response that young people may have missed out on training opportunities during the pandemic, and that in the longer-term there could be implications from increased remote working for induction and training programmes that have generally been designed to be delivered in-person[62].	Guidance or support for employers to develop remote training programmes, or to develop alternative skills and training opportunities for young people, such as work experience initiatives. Remote working to be considered as part of wider flexible working proposals, recognising that remote working may not be suitable for everyone (EHRC Wales).

[60] Resolution Foundation (2020), An intergenerational audit for the UK. Available online at: https://www.resolutionfoundation.org/publications/intergenerational-audit-uk-2020/

[61] Kabeer (2020), cited in WCPP (2021), *Remote working*. Available online at: https://www.wcpp.org.uk/wp-content/uploads/2021/02/Remote-working-.pdf

[62] University of Southampton (2021), Welsh Committee on Economy, Infrastructure and Skills.

Younger people (aged 16-24) are more likely to work in low-paid jobs and in sectors in which it is more difficult to work from home, and therefore may be less able to benefit from the shift towards remote working.

Research by the Resolution Foundation[63] has found that employees in the youngest age group (18-24) are among the least likely to be able to work from home. As of May 2020, 57% of employees in this age group were working from home, compared with 72% of those in the 35-39 age group. It is likely that this reflects the high proportion of workers in this age group that work in sectors such as retail and service occupations, in which working from home is not possible.

The provision of local work hubs in communities across Wales will provide suitable workspace for workers who find it difficult to work from home. These pilot hubs will allow us to consider what actions can be taken to ensure that the cost of use is not prohibitive to those in low-paid jobs, including younger people.

Worth noting that early career jobs and jobs taken by those still in full time education tend to be lower paid and in service industries where remote working is not an option. WG will advocate for Fair Work for all workers and better flexible working options to be available across the piece.

We will continue to monitor trends and engage with key stakeholders such as the Children's Commissioner for Wales.

[63]Resolution Foundation (2020) Young Workers in the Coronavirus Crisis. Available online at:

https://www.resolutionfoundation.org/app/uploads/2020/05/Young-workers-in-the-coronavirus-crisis.pdf

Potential positive impacts for young people who may be able to look for work or training opportunities over a wider geographical area than may previously have been possible. This could reduce the need, real or perceived, to move away from home, typically to London or the South-East of England, in order to find better work. There may be particular benefits for young people from lower-income groups who may be less likely or less able to migrate to find work, and for young people in rural areas. In the Welsh context, there may be less incentive for young people to move from small towns, rural and coastal areas, to Cardiff or to parts of England.

Work by the Social Mobility Foundation has found that young people who move away from home are more likely to be employed; to be employed in a higher-level occupation; and to earn more. Mean gross monthly earnings are 33% higher for those who move away than for those who stay at home. However, there is a marked socio-economic inequality between those who move and those who stay: of those who move away, 56% have a degree and 60% have at least one parent in a higher managerial occupation. Young people from working class backgrounds are less likely to migrate. Outward migration can therefore contribute to the 'opportunity divide' between areas, particularly if it leads to workforce shortages in some areas. The north of England and Wales are identified as areas with relatively few opportunities

		for work and study, in comparison with London and the South-East[64].	
	Working people in older age groups may be less likely to choose to work from home and therefore less likely to benefit from the shift towards remote working. Older people may also be less likely to have access to digital skills and technology to enable them to work remotely.	The Resolution Foundation have found that the youngest and oldest age groups are the least likely to work from home. 54% of employees aged 55-59 and 56% of those aged 60-64 were working from home as of May 2020, compared with 72% of those in the 35-39 age group. Older workers are also considerably less likely to expect to continue working from home in future: 32% of employees aged 60-64 expected to work from home more following the pandemic, compared with 62% of those aged 30-34. The Resolution Foundation speculates that this could be because people in this age group are more settled in the routine of going out to work, more likely to dislike being reliant on technology, and more	To promote IT skills training aimed at working people aged 60 and over to encourage internet use and increase remote working among this demographic.

The Digital Companions Scheme (part of Digital Communities Wales)is based on the premise of a friend, neighbour, or family member helping someone they know to use the internet. With this help, some of the country's most vulnerable and isolated residents can improve their digital confidence and re-connect with their loved ones, wider communities, and vital services around them. In addition, their communications campaign will aim to raise awareness of levels of digital |

---

[64] Social Mobility Foundation (2020), Moving out to move on: Understanding the link between migration, disadvantage and social mobility. Available online at:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/902943/Moving_out_to_move_on_report.pdf

		likely to work in senior roles that rely on social interaction[65].	exclusion and ways to help improve the basic digital skills of older people.
		The consultation response from the Wales Co-operative Centre cites data from the National Survey for Wales which shows higher levels of digital exclusion among older people, including those of working age: in 2018-19 18% of survey respondents aged 50 and over did not use the internet[66].	Learn My Way is another useful resource within the policy as it a free resource with topics covering how to use a keyboard, privacy settings or using Microsoft Excel.[67]-
Disability (think about different types of disability)	Disabled people may be more likely to work in low-paid jobs and in sectors in which it is more difficult to work from home, and therefore may be less able to benefit from the shift towards remote working. Disabled people may also be less	Research by the Equality and Human Rights Commission (EHRC) in Wales has found that disabled people are more likely than non-disabled people to work in low-pay occupations (33.2% compared with 28.9%), and less likely to work in high-pay occupations (23.7%	To work with partners in Welsh Government in order to explore solutions for digital inclusion across relevant sectors, and additional support for disabled workers. The Remote Working team have worked with Disability Wales to co-author

---

[65] Resolution Foundation (2020), Young workers in the coronavirus crisis: Findings from the Resolution Foundation's coronavirus survey. Available online at: https://www.resolutionfoundation.org/app/uploads/2020/05/Young-workers-in-the-coronavirus-crisis.pdf

[66] Wales Co-operative Centre (2021), Remote Working: Implications for Wales, Economy, Infrastructure and Skills Committee. Wales Co-operative Centre response. Available online at: https://business.senedd.wales/documents/s111798/09.%20Wales%20Co-operative%20Centre.pdf

[67] Home | Learn My Way

likely to have access to the digital skills and technology to enable them to work remotely.	compared with 29.2%)[68]. The Wales Centre for Public Policy (WCPP) has found that workers in low-paid sectors are the least likely to be able to work from home[69]. However, Bank of England data shows that, before the pandemic, disabled people were more likely to work from home: of those in employment, 6.9% worked mainly from home, compared with 5.2% of people who are not disabled. Evidence cited by the Wales Co-operative Centre that 19% of disabled people are 'digitally excluded' as they do not have access to a useable device and broadband, considerably above the Welsh average of 10%[70].	guidance on supporting disabled employees.

---

[68] EHRC Wales (2018), Is Wales Fairer? The state of equality and human rights in 2018. Available online at: https://www.equalityhumanrights.com/sites/default/files/is-britain-fairer-2018-is-wales-fairer.pdf

[69] WCPP (2021), Remote working. Available online at: https://www.wcpp.org.uk/wp-content/uploads/2021/02/Remote-working-.pdf

[70] Wales Co-operative Centre (2021), Remote Working: Implications for Wales, Economy, Infrastructure and Skills Committee. Wales Co-operative Centre response. Available online at: https://business.senedd.wales/documents/s111798/09.%20Wales%20Co-operative%20Centre.pdf

Potential positive impacts for disabled people as increased flexibility and remote working could reduce transport or accessibility barriers to work and support improved access to employment.

The employment rate among disabled people is around half that of non-disabled people[71]. In their response to the Welsh Parliament's consultation on remote working in Wales, the EHRC Wales commented that flexible or remote working could remove barriers to employment for certain groups, including disabled people, allowing greater participation in the labour market[72].

In their consultation responses, both Legally Disabled and Disability Wales noted that remote or home working is the most requested, and the most refused, reasonable adjustment in the workplace. Legally Disabled commented that remote working can remove work-related barriers and stresses such as tiring commutes, and reduce the importance of factors such as travel,

Remote working to be considered as part of wider flexible working proposals allowing increased flexibility in terms of hours of work as well as place of work (EHRC Wales).

Encourage and support training and new management practices to be implemented, e.g. risk assessments for remote working disabled staff (EHRC Wales). We are working with business wales to encourage better support for remote and flexible working Reasonable adjustments to be developed as required to enable disabled people to participate effectively in a remote working environment. This is addressed in part in the current guidance from

[71] EHRC Wales (2018), Is Wales Fairer? Available online at: https://www.equalityhumanrights.com/sites/default/files/is-britain-fairer-2018-is-wales-fairer.pdf

[72] EHRC Wales (2021), Consultation response: The implications for Wales of the WG's proposals on remote working. Available online at: https://business.senedd.wales/documents/s111795/06.%20Equality%20and%20Human%20Rights%20Commission%20Wales.pdf

		presenteeism and appearance[73]. Disability Wales noted in their response that removing stresses such as commuting can allow disabled people to save energy for other areas of their lives, and highlighted the importance to some disabled people of being able to adapt their work-environment to suit their needs, allowing them to work more effectively[74].	Business Wales which has been co-authored with Disability Wales[75] Work with providers to ensure that remote working hubs, including repurposed community buildings, are fully accessible (EHRC Wales).
	The widespread use of remote working technology can enable improved participation in formal and informal activities for disabled people, supporting skills development and better integration into organisational culture.	Research by Legally Disabled has found a 'mixed picture' for disabled people in relation to communication and working relationships, suggesting that more consideration is required of the needs of people with different impairments. Technology such as captioning, the ability to access recordings at suitable times, and methods of participation such	We will continue to provide support on how businesses can make reasonable adjustments or develop alternatives as required for those for whom remote working options are not accessible (Legally Disabled).as well as signposting to other initiatives such as Digital Communities.

---

[73] Legally Disabled (2021), Submission to the Committee for Economy, Infrastructure and Skills 'Remote Working: Implications for Wales.' Available online at: https://business.senedd.wales/documents/s111801/12.%20Legally%20Disabled.pdf

[74] Disability Wales (2021), Consultation Response to Economy, Infrastructure and Skills Committee on Remote Working: Implications for Wales. Available online at: https://business.senedd.wales/documents/s500006342/15.%20Disability%20Wales.pdf

[75] https://businesswales.gov.wales/responsible-business/supporting-disabled-employees

	However, there may be potential negative impacts for some groups, including neuro divergent and autistic people as well as those with sight or hearing impairments, who may be more likely to experience difficulties associated with communication and technology.	as via chat boxes has enabled some disabled people to experience new, more accessible opportunities during the pandemic, including professional development, social events and networking. However, the use of technology such as video conferencing can be both enabling and disabling depending on individual circumstances. 'Concentration fatigue' can be an issue for some groups, as well as the loss of visual cues, which can affect neuro divergent and autistic people as well as people who have sight or visual impairments[76].	
	Potential negative impacts for disabled people due to increase in loneliness and isolation as a result of remote working. Levels of loneliness are generally higher among disabled people than the rest of the population. There could be particular negative impacts	Data from the National Survey for Wales, cited by Disability Wales in their consultation response, shows that 18% of disabled people in Wales were classed as lonely in 2019-20, compared with 10% of non-disabled people. Among people with a mental illness, 44% classed themselves as lonely compared with 12% of those without a mental illness. Disability Wales noted	Provision of remote working hubs in communities across Wales could help to reduce the potential for loneliness and isolation.

Consider what actions can be taken to ensure that the cost of using remote working hubs is not |

[76] Legally Disabled (2021), Submission to the Committee for Economy, Infrastructure and Skills.

	for people with mental health related impairments.	that some disabled people have reported that working from home has resulted in them feeling increasingly isolated[77].	prohibitive to those in low-paid jobs, including disabled people. Remote working to be considered as part of wider flexible working proposals, recognising that remote working may not be suitable for everyone (EHRC Wales).
Gender Reassignment (the act of transitioning and Transgender people)	Potential negative impacts for some transgender people, particularly young trans people living in the family home, who may be at risk of loneliness, non-acceptance or transphobia in the home.	The LGBTQ+ helpline Switchboard reported 20% more calls, emails and instant messages during the Covid-19 pandemic[78]. While the easing of lockdown restrictions is likely to reduce negative impacts arising during the pandemic, an increased move to remote working could contribute to social isolation among transgender people who may have less opportunity to meet with friends and support networks, including in the workplace. This is particularly likely to be the case for young	Provision of remote working hubs in communities across Wales to provide suitable and safe workspace for all workers. Consider what actions can be taken to ensure that the cost of using remote working hubs is not prohibitive to those in low-paid jobs. Provide guidance and training to employers around identifying potential abuse in the home, and ensuring a supporting and safe working environment. Guidance on supporting workers at risk of

---

[77] Disability Wales (2021), Disability Wales Consultation Response. Available online at:
https://business.senedd.wales/documents/s500006342/15.%20Disability%20Wales.pdf

[78] Barnardo's, How Coronavirus has affected the LGBTQ+ community, 22nd June 2020. Available online at:
https://www.barnardos.org.uk/blog/how-coronavirus-has-affected-lgbt-community

		transgender people living in the family home. LGBT+ young people are at increased risk of homelessness, with 69% of homeless LGBT+ young people reporting that they have experienced abuse or rejection in the family home[79].	domestic abuse has been developed with Welsh Women's Aid and is available on www.businesswales.gov.wales Remote working to be considered as part of wider Fair Work and flexible working proposals, recognising that remote working may not be suitable for everyone (EHRC Wales).
Pregnancy and maternity	Positive impacts for pregnant women who may be able to work more easily from home rather than commuting into an office or other place of work. There could also be positive impacts for women after giving birth[80], as increased flexibility and the option to work from home	Research for the Department for Business, Innovation and Skills and the EHRC found that a high proportion of women requested more flexible working practices on their return to work, including 15% who requested to work from home or do so more frequently. Of mothers who chose not to return to work, 36% said that they could not find a job with the right hours, and 24% said	Remote working to be considered as part of wider flexible working proposals allowing increased flexibility in terms of hours of work as well as place of work (EHRC Wales).

---

[79] Albert Kennedy Trust (2015), LGBT Youth Homelessness: A UK National Scoping of Cause, Prevalence, Response and Outcome. Available online at: https://www.theproudtrust.org/resources/research-and-guidance-by-other-organisations/lgbt-youth-homelessness-a-uk-national-scoping-of-cause-prevalence-response-and-outcome/

[80] The protected characteristic of pregnancy and maternity refers to women who are pregnant, the period after the birth (linked to maternity leave in the employment context), and, in the non-work context, the period of 26 weeks after giving birth.

	may support return to work following maternity leave, or make it easier to keep in touch with colleagues while on leave. However, this could also create an expectation that women will return to work earlier than they might otherwise choose, which could have negative impacts.	that they could not find a job in a suitable location[81]. A quarter of mothers felt they had little contact with their employer while on maternity leave, which could contribute to feelings of isolation and lead to misunderstandings regarding the return to work[82].	
Race (include different ethnic minorities, Gypsies and Travellers and Migrants, Asylum seekers and Refugees)	People from some Black, Asian and Minority Ethnic communities may be less able to work from home due to concentration of employment in particular sectors, and therefore less	ONS data released in April 2021reveals that there is a significant discrepancy if you disaggregate groups within the Black and Asian minority ethnic grouping. 63.51% of white workers had never worked from home, but this figure rises to 76.21%.for Black workers. Less	Remote working is only one aspect of agile or flexible working practices. Welsh Government's position on Fair Work includes a focus on better flexible working options for all workers that is additional to this policy.

---

[81] HM Government and EHRC (2015), Pregnancy and Maternity-Related Discrimination and Disadvantage: Experiences of mothers. Available online at: https://www.equalityhumanrights.com/en/file/10511/download?token=fhYbcMUf

[82] HM Government and EHRC (2015), Pregnancy and Maternity-Related Discrimination and Disadvantage: Summary of key findings. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509500/BIS-16-145-pregnancy-and-maternity-related-discrimination-and-disadvantage-summary.pdf

likely to benefit from the introduction of the policy.

It is important to note that different groups within the Black and Asian Minority Ethnic category are impacted differently. | affected were Asian workers (66.5%) and mixed race workers (62.62%)[83]

Research by the Runnymede Trust found that, during the pandemic, people from Black, Asian and Minority Ethnic communities have been less likely than white people to work from home, with 33% of people from Black, Asian and Minority Ethnic groups working outside the home compared with 27% of white people. Black, Asian and Minority Ethnic people are also more likely to be classed as key workers than white people, at 28% compared with 23%. Black groups are particularly likely to be classed as key workers, at 34%[84].

The Joseph Rowntree Foundation's work on poverty in the UK in 2021 cites research by the Runnymede Trust, noting high rates of employment in sectors such as catering, restaurants, | It will be essential to monitor employment data in as much detail as possible to see a clear picture and to track trends. |

[83] ONS, Home working in the UK (April 2021) available online at:

Homeworking in the UK, work from home status - Office for National Statistics (ons.gov.uk)

[84] Runnymede Trust (2020), Over-exposed and under-protected.

	taxis and chauffeuring among certain Black, Asian and Minority Ethnic groups, including Bangladeshi and Pakistani men.[85] These sectors are generally relatively low-wage, and less adaptable to home working.	
	Potential negative impacts for people from Black, Asian and Minority Ethnic groups, who may be more likely to be affected by job losses in sectors such as retail and hospitality that could be associated with decreased footfall in town and city centres resulting from more remote working. Research	People from Black, Asian and Minority Ethnic groups make up 17% of the hospitality workforce, compared with 12% of the workforce in the rest of the economy[86]. The Joseph Rowntree Foundation has found that people from some Black, Asian and minority ethnic groups are disproportionately employed in sectors such as catering and restaurants[87]. Research by the TUC has found that workers from some Black,	Close monitoring of statistics relating to employment, disaggregated into as much detail as possible in order to gain a clear picture over time.

[85] Joseph Rowntree Foundation (JRF) (2021), UK Poverty 2020/21. Full report available online, via: https://www.jrf.org.uk/report/uk-poverty-2020-21

[86] Resolution Foundation (2020), Ethnic minorities in the hospitality sector: Comparing the experiences of hospitality workers from different ethnic backgrounds. Available online at: https://www.resolutionfoundation.org/app/uploads/2020/12/Ethnic-minorities-in-the-hospitality-sector.pdf

[87] Joseph Rowntree Foundation (JRF) (2021), UK Poverty 2020/21. Available online at: https://www.jrf.org.uk/report/uk-poverty-2020-21

suggests that employees from Black, Asian and minority ethnic groups may be more likely to work in affected sectors, and have also been more likely to experience job losses during the Covid-19 pandemic.

Asian and minority ethnic groups have been more likely to be affected by job losses during the Covid-19 pandemic than white workers, partly reflecting their employment in these industries. Sectors which have seen the largest decrease in Black, Asian and minority ethnic employees in 2020 period include accommodation and food (23% compared with 13% for white employees), and arts and entertainment (19%, compared with 3% for white employees)[88]; both sectors which could be affected by an increase in remote working and any associated fall in town and city centre footfall.

Data at the time of writing shows that there are currently 953,000 job vacancies in the UK[89], a record high and an increase of 43.8% on the previous quarter. This could suggest that the

---

[88] TUC (2021), Jobs and Recession Monitor – BME workers. Available online at: https://www.tuc.org.uk/research-analysis/reports/jobs-and-recession-monitor-bme-workers

[89] Vacancies and jobs in the UK, ONS, August 2021 available online at:

 Vacancies and jobs in the UK - Office for National Statistics (ons.gov.uk)

labour market may recover more quickly than was first assumed; however very close monitoring will be essential in order to gain a clear picture over time.

	Potential negative impacts for people from some Black, Asian and Minority Ethnic communities who may be more likely to be living in overcrowded housing and therefore less likely to have access to suitable workspace in the home.	Research by the Runnymede Trust has found that some Black, Asian and Minority Ethnic households tend, on average, to be larger than white British households, and more likely to be living in overcrowded accommodation. Black, Asian and Minority Ethnic groups are twice as likely, on average, to live in households of five people or more, and are more likely to live in households with fewer rooms than occupants[90]. In Wales, Census data shows that the rate of overcrowding among Black / Black British households was 19.4%, compared with 17.6% for Asian / Asian British households, 9.6% for mixed / multiple ethnic group households, and 5.1% for white households. The highest rate of overcrowding was amongst	Provision of remote working hubs in communities across Wales to provide suitable workspace for all workers. Important that hubs are available to all communities and that they are advertised locally, including in languages other than English where necessary. Consider what actions can be taken to ensure that the cost of using remote working hubs is not prohibitive to those in low-paid jobs.

---

[90] Runnymede trust (2020), Over-exposed and under-protected: The devastating impact of Covid-19 on Black and Minority Ethnic Communities in Great Britain. Available online at: https://www.runnymedetrust.org/uploads/Runnymede%20Covid19%20Survey%20report%20v3.pdf

		Gypsy or Irish Traveller households, at 28.7%[91].	
Religion, belief and non-belief	Potential positive impacts for some religious groups as remote working may allow people increased flexibility to attend or celebrate religious events and festivals. Working remotely may also allow people to work during religious holidays they don't observe, but when the office would usually be closed, such as Christmas.	Employees in the UK do not currently have a right to guaranteed time off to attend religious services, although it is good practice for employers to accommodate requests where possible[92].	Remote working to be considered as part of wider flexible working proposals allowing increased flexibility in terms of hours of work as well as place of work (EHRC Wales). Some local work spaces may be able to provide a space suitable of prayer and contemplation – especially community centres
Sex / Gender	Potential positive impacts for women as remote working may allow greater flexibility around caring and other responsibilities. However,	The employment rate among women is lower than among men, and women are considerably more likely to work part-time: 42% of women work part-time	The risk of a 'two tier' workforce forming has been a key recurring concern raised by stakeholders but as with many other aspects of this policy, much is yet to be proven.

[91] Improving-Race-Equality-in-Housing-and-Accomodation-Policy-Briefing-.pdf (wcpp.org.uk)

ONS (2012), Census 2011, Occupancy rating (bedrooms). Overcrowding in the Census is recorded using the occupancy rating. An occupancy rating of -1 or less means that a household has at least one fewer bedroom than required.

[92] ACAS, Religious festivals, holy days and observances. https://archive.acas.org.uk/religiousfestivals

	there could also be a risk that remote working could be detrimental to women's careers, due to the expectation that women will continue to take on a disproportionate share of domestic work. This could be the case particularly if take up of remote working is higher among women than among men, leading to a perception that male workers are more visible in the workplace than their female colleagues.	compared with 13% of men[93]. Women with young children are particularly likely to be in part-time employment. In their consultation response, EHRC Wales noted that there is evidence that women still disproportionately have responsibility for childcare and other caring roles, and that this poses a significant barrier to women entering the labour market[94]. The University of Southampton noted a growing body of evidence that woman have born an additional domestic burden during lockdown, even where both partners have been working at home[95].	Therefore ongoing monitoring, and subsequent actions are crucial to making the remote working policy an equitable one. We want remote working to be considered as part of the wider flexible working landscape, recognising that remote working may not be suitable for everyone. Work with colleagues in Social Partnerships and Fair Work on other aspects of flexible working. Engage with UK Government on their plans for Flexible Working. Legislative support for flexible working entitlements could help to encourage uptake and shift attitudes to flexible and remote working, reducing the potential for negative

[93] EHRC (2018), Is Britain Fairer? The state of equality and human rights in 2018. Available online at: https://www.equalityhumanrights.com/en/publication-download/britain-fairer-2018

[94] EHRC Wales (2021), Consultation response.

[95] University of Southampton (2021), Welsh Committee on Economy, Infrastructure and Skills, inquiry into the Welsh Government's proposal on working remotely. Available online at: https://business.senedd.wales/documents/s111793/04.%20Southampton%20University.pdf

		impacts on women's careers (University of Southampton).
	Potential positive impacts for men as remote working could allow more flexibility to spend time with family and to participate in childcare and other responsibilities.	A survey of 26 UK employers conducted by Working Families in 2020, and cited by EHRC Wales in their consultation response, found that 68% reported that male parents and carers had shown more interest in flexible working since the beginning of the Covid-19 pandemic[96].	N/A
	Women may be more likely to work in low-paid jobs and in sectors in which it is more difficult to work from home, and therefore may be less	Research by the EHRC in Wales has found that women are much more likely than men to work in low-pay occupations (39.3% compared with 20.3%)[97]. The WCPP has found that workers in low-paid sectors are the least	Remote working is only one aspect of agile or flexible working practices. Welsh Government's position on Fair Work includes a focus on better flexible working options for all

---

[96] See "Working Families Briefing – Working through Covid-19 and beyond: the perspective from employers", Working Families, (https://res.cloudinary.com/workingfamilies/images/v1616492600/Employer-survey-briefing-Oct_2020/Employer-survey-briefing-Oct_2020.pdf) cited by EHRC Wales in their consultation response.

[97] EHRC (2018), Is Wales Fairer? Available online at: https://www.equalityhumanrights.com/sites/default/files/is-britain-fairer-2018-is-wales-fairer.pdf

	able to benefit from the shift towards remote working.	likely to be able to work from home[98]. Research carried out during the Covid-19 pandemic found that 77% of the 3 million people in 'front-line' occupations in the U.K such as health and social care, retail and cleaning, which are less likely to be done from home, were women. Of the 1 million of these workers in low-paid jobs, 98% were women[99].	workers that is additional to this policy.
	Potential negative impact for people who may be at risk of domestic abuse taking place in the home.	ONS data show that, during the Covid-19 lockdown between April and June 2020, around one in five offences recorded by the police were flagged as domestic abuse-related, an increase of around five percentage points compared with the same period in 2019[100].	We are promoting a hybrid model of work that focuses on the needs of both the business and the worker. This allows people to be able to work away from home where home is not a suitable or safe space – either in a

---

[98] WCPP (2021), Remote working. Available online at: https://www.wcpp.org.uk/wp-content/uploads/2021/02/Remote-working-.pdf

[99] Women's Budget Group, cited in Chwarae Teg (2020), Women and Covid-19. Available online at: https://chwaraeteg.com/wp-content/uploads/2020/04/FINAL-UK-Briefing-on-Women-and-Covid-19.pdf

[100] ONS, Domestic abuse during the coronavirus (Covid-19) pandemic, England and Wales: November 2020. Available online at: https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/domesticabuseduringthecoronaviruscovid19pandemicenglandandwales/november2020#:~:text=As%20the%20lockdown%20measures%20eased,domestic%20abuse%2Drelated%20decreased%20slightly.&text=The%20police%20recorded%20206%2C492%20violence,in%202019%20(Figure%202).

		In their consultation response, Welsh Women's Aid commented that work can offer an important respite from abuse that may be taking place in the home. Working from home could also provide an increased opportunity for an abuser to control and conceal the abuse. Welsh Women's Aid works with employers to raise awareness of a range of potential indicators of abuse; however, the majority of these assume that employees and employers are interacting in a physical workspace[101].	central location or in their own community. Provide guidance and training to employers around identifying potential abuse in the home, and ensuring a supporting and safe working environment.
Sexual orientation (Lesbian, Gay and Bisexual)	Potential negative impacts for some LGBTQ+ people were identified, particularly young people living in the family home, who may be at risk of loneliness, rejection or homophobia in the home.	The LGBTQ+ helpline Switchboard reported 20% more calls, emails and instant messages during the Covid-19 pandemic[102]. While the easing of lockdown restrictions is likely to reduce negative impacts arising during the pandemic, an increased move to remote working could contribute to social	We are promoting a hybrid model of work that focuses on the needs of both the business and the worker. This allows people to be able to work away from home where home is not a suitable or safe space – either in a

---

[101] Welsh Women's Aid (2021), Remote working: Implications for Wales. Available online at: https://business.senedd.wales/documents/s111796/07.%20Welsh%20Womens%20Aid.pdf

[102] Barnardo's, How Coronavirus has affected the LGBTQ+ community, 22nd June 2020. Available online at: https://www.barnardos.org.uk/blog/how-coronavirus-has-affected-lgbt-community

isolation among lesbian, gay and bisexual people who may have less opportunity to meet with friends and support networks, including in the workplace. This is particularly likely to be the case for young LGB people living in the family home. LGBT+ young people are at increased risk of homelessness, with 69% of homeless LGBT+ young people reporting that they have experienced abuse or rejection in the family home[103].

central location or in their own community.

Provision of remote working hubs in communities across Wales to provide suitable workspace for all workers. Consider what actions can be taken to ensure that the cost of using remote working hubs is not prohibitive to those in low-paid jobs.

Provide guidance and training to employers around identifying potential abuse in the home, and ensuring a supporting and safe working environment.

Remote working to be considered as part of wider flexible working proposals, recognising that remote working may not be suitable for everyone (EHRC Wales).

---

[103] Albert Kennedy Trust (2015), LGBT Youth Homelessness: A UK National Scoping of Cause, Prevalence, Response and Outcome. Available online at: https://www.theproudtrust.org/resources/research-and-guidance-by-other-organisations/lgbt-youth-homelessness-a-uk-national-scoping-of-cause-prevalence-response-and-outcome/

Marriage and civil partnership	The assessment has not identified any disproportionate or differential equality impacts on the basis of the protected characteristic of marriage and civil partnership.	No impacts identified.	N/A
Children and young people up to the age of 18	Equality impacts for different age groups are considered above, under 'Age'.	No impacts identified.	N/A
Low-income households	Low-income workers could experience negative impacts as they may be more at risk of job losses in the retail or hospitality sectors as a result of any loss of footfall / spending in town and city centres.	The evidence available indicates that there is some inequality between groups in terms of their ability to work remotely, with low-paid workers the least likely to be able to work from home[104]. Work by Senedd Research has found that, for those earning less than £20,000 a year in Wales, only around 30% of key work tasks can be adequately performed at home, compared with over half of key tasks for those earning over £40,000 a	To promote the broader flexible working and Fair Work Agenda as part of delivery of the remote working strategy. Ongoing monitoring and trend tracking. Other departments of Welsh Government are working on mitigating these impacts. It is clear that all businesses will need to change in response to shift to a more circular economy, in order to recover

---

[104] Wales Centre for Public Policy (WCPP) (2021), *Remote working.* Available online at: https://www.wcpp.org.uk/wp-content/uploads/2021/02/Remote-working-.pdf

year[105]. PCGs including women, disabled people, young people aged under 25, and some Black, Asian and Minority Ethnic groups are more likely to be employed in lower-paid sectors[106].

Research by WCPP has found that around half of low-paid workers in Wales are employed in sectors such as retail, hospitality, tourism, care and food processing, which have been particularly badly affected by lockdown. The report cites research by the Joseph Rowntree Foundation which found that 78% of workers in the accommodation and food services sector in Wales were furloughed, and 77% of workers in arts, entertainment and recreation[107]. These sectors could also be among the most

to the same or similar trading position as before. .

The Welsh Government are working with stakeholders to develop a Retail Strategy, closely linked to the Fair Work agenda and in step with Town Centre First principles. The Strategy will outline short medium and long-term priorities for the sector and will proactively engage in a social partnership dialogue that will consider these issues over a defined period and then forward with agreed expectations that can be shared, disseminated and deployed to help address some of the challenges that face the sectors.

---

105 Senedd Research (2020), cited in WCPP (2021), Remote working.

106 Kabeer (2020), cited in WCPP (2021), Remote working.

107 Joseph Rowntree Foundation (2020), Briefing: Poverty in Wales, cited in WCPP, Remote Working. Available online via: https://www.jrf.org.uk/report/poverty-wales-2020

likely to be affected by any loss of footfall or revenue in town or city centres as a result of an increased move to remote working.

	Positive impacts for low-income households, as home or remote working could have the potential to reduce commuting costs and open up access to a wider range of employment opportunities, particularly for households without access to a car. This could reduce the incentive to move to other areas, including Cardiff, London and other parts of England. As discussed above under Age, there could be particular benefits for young people from lower-income households who could benefit from improved access to work and training	Across Wales, an average of 18% of households do not have access to a car or van, although the rate varies from 3% in Powys to 29% in Cardiff. Rural areas generally have the highest rates of car ownership. There are eight local authorities in Wales with higher than average proportions of households without access to a car or van: these are all located in south Wales and the valleys (Caerphilly, Neath Port Talbot, Swansea, Rhondda Cynon Taf, Newport, Blaenau Gwent, Cardiff, and Merthyr Tydfil).

As discussed above under the Age Impacts section there are considerable employment and income benefits for people who move away from home in order to find work, but these benefits have contributed to regional socio-economic inequality. An increase in remote working, particularly if it is |

opportunities, and for people in rural areas.	replicated in other parts of the UK, could enable people living in more deprived parts of Wales to benefit from increased access to work in other areas. One of the key goals of this policy is to reduce the need to travel in the first place, in line with the Wales Transport Strategy's Transport hierarchy. Being able to access employment without a lengthy and expensive commute helps to reduce our carbon footprint and eases congestion and pollution, in particular in urban areas and bottlenecks	
	Low-paid workers are less likely to be able to work from home due to concentration of employment in particular sectors, and therefore less likely to benefit from the introduction of the policy. Certain PCGs are more likely to be employed in low-pay jobs. There is the potential that this could exacerbate existing inequalities between groups,	There is the potential that areas with high proportions of residents in low-paid employment will not benefit from the introduction of the policy to the same extent as areas characterised by high-wage, white collar employment. Evidence provided by the University of Cardiff in its consultation response shows that the increase in homeworking during the pandemic has been strongest among the most highly skilled and highly paid sectors of the workforce. While a majority of managerial, professional,	Target areas such as this for focused engagement and work with the Community Housing sector and other providers in development of local work facilities appropriate to the locale

and between regions of Wales.

administrative and secretarial staff were working from home during lockdown, more than 80% of operatives and elementary workers reported that none of their work was carried out at home[108].

Around a third of employees in Wales work in low-paid sectors, and low-paid workers are among the least likely to be able to work from home. As noted above, there are particular groups that are more likely to be employed in low-pay sectors, including women, disabled people, younger people and some Black, Asian and Minority Ethnic groups. There is therefore a risk, as noted in the WPPC research, that increased home working in the longer term could exacerbate existing inequalities within the labour market by benefitting white collar workers who

ONS data shows that the age-standardised mortality rate due to COVID in the most deprived areas was almost twice the mortality rate in the

---

108 Cardiff University (2021), Written evidence submitted by Professor Alan Felstead. Available online at: https://business.senedd.wales/documents/s111791/02.%20Cardiff%20University.pdf

		least deprived areas. Whilst a similar pattern (of higher death rates in more deprived areas) is seen for deaths from all causes, the difference for deaths due to COVID is greater. [109]	
	Low-income households, particularly in rural areas, could also be at greater risk of digital exclusion, which could further reduce their opportunity to benefit from the introduction of the policy. As noted above, certain PCGs are also more likely to be at risk of digital exclusion.	Data from the National Survey for Wales, cited in the consultation response from the Wales Co-operative Centre, shows that rates of digital exclusion in Wales vary significantly for some groups, including those on lower incomes. While 10% of the Welsh public are considered digitally excluded, the rate among social housing tenants is 17%. Broadband speeds are significantly slower in rural areas of Wales than in	To signpost to initiatives that can offer support, such as Digital Communities, Learn My Way, and Local authorities who have schemes aimed at assisting with devices and skills.

109
https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/deathsduetocovid19bylocalareaandd eprivation

	urban areas, at 32Mbit/s, compared to 54Mbit/s[110].		

Human Rights and UN Conventions

Consideration is given to whether the proposals would have an impact on people's human rights and is set out in the table below:

Human Rights	What are the positive or negative impacts of the proposal?	Reasons for your decision (including evidence)	How will you mitigate negative Impacts?
Article 23 1) Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment.	Positive impacts could include increasing access to a wider range of work for people living in communities across Wales, including women and disabled people who may be more likely to experience barriers to employment. Also potential positive impacts on working conditions, including for groups with childcare or other caring responsibilities.	See evidence included in Equality Impact Assessment above regarding potential positive impacts for women, men, and disabled people.	Introducing remote working as part of wider flexible working proposals could support positive impacts by allowing increased flexibility in terms of hours of work as well as place of work (EHRC Wales). Work with UK Government to ensure future changes to relevant employment legislation work for Wales.

110 Wales Co-operative Centre (2021), Remote Working: Implications for Wales, Economy, Infrastructure and Skills Committee. Wales Co-operative Centre response. Available online at: https://business.senedd.wales/documents/s111798/09.%20Wales%20Co-operative%20Centre.pdf

Article 24	Positive impacts could arise from increased time at home and reduced commuting time, allowing greater time for rest and leisure. However potential negative impacts for some workers who may find that remote working leads to an increase in working hours.	See evidence included in Equality Impact Assessment above regarding potential positive impacts for women, men, and disabled people.	Guidance for employers regarding working hours and maintaining work-life balance could help to mitigate any negative impacts.
Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.		Research cited in a report on remote working by the Wales Centre for Public Policy found that people working remotely tended to work longer hours, by approximately 45 minutes each day[111]. Research carried out before the pandemic found that home-workers can find it more difficult to unwind from work at the end of the day, and reported worrying about work more than conventionally sited workers[112].	

In addition to the above, it is noted that Article 9 (Accessibility) of the UN Convention on the Rights of Persons with Disabilities (CRPD) states the following:

---

111 WCPP (2021), Remote working.

112 Cardiff University (2021), Economy, Infrastructure and Skills Committee, Senedd Cymru: Welsh Government's Remote Working Proposal. Written evidence submitted by Professor Alan Felstead. Available online at: https://business.senedd.wales/documents/s111791/02.%20Cardiff%20University.pdf

1. To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas. These measures, which shall include the identification and elimination of obstacles and barriers to accessibility, shall apply to, inter alia:
   a) Buildings, roads, transportation and other indoor and outdoor facilities, including schools, housing, medical facilities and workplaces.
   b) Information, communications and other services, including electronic services and emergency services.
2. States Parties shall also take appropriate measures:
   a) To develop, promulgate and monitor the implementation of minimum standards and guidelines for the accessibility of facilities and services open or provided to the public.
   b) To ensure that private entities that offer facilities and services which are open or provided to the public take into account all aspects of accessibility for persons with disabilities.
   c) To provide training for stakeholders on accessibility issues facing persons with disabilities.
   d) To provide in buildings and other facilities open to the public signage in Braille and in easy to read and understand forms.
   e) To provide forms of live assistance and intermediaries, including guides, readers and professional sign language interpreters, to facilitate accessibility to buildings and other facilities open to the public.
   f) To promote other appropriate forms of assistance and support to persons with disabilities to ensure their access to information.
   g) To promote access for persons with disabilities to new information and communications technologies and systems, including the Internet.
   h) To promote the design, development, production and distribution of accessible information and communications technologies and systems at an early stage, so that these technologies and systems become accessible at minimum cos

** Evidence Table and Gap Analysis **

The table below summarises selected key evidence used in the Equality Impacts Assessment, and highlights key gaps.

It is worth reiterating that the evidence in some areas is emerging and changing as we move away from the crisis situation and restrictions relax, therefore ongoing monitoring and horizon scanning is essential.

Evidence/data required	Source
"Research into perceptions of modern working practices", Chwarae Teg / Mott Macdonald	https://chwaraeteg.com/projects/commission-on-modern-working-practices/
Age	The Retail Appointment: UK Retail, Facts and Figures. Available online at: https://www.retailappointment.co.uk/career-advice/talking-shop/uk-retail-facts-and-figures ONS, Employment in the UK: February 2021. https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/employmentintheuk/latest Resolution Foundation (2020), Young workers in the coronavirus crisis: Findings from the Resolution Foundation's coronavirus survey. Available online at: https://www.resolutionfoundation.org/publications/young-workers-in-the-coronavirus-crisis/ TUC, Young workers are bearing the brunt of the jobs crisis. 23rd February 2021. Available online at: https://www.tuc.org.uk/blogs/young-workers-are-bearing-brunt-jobs-crisis Kabeer (2020), cited in WCPP (2021), *Remote working*. University of Southampton (2021), Welsh Committee on Economy, Infrastructure and Skills.

Evidence/data required	Source
	Universities and Colleges Union (UCU) Wales (2021), UCU Response – Remote Working: Implications for Wales. Available online at: https://business.senedd.wales/documents/Wales.pdf
	Social Mobility Foundation (2020), Moving out to move on: Understanding the link between migration, disadvantage and social mobility. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment/Moving_out_to_move_on_report.pdf
Disability	Wales Co-operative Centre (2021), Remote Working: Implications for Wales, Economy, Infrastructure and Skills Committee. Wales Co-operative Centre response. Available online at: https://business.senedd.wales/documentsCo-operative%20Centre.pdf
	EHRC Wales (2018), Is Wales Fairer? The state of equality and human rights in 2018. Available online at: https://www.equalityhumanrights.com/sites/default/files/is-britain-fairer-2018-is-wales-fairer.pdf
	WCPP (2021), Remote working.
	EHRC Wales (2018), Is Wales Fairer?
	EHRC Wales (2021), Consultation response: The implications for Wales of the WG's proposals on remote working. Available online at: https://business.senedd.wales/documents/CommissionWales.pdf
	Legally Disabled (2021), Submission to the Committee for Economy, Infrastructure and Skills 'Remote Working: Implications for Wales.' Available online at: https://business.senedd.wales/documents/20Disabled.pdf
	Disability Wales (2021), Disability Wales Consultation Response.
	Disability Wales (2021), Consultation Response to Economy, Infrastructure and Skills Committee on Remote Working:

Evidence/data required	Source
	Implications for Wales. Available online at: https://business.senedd.wales/documents/Wales.pdf
Gender Reassignment (the act of transitioning and Transgender people)	Barnardo's, How Coronavirus has affected the LGBTQ+ community, 22nd June 2020. Available online at: https://www.barnardos.org.uk/blog/how-coronavirus-has-affected-lgbt-community Albert Kennedy Trust (2015), LGBT Youth Homelessness: A UK National Scoping of Cause, Prevalence, Response and Outcome. Available online at: https://www.theproudtrust.org/resources/research-and-guidance-by-other-organisations/lgbt-youth-homelessness-a-uk-national-scoping-of-cause-prevalence-response-and-outcome/
Pregnancy and maternity	HM Government and ESRC (2015), Pregnancy and Maternity-Related Discrimination and Disadvantage: Summary of key findings. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/-pregnancy-and-maternity-related-discrimination-and-disadvantage-summary.pdf
Race (include different ethnic minorities, Gypsies and Travellers and Migrants, Asylum seekers and Refugees)	Resolution Foundation (2020), Ethnic minorities in the hospitality sector: Comparing the experiences of hospitality workers from different ethnic backgrounds. Available online at: https://www.resolutionfoundation.org/app/uploads/2020/12/Ethnic-minorities-in-the-hospitality-sector.pdf Joseph Rowntree Foundation (JRF) (2021), UK Poverty 2020/21. Available online at: https://www.jrf.org.uk/report/uk-poverty-2020-21 TUC (2021), Jobs and Recession Monitor – BME workers. Available online at: https://www.tuc.org.uk/research-analysis/reports/jobs-and-recession-monitor-bme-workers Runnymede trust (2020), Over-exposed and under-protected: The devastating impact of Covid-19 on Black and Minority Ethnic Communities in Great Britain. Available online at:

Evidence/data required	Source
	https://www.runnymedetrust.org/uploads/Runnymede%20Covid19%20Survey%20report%20v3.pdf
	ONS (2012), Census 2011, Occupancy rating (bedrooms). Overcrowding in the Census is recorded using the occupancy rating. An occupancy rating of -1 or less means that a household has at least one fewer bedroom than required
	Runnymede Trust (2020), Over-exposed and under-protected.
	Joseph Rowntree Foundation (JRF) (2021), UK Poverty 2020/21. Available online at: https://www.jrf.org.uk/report/uk-poverty-2020-21
Religion, belief, and non-belief	ACAS, Religious festivals, holy days and observances. https://archive.acas.org.uk/religiousfestivals
Sex / Gender	EHRC (2018), Is Britain Fairer? The state of equality and human rights in 2018. Available online at: https://www.equalityhumanrights.com/en/publication-download/britain-fairer-2018
	University of Southampton (2021), Welsh Committee on Economy, Infrastructure and Skills, inquiry into the Welsh Government's proposal on working remotely. Available online at: https://business.senedd.wales/documents/sSouthampton%20University.pdf
	EHRC Wales (2021), Consultation response.
	https://www.peoplemanagement.co.uk/news/articles/flexible-working-morepopular-with-male-employees-since-lockdown
	Women's Budget Group, cited in Chwarae Teg (2020), Women and Covid-19. Available online at: https://chwaraeteg.com/wp-content/uploads/2020/04/FINAL-UK-Briefing-on-Women-and-Covid-19.pdf
	ONS, Domestic abuse during the coronavirus (Covid-19) pandemic, England and Wales: November 2020. Available online at:

Evidence/data required	Source
	https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/.
	Welsh Women's Aid (2021), Remote working: Implications for Wales. Available online at: https://business.senedd.wales/documents/Womens%20Aid.pdf
Sexual orientation (Lesbian, Gay and Bisexual)	Barnardo's, How Coronavirus has affected the LGBTQ+ community, 22nd June 2020. Available online at: https://www.barnardos.org.uk/blog/how-coronavirus-has-affected-lgbt-community
	Albert Kennedy Trust (2015), LGBT Youth Homelessness: A UK National Scoping of Cause, Prevalence, Response and Outcome. Available online at: https://www.theproudtrust.org/resources/research-and-guidance-by-other-organisations/lgbt-youth-homelessness-a-uk-national-scoping-of- cause-prevalence-response-and-outcome/
Low-income households	Cardiff University (2021), Written evidence submitted by Professor Alan Felstead
	The Guardian, '"It's heartbreaking": inequality reaps high Covid toll in south Wales valleys', 8th February 2021. https://www.theguardian.com/world/2021/feb/08/inequality-high-covid-toll-south-wales-valleys
	WPPC (2021), Remote working
	Wales Co-operative Centre (2021), Remote Working: Implications for Wales, Economy, Infrastructure and Skills Committee. Wales Co-operative Centre response. Available online at: https://business.senedd.wales/documents/s111798/09.%20Wales%20Co-operative%20Centre.pdf
Gender Reassignment (the act of transitioning and Transgender people)	Gap: Evidence gap for impact of agile working on young LGBT people from BAME backgrounds

Evidence/data required	Source
	Gap: Evidence gap for impacts for trans people specifically (rather than LGBT+)
Sexual orientation (Lesbian, Gay and Bisexual)	Gap: Evidence gap for Impacts for trans people from BAME backgrounds
Sex / Gender	Gap: Conflicting stats around men/women working from home therefore more evidence needed

There is no standard definition of 'rural Wales', however rural land constitutes a large part of Wales. Rural people are a minority but a significant one - there are almost as many people living in settlements of under 2,000 people as in Cardiff, Swansea and Newport combined.[113]

This presents an opportunity for more Remote Working to connect these areas, and to stimulate local economies in smaller towns and villages if there is less need to travel to urban centres for work. Pre-pandemic, home workers as a percentage of all those employed, tended to be already significantly higher in rural areas (and increasing with rurality). In England, 32% of those employed were home workers in rural hamlets and dispersed areas compared with 13% in urban areas. 22% of all workers living in rural areas were homeworkers in 2019. Between 2006 and 2019 the rate of home working increased across all sectors.[114]

In Wales, the extent to which homeworking is practicable for the working population depends on the type of job being done, as well as the geographical location. Research commissioned by the Welsh Parliament in February 2021 suggests that larger urban centres such as Cardiff and Swansea have the greatest potential for homeworking amongst resident populations, whilst former industrial and rural areas show a lower level of potential for homeworking. The report states that people working from home in both rural and urban areas are fewer than in England.[115]

Even though data shows that the percentage of total workers in both rural and urban areas who commute outside the area are similar, it will be necessary to monitor how many rural workers who currently commute will change their work pattern,[116] Other areas of interest will include what percentage of urban and suburban residents are likely to relocate to rural areas over the long-term, and how often or far these people are then willing to commute. The WCPP report on Remote working[117] points out that remote working and flexible

---

[113] Census of Population, 2011, classified using Built Up Areas.

[114]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_ data/file/945682/Home_Working_final_Dec_2020.pdf

[115] See "Remote working – spatial implications in Wales" (Reuschke, Clifton, Long on behalf of Welsh Parliament), February 2021 (https://business.senedd.wales/documents/s500006851/Adroddiad%20gweithio%20o%20 bell%20Dr%20Darja%20Reuschke%20Saesneg%20yn%20unig.pdf)

116 https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour- Market/People-and-Work/Employment/Commuting/commutingpatterns-by- welshlocalauthority-measure

[117] Remote Working | WCPP

working hours could result in people being willing to accept longer commutes if they are able to make fewer trips to the office.

A US study shows that many people are considering moving mainly from large cities to less dense areas with lower housing costs. Over half are considering moving more than 2 hours away, and 41.5% are considering moving more than 4 hours away.[118] A report by the Adecco group also demonstrates that 57% of Londoners believe that many workers will no longer feel the need to live within commuting distance of top city firms.[119]

The impact on people, communities and businesses is considered below. In considering these impacts we have sought to respond to the requirements of the Rural Proofing Impact Assessment as set out in the Welsh Government's IIA Guidance, as well as considering the consultation response of the Future Generations Commissioner for Wales

Impact on people and communities

There may be an increased demand for housing in the long-term in rural areas due to people being able to work remotely with no requirement to be near urban centres. There is also the potential that this could increase housing prices and rents in rural communities and increase poverty, however remote working can also provide an opportunity for people who have left rural areas to move back to their original communities if they have more flexibility about their place of work.[120]

Russell Galley, Managing Director, Halifax, has stated, "*Much of the impact from the stamp duty holiday has now left the market, as highlighted by the drop in industry transaction numbers compared to a year ago. However, while such Government schemes have provided vital stimulus, there have also been other significant drivers of house price inflation. We believe structural factors have driven record levels of buyer activity - such as the demand for more space amid greater home-working.*"

Therefore, the situation with house prices in rural or semi-rural areas will need to be monitored over time. Policies such as the Welsh Language Communities Housing Plan are being developed which aim to support first time buyers purchase a property in rural areas, which may help to balance the picture.

---

[118] https://www.upwork.com/press/releases/economist-report-remote-workers-on-the-move

[119] https://adeccogroup.co.uk/news/covid-19-driving-top-talent-migration-to-rural-parts-of-uk/

[120] Second Homes – Developing New Policies in Wales.   Dr Simon Brooks. (2021) https://gov.wales/sites/default/files/publications/2021-03/second-homes-developing-new-policies-in-wales.pdf

Professor Alan Felstead in his report published earlier this year states that 56% of workers in Wales are unable to work at home.[121] Not everyone will have space in their homes to be able to set up a remote working station. This strengthens the case for access to local work hubs in smaller communities in Wales as an alternative to working at home.

Digital Infrastructure

Rural communities may not be able to take full advantage of the opportunities for more remote working due to digital infrastructure constraints. Rural areas have lower availability of superfast and ultrafast broadband compared to urban areas, and the percentage of homes and businesses with indoor 4G and voice call coverage from all four network providers is lower.[122]

Again these infrastructure issues mean that working hubs as an alternative to working from home are desirable.

Additionally, despite telecommunications not being devolved to Wales, the Welsh Government is still using a range of solutions to support those without access to fast and reliable broadband such as a £10 million Local Broadband Fund, an Access Broadband Cymru grant scheme and an approach to topping up the value of UK Government gigabit vouchers. The Welsh Government are also working with Openreach to bring gigabit capable, full fibre broadband to a further 39,000 properties across Wales using £56m of public funding - made up of Welsh Government and EU funds with some extra funding from the UK Government. These interventions will help us achieve our ambitious Digital Strategy for Wales.

Transport

Rural communities may not be able to take the best advantage of economic benefits to rural businesses, jobs and poverty reduction due to a lack of public transport access.[123] Public transport is particularly important for those on low incomes, job seekers, those without access to a car and the elderly.

---

[121] Prof Alan Felstead, Outlining the contours of the 'Great Homeworking Experiment' and its implications for Wales

[122] Digital Infrastructure by region – Figures 28 - 31
https://gov.wales/sites/default/files/statistics-and-research/2020-05/summary-statistics-regions-wales-2020-629.pdf

[123] 123 Figure 17 Transport infrastructure in Wales:
https://gov.wales/sites/default/files/statistics-and-research/2020-05/summary-statistics-regions-wales-2020-629.pdf

Improvements to public transport and active travel options in rural areas would be helpful – The Wales Transport Strategy 2021 aims to '…extend the geographical 'reach' of public transport into every community, especially in rural Wales.'[124]

Rural communities may not be able to take advantage of economic benefits to rural businesses, jobs, and poverty reduction due to constraints on land uses. Commercial space is required to support growing businesses and jobs and this may be less available in rural areas. However, there is insufficient evidence at this time and ongoing monitoring is required in this area

Business

Increased localism in shopping and hospitality, leading to additional local spending in rural areas will create jobs and spur business growth.   Graham Shone argues that a long-term increase in remote working would bring about increased localism in the way people shop and engage with hospitality businesses. He highlights the potential lasting impacts of the need to use more local businesses during the Coronavirus pandemic as a key influence on future behaviour as people may fall into more local-based habits.'[125]

There is the potential to make it easier to do business from rural areas as virtual meetings become widely accepted. This offers the opportunity to reduce "brain drain" – keeping skilled workers in rural areas rather than people only seeking opportunities in urban centres.[126]

However, while SMEs and micro enterprises are flexible and agile, they may not have the resources and capabilities needed in HR and IT to easily switch to remote working. Welsh Government's business support may have a role to play in helping such businesses to adapt to new ways of working.

People

More remote working can help to stem the population decline in rural communities if fewer people are leaving the area to work – which could serve to strengthen local communities - notably in aging areas. There may also be more services available due to the localisation of shopping and hospitality

Welsh speaking communities

For a detailed assessment please see the Welsh Language Impact Assessment.

---

[124] The Wales Transport Strategy 2021, Welsh Government, available online at: Llwybr Newydd: the Wales Transport Strategy 2021 | GOV.WALES

125 Shone, G., 2020. Shifting working patterns: How WFH could be the high street's saviour. [Online] Retrieved from: https://www.egi.co.uk/news/shifting-working-patterns-how-wfh-could-be-the-high-streets-saviour/

126 https://www.bbc.co.uk/news/uk-wales-50130590

There may be more opportunity to use Welsh in the home in rural heartlands if people are not required to travel out to work. It would also present more opportunities to use Welsh in the community and more job options for people without them leaving Welsh speaking areas. This localism will also present the opportunity to support the economies of rural Welsh speaking communities.

People without reliable broadband in Welsh speaking communities may be excluded from participation, as noted previously in relation to digital infrastructure

There is also a risk that immigration into Welsh speaking heartlands may impact the language, including house prices increases putting home ownership out of the reach of locals.

There are opportunities to promote the use of the Welsh Language in local working hubs, and to work with providers to achieve best practice and explore possibilities - such as the promotion of online Welsh language training and Welsh Language Classes in hubs in order to continue to promote speaking Welsh.

Poverty

Defining poverty in rural areas is complex. Although Welsh Index of Multiple Deprivation (WIMD) data demonstrates that there are very few rural areas of high multiple deprivation in Wales, 'analysis of the underlying WIMD indicators by settlement type shows there are still significant numbers of deprived people living in rural areas'[127].

The creation of businesses and jobs in rural areas would mean access to more skilled and better paid jobs that can be performed remotely, at or near to home.

The Joseph Rowntree Foundation states that 'For low-income families, one factor in being unable to escape in-work poverty is the need to balance paid work with caring for children.' Having more flexibility about where you work can give people more flexibility with caring for their children.[128]

Low-income households may not have space at home for working, and may work in sectors where it is difficult to work remotely. Access to a local remote working hub and improved public transport would assist.

Conclusions and Monitoring

Remote working has the potential to produce benefits for rural communities, particularly to boost rural earnings as people will have more job options available to them. This has the potential to reduce poverty and support rural businesses. However fully realising these

---

127 Welsh Index of Multiple Deprivation 2014: A guide to analysing deprivation in rural areas1

128 Joseph Rowntree Foundation (JRF) (2021), UK Poverty 2020/21. Available online at: https://www.jrf.org.uk/report/uk-poverty-2020-21

benefits requires supporting infrastructure such as digital connectivity, public transport, commercial space, affordable housing and remote working hubs to be in place.

People across Wales having more flexibility about where they live may increase house prices in rural areas, but on the other hand it may also mean some people who have left rural areas to work may be able to return.

The availability of broadband is an issue in many rural areas, and Remote Working Hubs and the Welsh Government Digital Strategy for Wales will go some way to mitigating this issue.

As noted throughout this assessment, reliable and frequent public transport service is essential in rural areas to meet the changing needs of the working landscape as people continue to work more remotely.

Remote Working may be beneficial to the Welsh Language in rural areas, as Welsh speakers are able to live and work in the Welsh heartlands, and have more time to speak Welsh at home.

Further monitoring and evidence gathering should be done to ensure that rural communities are prepared for an increase in remote working,

* Evidence Table and Gap Analysis **

The table below summarises selected key evidence used in the assessment of impacts on rural communities, and highlights key gaps.

Evidence/data required	Source
Context: Definition of rural areas	https://gov.wales/sites/default/files/statistics-and-research/2020-05/summary-statistics-regions-wales-2020-629.pdf
Context: Funding to support the rural economy	https://gov.wales/written-statement-funding-support-our-rural-economy
Context: % of rural workers working from home and industrial profile	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/945682/Home_Working_final_Dec_2020.pdf
Context: Regional Variation in homeworking in Wales	Annual Population Survey 2019
Context: Commuting data	https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/People-and-

Evidence/data required	Source
	Work/Employment/Commuting/commutingpatterns-by-welshlocalauthority-measure
Context: Relationships between remote working and willingness to accept longer commutes	WCPP report
Context: Remote working and number of people considering moving	US study: https://www.upwork.com/press/releases/economist-report-remote-workers-on-the-move UK: https://adeccogroup.co.uk/news/covid-19-driving-top-talent-migration-to-rural-parts-of-uk/
Housing: Lack of space at home for homeworking	WCPP report
Housing: Impact on house prices in rural locations	Cardiff University consultation response (https://www.bbc.co.uk/news/uk-wales-55085184, https://www.dailypost.co.uk/news/north-wales-news/second-homes-crisis-putting-future-18754517)
Digital Infrastructure: Regional digital infrastructure statistics	https://gov.wales/sites/default/files/statistics-and-research/2020-05/summary-statistics-regions-wales-2020-629.pdf
Transport: Regional Transport Infrastructure statistics	https://gov.wales/sites/default/files/statistics-and-research/2020-05/summary-statistics-regions-wales-2020-629.pdf
Business: Local spending	WCPP report
Business: Reducing outflow of skilled workers	https://archive.curbed.com//startup-remote-working-rural-coworking and https://www.bbc.co.uk/news/uk-wales-

Evidence/data required	Source
Business: SME barriers to remote working	FSB Consultation response
Poverty – Economic inactivity by local areas	https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/People-and-Work/Economic-Inactivity/economicinactivityratesexcludingstudents-by-welshlocalarea-year
Poverty: Average earnings by local areas	https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/People-and-Work/Earnings/medianweeklyearnings-by-welshlocalareas-year
Poverty: Deprivation	Indices of Multiple Deprivation
Context: % of rural residents likely to be able to work from home (who may currently commute to urban and suburban areas).	Gap: Further analysis required on commuting data
Context: Data required for Wales - What % of urban and suburban residents are likely to relocate to rural areas over the long-term? What would be the typical travel to work time in the future?	Gap: Further evidence needed
Land: Availability of commercial space in rural areas	Gap: further evidence needed
People- Older Population	Gap: further research is required to understand the link between reducing population decline in ageing areas and remote working. To consider: Case studies from Japan (population decline and rapid ageing)

D. DATA PROTECTION IMPACT ASSESSMENT SCREENING

The remote working policy has an aim to keep 30% of people across all sectors working at or near their homes. The policy does not directly require the processing of data. Some data may need to be processed by third parties if people choose to work in a remote working hub, where they will liaise directly with the provider. We will not know for sure what if any personal data will be captured.

We have and will continue to consult with the public as part of this policy to gauge opinion on remote working/ the remote working hubs, but no personal data has been collected and a separate DPIA was completed.

Has data protection impact screening or assessment already been carried out?

- No

Does the proposal involve the processing of personal data by Welsh Government or any other parties?

No

Please tick the personal data items that will be processed (this list is not exhaustive):

Personal

Name	Telephone numbers
Name address	Date of birth
Business address	Driving licence number
Postcode	Passport / ID card number
Email address	Photographs / images (which could be used to identify an individual)
	Other (please specify)

Special Category

Racial / ethnic origin	Biometric data e.g. DNA, finger-prints
Political opinions	
Religious / philosophical beliefs	

The remote working policy has an aim to keep 30% of people across all sectors working at or near their homes. The policy does not directly require the processing of data. Some data may need to be processed by third parties if people choose to work in a remote working hub, where they will liaise directly with the provider. We will not know for sure what if any personal data will be captured.

We have and will continue to consult with the public as part of this policy to gauge opinion on remote working/ the remote working hubs, but no personal data has been collected and a separate DPIA was completed.

Trade union membership Physical / mental health conditions Sexual life Sexual orientation Criminal & court records (inc. alleged offences)	

If special category personal data is being processed, is this data being collected mandatorily (i.e. without the data subjects having an option to not provide it)?

- Yes – please provide details
- No

Do any of the data subjects whose personal data will be processed fall into the following categories?

Children (under the age of 12)

Patients

Asylum Seekers

Welsh Government employees

Please give an indication of the scale of the processing (e.g. pan-Wales; targeted group)

Details

For the personal data being processed, please indicate

The remote working policy has an aim to keep 30% of people across all sectors working at or near their homes. The policy does not directly require the processing of data. Some data may need to be processed by third parties if people choose to work in a remote working hub, where they will liaise directly with the provider. We will not know for sure what if any personal data will be captured.

We have and will continue to consult with the public as part of this policy to gauge opinion on remote working/ the remote working hubs, but no personal data has been collected and a separate DPIA was completed.

Who the data controller is?	Details:
Any data processors?	Details:
Will the data be shared?	Details:

What is the statutory basis for processing the data? NB – GDPR itself does <u>not</u> provide a statutory legal basis to process personal data.

Have legal Services confirmed that the basis outlined above provides the necessary statutory gateway for processing (including any proposed sharing)?

- Yes
- No

Will the proposal involve new or significantly changed processing of personal data about each individual?

- Yes (please provide details)
- No

Will the personal data be consolidated, linked or matched with data from other sources?

- Yes (please provide details)
- No

Will the personal data be used for automated decision making?

- Yes (please provide details)
- No

Will the personal data result in systematic monitoring of data subjects?

The remote working policy has an aim to keep 30% of people across all sectors working at or near their homes. The policy does not directly require the processing of data. Some data may need to be processed by third parties if people choose to work in a remote working hub, where they will liaise directly with the provider. We will not know for sure what if any personal data will be captured.

We have and will continue to consult with the public as part of this policy to gauge opinion on remote working/ the remote working hubs, but no personal data has been collected and a separate DPIA was completed.

- Yes (please provide details)
- No

Does the proposal involve new or changed data collection, retention or sharing policies/practices for personal data?

- Yes (please provide details)
- No

Do you have a clear retention policy and what practical things are in place for you to ensure that your Retention Policy is applied?

- Yes (please provide details)
- No

Will the proposal involve the introduction of privacy-intrusive technologies such as

- Smart cards
- RFID tags
- Biometrics
- Visual surveillance (e.g. CCTV)
- Digital image and video recording
- Profiling, data mining or logging electronic traffic
- Locator technologies (e.g. GPS, mobile phone tracking)
- Other (please provide details)

Will the proposal involve new or changed identity management or authentication processes?

- Yes (please provide details)
- No

Will the proposal have the effect of enabling identification of individuals who were previously anonymous?

The remote working policy has an aim to keep 30% of people across all sectors working at or near their homes. The policy does not directly require the processing of data. Some data may need to be processed by third parties if people choose to work in a remote working hub, where they will liaise directly with the provider. We will not know for sure what if any personal data will be captured.

We have and will continue to consult with the public as part of this policy to gauge opinion on remote working/ the remote working hubs, but no personal data has been collected and a separate DPIA was completed.

- Yes (please provide details)
- No

For completion by Information Rights Unit

Is a Data Protection Impact Assessment (DPIA) required for this proposal?

- No – the proposal does not specifically involve the processing of personal data.

Has advice on General Data Protection Regulation (GDPR) compliance been provided?

- No

- Does the proposal require a Privacy Notice to be drafted? No
- Does the proposal require consultation with the ICO under GDPR Art 36(4)? No
- Does the proposal require a contract between Welsh Government as data controller and a third party processor? No
- Does the proposal require a data sharing agreement to be drafted? No

E. WELSH LANGUAGE IMPACT ASSESSMENT

Policy and Legislative Context

Overview of the following relevant policy and legislative context:

- Welsh Language Act 1993
- Government of Wales Act 2006, s78 which places a duty on the Welsh Government to both facilitate and promote the use of the Welsh language
- The Welsh Language (Wales) Measure 2011
- The Welsh Language Standards
- The Well-being of Future Generations (Wales) Act 2015
- Cymraeg 2050
  - o Including its data and analysis on the Welsh Language and Welsh speakers
- Prosperity For All: economic action plan

- Current data on Welsh speaking ability: Summary statistics for Wales, by region, 2020.

Additionally, the Welsh Government has its own policy on promoting the Welsh Language 'Cymraeg – It Belongs to us all'. This commits to promoting and facilitating increased use of Welsh in its own workforce

This Welsh Language Impact Assessment considers the remote working policy and its likely contribution to the Welsh Government's Well-being goal of a Wales of vibrant culture and thriving Welsh language and to the Welsh language strategy, Cymraeg 2050: A million Welsh speakers.

Welsh Language Impact Assessment

1. Welsh Language at Home

Language transmission in the family could be improved with an increase in family time, resulting in more opportunities to speak Welsh at home.

Evidence

See Children's Rights Impact Assessment

The Welsh Language Transmission and Use in Families (gov.wales[129]) states language transmission is generally lower amongst NS-SEC groups 5-9 (section 3.32 of the above report). Remote working may be less likely for these groups, so the precise impact of remote working on language transmission in the home will need to be monitored closely and data disaggregated by socio-economic variables to get a clear picture, and to ensure that any positive impacts are far reaching.

The Welsh Government published a National policy on Welsh language transmission and use in families at the beginning of 2021 which includes the action: 'We'll use all the possibilities the workplace offers to increase individuals' use of Welsh and explore what potential there is for this to 'spill over' into families. We'll consider how this work needs to be tailored to meet the needs of various demographic groups.'

Opportunities/ Mitigations

It will be necessary to work closely with stakeholders and the Welsh Language Division in the Welsh Government - as people's individual situations will inevitably be different it is vital we ensure that opportunities to speak Welsh at home are maximised.

2. Welsh Language in the Workplace

There is a risk that more remote working could limit opportunities for informal Welsh language use at work, due to a reduction in informal face to face interactions. Whether this will be counterbalanced by the potentially positive impacts at home (as above) and also in Welsh speaking communities (identified later), is yet to be seen. This is due to significant numbers of Welsh speakers for whom work may be their only regular opportunity to speak

---

[129] The Welsh Language Transmission and Use in Families (gov.wales[129])

Welsh if they live in largely English speaking communities. This is particularly true in South Wales.

Non-Welsh speakers who work remotely may be less exposed to the Welsh Language if they live in non-Welsh speaking communities/ households, but would normally interact with Welsh speakers in the workplace. Workplaces can be opportunities for different communities to mix. Less informal chat may also impact the influence these conversations can have on people's decisions to choose Welsh -medium education for children, or to learn Welsh and support the use of Welsh.

There may be a reduction in the impact of Welsh Language promotion in the workplace, such as visual campaigns, bilingual posters.

The impact of video calling on the use of the Welsh Language in the workplace is not yet clear; it is easier to facilitate bilingual meetings as translators can attend these remotely, but also a risk that this is not part of the smaller day to day conversations. Microsoft are currently developing the capability to enable simultaneous translation.

The impact of remote working on the demand for services in Welsh and/or Welsh speaking skills in the workplace

Increased Remote working has the potential to increase the availability and/or take-up of remote learning or training, making it easier to access training in Welsh or Welsh language lessons for work. For example, Duolingo reported a 44% increase in people learning Welsh since the outset of the pandemic. There is also the potential to increase the use of Welsh in local services. This will need to be joined up with strategies to allow learning and usage to spill over into social and family life. [130]

Evidence

Link between fluency and frequency of Welsh language use[131]

Link to Economic assessment impacts to collaboration or Health Impact Assessment impacts to wellbeing and social interactions

Cymraeg 2050 maps and census data

More Welsh speakers use Welsh with their colleagues where the employer is supportive of the use of Welsh in most aspects of the work of the business.[132]

"A better understanding and awareness of the opportunities that Welsh language technology and resources can provide will also enable individuals to become confident in using Welsh at work. We will aim to increase the use of developing language technologies

---

131 The Welsh Language Use Survey 2013 -15 (Welsh Government and Welsh Language Commissioner 2015)

132 The Welsh Language Use Survey 2013 -15 (Welsh Government and Welsh Language Commissioner 2015)

to foster more bilingual communication between staff of all abilities, making the Welsh language more accessible for all."[133]

Link to Economic Impact Assessment and Rural Proofing Impact Assessment for impact on job opportunities in Welsh speaking areas from local spending from remote workers

Further data required

Opportunities/ Mitigations

Promotion of Welsh in remote working hubs.   This could include possibilities such as Welsh Language Classes in hubs, or mentor schemes where learners have the opportunity to practise speaking Welsh with fluent Welsh Speakers.

Share good practice for encouraging usage of Welsh with other organisations through case studies, ambassadors and signposting, guidance.

Improve promotion of Welsh and its use through digital platforms and new technology

Integrating Welsh Language capabilities into remote working technology, including interfaces of video conferencing programmes such as zoom.

3. Welsh Language and education

Welsh-medium education is not as accessible as English-medium education in all areas of Wales. Decreasing the need to commute into the office could allow parents/guardians more choice of home location to be nearer or have easier access to Welsh nurseries and schools thereby providing a positive impact on early years and statutory Welsh -medium education. However it is unclear whether conversely more parents who would take children to Welsh-medium school or nursery on the way to work would continue to do so if they worked nearer their homes.

Evidence

Access to Welsh-medium education varies by local authority[134]

Access to Welsh-medium childcare provision is uneven[135]

Opportunities/ Mitigations

Engage with colleagues working on Learner Travel reform to ensure these issues are considered as part of this work, including the funding of travel for post-16 education - to seek to engage with work on learner travel learners.

More childcare provision (including childcare through the medium of Welsh) may be needed nearer people's homes or local work facilities in the future to enable the greatest

---

133 Cymraeg 2050

134 https://statswales.gov.wales/Catalogue/Education-and-Skills

135 Cymraeg 2050

benefit from the ability to work away from the office. Engagement with colleagues in early years and childcare policy is required.

4. Welsh Language in the Community

a. Social Use and services

For those working remotely from Welsh speaking communities, there is the potential for more opportunities to use Welsh when accessing local services – therefore also increasing the demand for services in Welsh. These businesses may require support if these opportunities are to be maximised.

There is also the possibility that people may have more leisure time if they are working closer to home, so this could mean more opportunities for people to join clubs and social activities where Welsh could be used socially.

b. Community and Economy

There is potential to sustain economies of Welsh-speaking communities with the creation of Job opportunities in Welsh speaking areas from more start-ups and SMEs being able to grow in these areas as well as more economic activity from associated local spending.

There is also the potential positive impact on demand for Welsh skills and services as a result of business growth in Welsh speaking areas. Greater availability of roles that can be undertaken remotely in full or in part provides an opportunity to reverse the trend of outmigration from Welsh speaking areas as people would have options other than to move away to urban centres for career progression.

While it is not yet proven, there may be an increase in the number of new Welsh speakers as English speakers may move to Welsh speaking areas and have access to Welsh Language services and schools – equally there is also a risk that English speakers moving into Welsh speaking areas due to the ability to remote work could dilute the use of Welsh in local areas.

Welsh speaking communities could be left behind if they do not have the right infrastructure for remote working such as digital connectivity, public transport, and work and commercial spaces

Evidence

"Traditionally we have regarded opportunities to use Welsh in a community setting as a matter of providing or arranging events. Although this is part of the picture, it does not reflect fully how people live their lives. In many cases people are not members of clubs and do not frequent formal activities on a regular basis, tending to be too busy or with other priorities. These individuals are more likely to use Welsh in the street, in shops and when using services." "We need to assess the extent to which the local community/neighbourhood remains a major influence on the language practices of

individuals, and be prepared to develop policy interventions which acknowledge the increase in personal mobility."[136]

Link to Economic Impact Assessment and Rural Proofing Impact Assessment for evidence

"Evidence gathered in some communities indicates that some new speakers felt that Welsh speakers' tendency of using English with learners in the community hindered their opportunities to practise their skills and gain confidence in the Welsh language."[137] This is particularly true in areas where there are fewer Welsh speakers in the first place, where data tells us that immigrants are less likely to learn Welsh.[138]

See Rural Proofing Impact Assessment on rising House prices in Welsh-speaking areas

Opportunities/ Mitigations

Continued provision of grants or support for start-ups and SMEs through Welsh Government's Business Support mechanisms and the Development Bank of Wales

Improved localised public transport networks will be required to service greater local travel and developments in this area will need to be monitored to ensure services are able to change in nature to meet different travel and commuting patterns.

Better digital connectivity will be needed for some, however the Welsh Government's Digital Strategy uses a range of solutions to support those without access to fast and reliable broadband. These include a £10 million Local Broadband Fund, the Access Broadband Cymru grant scheme and an approach to topping up the value of UK Government gigabit vouchers. The department are also working with Openreach to bring gigabit capable, full fibre broadband to a further 39,000 properties across Wales using £56m of public funding - made up of Welsh Government and EU funds with some extra funding from the UK Government. This work builds upon the previous Superfast Cymru roll-out which brought superfast broadband coverage across Wales up to 95% with a public sector investment of over £200m. The Welsh Government will continue to intervene in this non-devolved area, as well as working closely with UK Government to ensure its £5 billion investment in gigabit capable broadband reflects the needs of Wales.

We are trialling small, community focussed co-working spaces that can provide an alternative to commuting for those without access to high speed broadband at home.

There will be more opportunities for people to access Welsh Language training using digital technologies across all sectors.

---

136 Cymraeg 2050

137 The Welsh Language Use Survey 2013 -15 (Welsh Government and Welsh Language Commissioner 2015)

138 Partneriaeth Mentrau Iaith Myrddin ac Ysgol y Gymraeg, Coleg y Drindod, Caerfyrddin (gov.wales), page 38).

There will be opportunities for hub providers and employers to work with Mentrau Iaith, the National Centre for Learning Welsh, and Local Authorities to raise awareness of the importance of speaking Welsh.

There will be opportunities for the National Centre for Learning Welsh to encourage Welsh speakers to persist in Welsh with Welsh learners in the Welsh heartlands.

It will be important to monitor trends of migration to rural areas, and to engage with the Welsh Language Communities Action Plan to preserve Welsh place names and to help local first time buyers secure affordable housing.

5. Culture, Media and Wales in the World

Impacts on place-based cultural sectors could be positive for some based in Welsh-speaking communities if people can access activities in the medium of Welsh more easily due to working at home or in their local community. For example Arts Council Wales has made a commitment to the Welsh language in its activities and more recently has mapped Welsh language provision across Wales. The organisation has committed to "ACW to include, within its wider Welsh Language strategy, a bold and inspiring 5 year strategy (along with an action plan with measurable targets) specifically on increasing the level, variety and consistency of live arts product/content of quality available for audiences across Wales."[139]

Increasing acceptance of remote working and remote working technologies could create opportunities to conduct global business more easily from anywhere in Wales and digital platforms offer audiences the opportunity to connect and engage with Welsh Language, our businesses and culture across the world.[140]

Improved access to good digital connectivity will help greater numbers of people to access Welsh -medium creativity while also allowing Welsh creatives to create and exploit their intellectual property in Wales – thus retaining the benefits for the Welsh economy.

Evidence

CAZ report

Welsh Language Mapping Report | Arts Council of Wales

"Using the workplace to introduce the Welsh language to newcomers and ensuring that they are aware of the Welsh language and culture, as well as giving them opportunities to learn and use the Welsh language, is another important approach."[8]

Opportunities/ Mitigations

---

[139] Welsh Language Mapping Report | Arts Council of Wales

[140] AM Cymru | Home (amam.cymru)

Greater opportunities for remote training for Welsh language learning and lessons

1. Evaluation and research

Additional monitoring, evaluation and research is needed on:

- The impacts of remote working on Welsh language in the Workplace
- Effect of remote working on house prices
- Effect of remote working on demand for local services
- Remote working and language planning
- How to promote Welsh Language use in the hubs most effectively
- Integrating Welsh language into remote working practises
- Language planning and land use planning, to include effects on housing in rural and Welsh speaking areas – in line with the Welsh Language Communities Housing Plan
- The effect on take up of Welsh Language education
- The take up of digital events and activities

** Evidence Table and Gap Analysis **

The table below summarises selected key evidence used in the assessment of impacts on the Welsh Language, and highlights key gaps.

Evidence/data required	Source
Context: Current data on Welsh Speaking Ability	https://gov.wales/sites/default/files/statistics-and-research/2020-05/summary-statistics-regions-wales-2020-629.pdf
Language transmission in the family: Benefits to family time	See Children's Rights Impact Assessment Welsh Language Transmission and Use in Families (gov.wales)
In the workplace: Link between fluency and frequency of use	Welsh Language Use Survey
In the workplace: Wellbeing and social interactions	See Health Impact Assessment
In the workplace: Welsh speaker regional distribution	Cymraeg 2050 maps and census data
In the workplace: Relationship between use and employer support	Welsh Language Use Survey Welsh Language Standards

Evidence/data required	Source
In the workplace: Impact of video calling on language use	Cymraeg 2050 and the role of Welsh language technology in using Welsh at work
In the workplace: Demand for services and skills	See Economic assessment and Rural Proofing for impact on job opportunities in Welsh speaking areas
Education: Access to Welsh-medium education and childcare by local authority	https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/Schools-Census/Pupil-Level-Annual-School-Census/Welsh-Language/pupils-by-localauthorityregion-welshmediumtype
Social Use and services	Cymraeg 2050
Community and Economy	See Economic assessment and Rural Proofing

And

Welsh Language Use Survey

And

Second homes: Developing new policies in Wales WG42058 (gov.wales) |
| Culture and media | Arup CAZ report

And

Also work of Arts Council of Wales Welsh Language \| Arts Council of Wales |
| Wales and the wider world | Cymraeg 2050

And

International Strategy International strategy [HTML] \| GOV.WALES |
| In the workplace: Exposure of non-Welsh speakers to Welsh when remote working | Gap: Further data collection required |

Evidence/data required	Source
In the workplace: Impact of video calling on language use	Gap: Further data collection required
In the workplace: The impacts of remote working, remote working technologies and bilingualism	Gap: Further data collection and evidence needed
In the workplace: Remote working and language planning	Gap: Further data collection and evidence needed
In the workplace: Integrating Welsh language into remote working technologies	Gap: Further data collection and evidence needed
Community and Economy: Language planning and land use planning	Gap: Further data collection and evidence needed

F. BIODIVERSITY IMPACT ASSESSMENT

Introduction

Biodiversity underpins our lives and livelihoods and supports the functioning and resilience of ecosystems in oceans, wetlands, lakes, rivers, mountains, forests and agricultural landscapes.

Overall, biological diversity is declining, which can be evidenced by the loss of many habitats and species. The extent of some habitats has also declined significantly. This means that unless action is taken, the benefits that are derived from natural resources are at risk. Given the current stage of the proposals, the information available to inform a biodiversity assessment means that there can only be a high-level consideration of potential effects.

The UK National Ecosystems Assessment[141] identified changing land management practices, through agriculture and urbanisation, pollution and invasive non-native species as key pressures leading to habitat and species loss and fragmentation. This, together with acidification and eutrophication, has changed the quantity and quality of habitats and the species they can support. In the marine environment, key pressures include

---

141 Wales Biodiversity Partnership - Biodiversity in Wales (biodiversitywales.org.uk)

unsustainable human activity, climate change leading to the warming and acidification of the world's seas and oceans, and the introduction of invasive non-native species.

The potential impacts on biodiversity of the proposal for remote working in Wales are outlined below, focusing on how the proposals contribute towards Wales meeting its biodiversity objectives.

Embedding biodiversity

The Environment (Wales) Act 2016[142] sets out the requirement for the 'sustainable management of natural resources' together with a duty in Section 6 for stronger biodiversity and resilience of ecosystems in Wales.

The Nature Recovery Action Plan (NRAP) for Wales, 2020-21[143] sets out current national priorities for Wales' natural resources which are:

- delivering nature based solutions;
- increasing resource efficiency and renewable energy; and
- taking a place-based approach.

These priorities are to be embedded within policy decisions made by the WG with the aim to achieve the following, as set out in the NRAP:

- build resilient ecological networks and mosaics across our whole land and seascape to safeguard species and habitats and the benefits they provide;
- address the root causes of biodiversity loss, not just the symptoms;
- understand the role that nature plays in our lives, livelihoods and well-being;
- invest in improving our evidence and monitoring for the long term;
- recognise and value biodiversity in our accounting and decision making across sectors and portfolios; and
- demonstrate the value we place on biodiversity through governance, and support for skills and capacity.

The proposals for remote working would not include funding for the physical provision of new buildings or infrastructure to support the creation of remote working hubs. Rather, there is an expectation that existing buildings and facilities would be utilised and repurposed to perform this function. There is therefore unlikely to be any direct habitat loss from land take needed to construct new buildings and associated facilities such as car parking areas to meet co-working hub requirements. Where a new build is required,

142 Welsh Government. (2016). Environment (Wales) Act 2016. Available online at: https://www.legislation.gov.uk/anaw/2016/3/contents/enacted

143 https://gov.wales/sites/default/files/publications/2020-10/nature-recovery-action-plan-wales-2020-2021.pdf

biodiversity impacts, the potential for biodiversity net gain, and the contribution to resilient ecological networks can be addressed at the project level through the planning process.

The proposals are intended, and more likely, to result in a need for existing buildings to be upgraded and/or retrofitted to make them fit for purpose. In these instances, there is scope for embedding requirements for biodiversity net gain on land attached to these premises and consideration should be given to how this could be achieved, especially as these works would often not require planning permission (unless through change of use). This would also provide an opportunity for recognising the value that green spaces and nature has for our wellbeing, thereby also meeting this priority set out in the Nature Recovery Action Plan.

At this stage it is not clear if people working remotely would, over time, significantly reduce emissions from vehicle usage. There is evidence to suggest that whilst the frequency of commuting decreases, this may in fact be counterbalanced by rebound effects of people being prepared to commute longer distances, less frequently, and to increase the number of leisure/personal car journeys, made possible with the time spent from not commuting as frequently[144,145]. This actually results in the potential for remote workers (especially those in higher paid jobs) increasing their emissions from vehicles, which includes Nitrous Oxides that are harmful to ecological habitats as a result of nitrogen deposition. This is a current concern of National Resources Wales (NRW) which has seen nitrogen deposition levels increase in recent history, resulting in impacts on protected habitats across Wales.

It is possible that existing green areas that are around potential co-working hubs could become more valued by the local community who utilise the work hubs. In these cases, people may volunteer to become involved in their protection and management which would benefit local biodiversity (whilst also benefiting community cohesion). However, this would be very dependent on local appetite and potentially, policy support for community gardens[146]. More research would be required to identify where such opportunities exist.

Benefits for the environment are identified in the proposal consultation material as including:

- less traffic, especially at peak times;
- less air and noise pollution; and
- the opportunity to redesign our towns and city centres.

---

144 Does working from home reduce CO2 emissions? An analysis of travel patterns as dictated by workplaces. Transportation Research Part D (83) 2020.

145 He, S.Y. and Hu,L. (2015) Telecommuting, income, and out-of-home activities. Travel Behaviour and Society, Volume 2, Issue 3, 2015.

146 Witheridge, J. and Morris, N. J. (2016) 'An analysis of the effect of public policy on community garden organisations in Edinburgh', Local Environment, 21(2), pp. 202–218

As discussed above, more research is required to determine whether post pandemic behaviour will actually result in less traffic overall, or whether this would instead become distributed across the day as fewer people need to travel during peak times, but instead choose to make journeys (for other purposes) in off peak times.

Long term, there is the potential that changes in working patterns will result in changing demands for workspaces, with the result that towns and city centres will have less building space dedicated to business uses. Alternative uses (for example residential) may use this freed-up space, which would benefit biodiversity only where such conversions required the inclusion of additional green spaces for residents and biodiversity benefit.

Improving our evidence, understanding and monitoring

Given the current stage of the proposals, the information available to inform the impact assessments means that there can only generally be a high-level consideration of potential effects. In particular, whilst there currently appears to be great appetite for remote working to continue post pandemic, it is yet to be seen whether this will remain long term. More longitudinal assessment is required to monitor changing attitudes and expectations amongst both employers and employees post Covid.

However, as further outcomes related to these questions do emerge, more informed assessments can be made about the associated transportation behavioural change (i.e. vehicle miles and modal split), in addition to induced land use changes that may result from increased remote working. This may include reduced demand in town and city centres and increased demand in rural or suburban areas. An updated assessment could be carried out at that stage, alongside the development of associated monitoring and evaluation plans.

Governance and support for delivery of biodiversity action

Through raising awareness of how a reduction in emissions can protect biodiversity, positive behaviours and attitudes can be fostered. This includes the increased uptake of public transport, making choices to live in a more sustainable way (resulting in reduced emissions), along with actively supporting the protection of the environment and biodiversity of the local area.

G. Health Impact Assessment

A Health Impact Assessment (HIA) is a process to consider how the health and well-being of a population may be affected by the implementation of a policy, plan or programme. The overarching aim is to ensure that plans, policies and programmes minimise negative impacts and maximise positive health and wellbeing impacts.

A summary of the potential impacts and associated mitigating actions can be found at the end of this section.

The approach to this HIA is based on the Wales Health Impact Assessment Support Unit (WHIASU) Practical Guide to HIA[147]. When considering impacts on health, health is viewed in a broader sense, encompassing both physical and mental wellbeing, as influenced by a wide range of environmental, social and economic determinants. The WHIASU Guidance captures this broader understanding of health by using the World Health Organisation (WHO) definition of health: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

The Dahlgren and Whitehead model shown illustrates the wide range of health determinants to be considered in an assessment, ranging from individual characteristics and lifestyles to wider economic, cultural, social and environmental conditions.

Methodology

The methodology has been adapted from the WHIASU practical guide and is undertaken in the following stages:

Population Profile

A high-level population profile provides an overview of the existing population, health profile and socio-economic conditions for each of the study areas. The study area for the high-level population profile included the different local authorities/local health board that make up Wales to provide a more detailed approach to the impact assessment. It uses publicly available data including the Office for National Statistics (ONS) (such as Census data and annual reports), StatsWales, the Welsh Index of Multiple Deprivation (WIMD) and Public Health Wales.

Health inequality is an important consideration in the HIA process and Appendix 2 of the WHIASU Guidance provides a list of population groups who are particularly vulnerable to the causes of ill-health. Following the preparation of the population profile, the most disadvantaged and/or vulnerable groups present will be identified and considered in the assessment along with the general population.

Evidence Review

The evidence review provides a high-level commentary on the links between the health determinants (environmental, social and economic factors known to influence health) that are assessed in the health assessment and the resulting effects on health and wellbeing, based on a review of available primary and secondary literature. The purpose of this is to provide an overview of the scientific consensus on the types of health outcome associated with impacts on health determinants.

Assessment

---

[147] Welsh Health Impact Assessment Support Unit. Health Impact Assessment – A Practical Guide. Available online at: https://whiasu.publichealthnetwork.cymru/files/1415/0710/5107/HIA_Tool_Kit_V2_WEB.pdf

Appendix 1 of the WHIASU Guidance sets out a range of health determinants to consider in a HIA. Considering those determinants most relevant to remote working, the following health determinants are included in the assessment:

a) Lifestyle/behaviour factors (e.g. diet, physical activity, substance misuse)
b) Social and community influences (e.g. social isolation and social networks);
c) Living/ environmental conditions (e.g. noise, air quality, greenspace, housing, indoor environment);
d) Economic factors (e.g. Access to employment, education and training);
e) Access to and quality of services;
f) Macroeconomic factors (e.g. economic development, gross domestic product)

The assessment is undertaken in a tabular format using an assessment framework based on the most relevant health determinants and vulnerable groups identified. This is based on Appendix 3 of the WHIASU Guidance and the health impact assessment of home and agile working in Wales conducted by Public Health Wales[148].

The assessment is split up by each health determinant, guiding questions are provided to ensure the assessment considers the wide range of aspects related to that determinant. The assessment identifies whether the impact on each health determinant is positive or negative and which vulnerable groups are most affected by the health impact.

A commentary is also provided explaining the rationale for the assessment outcome. This commentary will relate to the relevant health issues identified in the population profile and the evidence described in the evidence review to provide justification for the assessment.

Where appropriate the HIA makes recommendations for mitigating identified adverse health and wellbeing effects or enhancing beneficial ones.

It is important to note that the HIA will closely align with other assessments in this IIA which also consider vulnerable groups, such as the Equality Impact Assessment, Children's Rights Assessment and Rural Proofing Impact Assessment.

Please note: the following sections have not been completed in this draft IIA, but will be progressed in the next phase of work:

- Population Profile
- Population
- Deprivation
- Healthy Behaviours
- Mental health and well-being
- Education and employment

---

148 Public Health Wales. A Health Impact Assessment of Home and Agile Working in Wales in response to the COVID-19 pandemic.

- Transport and accessibility
- Air quality

Vulnerable Groups

Group	Sub-group	Applicable (Y/N)
Age related groups	Children and young people	Y
	Older people	Y
Income related groups	People on low income	Y
	Economically inactive	Y
	Unemployed	Y
	People who are unable to work due to ill health	N (inherently covered in other income-related groups)
Groups who suffer discrimination or other social disadvantage	People with physical or learning disabilities/difficulties	Y
	Refugee groups	N (inherently covered in age or income-related groups)
	People seeking asylum	
	Single parent families	
	Religious groups	
	Lesbian and gay and transgender people	
	Black and minority ethnic groups	
Geographical groups	People living in areas known to exhibit poor economic and/or health indicators	N (inherently covered in income-related groups)

Group	Sub-group	Applicable (Y/N)
	People living in isolated/over populated areas	N
	People unable to access services and facilities	Y

Evidence Review

Lifestyle/behaviour factors (e.g. diet, physical activity, substance misuse)
Physical activity and active travel

There is a large body of evidence linking physical activity with improved physical and mental health. The WHO[149] defines physical activity as 'any bodily movement produced by skeletal muscles that requires energy expenditure' and states that 'physical activity has significant health benefits and contributes to prevent non-communicable diseases'.

UK Guidelines[150] published by the Department of Health & Social Care state that every week, adults should accumulate at least 150 minutes of moderate intensity activity; or 75 minutes of vigorous intensity activity; or even shorter durations of very vigorous intensity activity; or a combination of moderate, vigorous and very vigorous intensity activity.

The health benefits of physical activity are summarised in a 2011 Department of Health Report[151], which states that 'regular physical activity can reduce the risk of many chronic conditions including coronary heart disease, stroke, type 2 diabetes, cancer, obesity, mental health problems and musculoskeletal conditions'. The report also states that 'even relatively small increases in physical activity are associated with some protection against chronic diseases and an improved quality of life.' A systematic review of reviews and meta-analyses[152] found that physically active older adults are at reduced risk of all cause and cardiovascular mortality, breast and prostate cancer, fractures, recurrent falls, ADL disability and functional limitation and cognitive decline, dementia, Alzheimer's disease

---

[149] World Health Organization, Physical activity (2017).

[150] Department of Health and Social Care. (2019) Physical activity guidelines: UK Chief Medical Officers' report.

[151] Department of Health (2011), Start Active, Stay Active: A report on physical activity in the UK

[152] Cunningham C, O' Sullivan R, Caserotti P, Tully MA. (2020). Consequences of physical inactivity in older adults: A systematic review of reviews and meta-analyses. Scand J Med Sci Sports. 30(5):816-827. doi: 10.1111/sms.13616. Feb 4. PMID: 32020713.

and depression. Further evidence[153] suggests that lack of physical activity in children can lead to CVD and associated diseases such as obesity which can be tracked from adolescence into adulthood, contributing to premature mortality.

A systematic review and meta-analysis[154] of 150 Cochrane systematic reviews published between 2000 and 2019 found physical activity was associated with a 13% reduction in mortality and an improvement in quality of life. Another systematic review and meta-analysis[155] assessing objective physical activity found a 40% decreased risk for mortality in individuals in the highest category of light, moderate to vigorous and total physical activity compared to the lowest.

A literature review of studies from various countries examining the relationship between physical activity and happiness[156] showed that as little as 10 minutes of physical activity per week resulted in increased levels of happiness. A systematic review undertaken by the Department of Health and Human Services[157] in the US, noted that a major finding of the evidence was that regular physical activity reduced the risk of clinical depression and depressive symptoms among people both with and without clinical depression. Physical activity was also found to reduce the severity of those symptoms irrespective of number of depressive symptoms. The review also found that perceived quality of life is improved by regular physical activity. A cross-sectional and longitudinal study[158] found that walking had positive associations with psychological and social wellbeing, strolling in nature with

[153] Kumar, B, Robinson, R and Till. S (2015), Physical activity and health in adolescence. Clinical Medicine. Vol 15 267-272

[154] Posadzki, P., Pieper, D., Bajpai, R. *et al.* Exercise/physical activity and health outcomes: an overview of Cochrane systematic reviews. *BMC Public Health* **20,** 1724 (2020). https://doi.org/10.1186/s12889-020-09855-3

[155] Ramakrishnan R., He JR., Ponsonby AL., Woodward M., Rahimi K., Blair SN., Dwyer T., (2021), Objectively measured physical activity and all-cause mortality: A systematic review and meta-analysis, Preventive Medicine,Volume 143,106356,ISSN 0091-7435, https://doi.org/10.1016/j.ypmed.2020.106356.

156 Zhang, Z. & Chen, W. (2018), A Systematic Review of the Relationship Between Physical Activity and Happiness. Journal of Happiness .pp 1-8.

157 2018 Physical Activity Guidelines Advisory Committee. 2018 Physical Activity Guidelines Advisory Committee Scientific Report. Washington, DC: U.S. Department of Health and Human Services, 2018. Available online at: https://health.gov/paguidelines/second-edition/report/pdf/PAG_Advisory_Committee_Report.pdf.

158 Kekäläinen, T. et al. (2019), Cross-Sectional and Longitudinal Associations between Leisure Time Physical Activity, Mental Well-Being and Subjective Health in Middle Adulthood, Applied Research Quality Life, doi.org/10.1007/s11482-019-09721-4.

emotional and social wellbeing and endurance training with subjective health. A systematic review and meta-analysis[159] of forty-two studies including 37,408 individuals found a significant protective effect of physical activity on depression further highlighting the importance of physical activity on mental health.

Research suggests that most sustained exercise is taken during the course of everyday activities such as travelling to work or going to the shops, rather than specifically for health purposes[160].A systematic review[161] of built environment effects on physical activity and active transport showed a positive effect of walkability components, provision of quality parks and playgrounds, and installation of or improvement in active transport infrastructure on active transport, physical activity and visits or use of these settings

A 2013 literature review focused on the health benefits of active travel by Saunders et al.[162] determined that, although there is no clear evidence in the effectiveness of active travel in reducing obesity, there has been a rise in the prevalence of obesity which has occurred in parallel with a decline in active travel in the past thirty to forty years. Data from a report by the National Obesity Observatory in 2011[163] suggests a number of factors impact active travel including access to fitness facilities, distance to destinations, land use, urban walkability scores, safety, availability of equipment and the provision of footpaths.

More recent research[164] found that people living in walkable neighbourhoods tend to be more physically active and less likely to be obese which could contribute to the reduced

159 Gianfredi V, Blandi L, Cacitti S, Minelli M, Signorelli C, Amerio A, Odone A. (2020). Depression and Objectively Measured Physical Activity: A Systematic Review and Meta-Analysis. International Journal of Environmental Research and Public Health. 17(10):3738. https://doi.org/10.3390/ijerph17103738

160 Caldwell, L.L. (2005) Leisure and Health: Why is leisure therapeutic?

161 Smith, M., Hosking, J., Woodward, A. et al. (2017) Systematic Literature Review of Built Environment Effects on Physical Activity and Active Transport – An Update and New Findings on Health Equity. Int J Behav Nutr Phys Act 14, 158. DOI: https://doi.org/10.1186/s12966-017-0613-9

162 Saunders, L., Green, J., Petticrew, M., Steinback, R. and Roberts, H. (2013), What are the health benefits of active travel? A systematic review of trials and cohort studies, PLoS ONE.

163 NHS, National Obesity Observatory (2011), Data sources: environmental influences on physical activity and diet, https://khub.net/c/document_library/get_file?uuid=68b8960e-4145-4ed2-b9f8-1ce767f1d2ff&groupId=31798783.

164 Booth GL, Creatore MI, Luo J, et al. (2019) Neighbourhood Walkability and the Incidence of Diabetes: An Inverse Probability of Treatment Weighting Analysis. J Epidemiol Community Health.

risk of diabetes for older adults. Similarly, a study[165] of the UK Biobank cohort found that neighbourhood walkability is associated with lower levels of blood pressure and reduced risk of hypertension. This suggests that there could be wider health implications of walkable neighbourhoods and increased physical activity.

Vernon et al. in 2014[166] suggest that road safety inventions can also help to encourage physical activity by creating a safer physical road environment and reducing the level of danger posed to vulnerable road users. Vernon et al. also noted that that 'road safety has a much wider impact on health than just preventing injuries. This is because some forms of travel (i.e. walking and cycling), and the provision for them, bring more health benefits for individuals and society than others. However, the way that people travel is influenced by concerns about actual or perceived safety; effective intervention to reduce road danger can encourage more people to travel by these active, health-promoting modes.'

Vulnerable groups

Although all groups are shown to benefit from regular exercise, the benefits to children and the elderly are particularly emphasised. The importance of exercise for children is highlighted in terms of benefits in building up bone density, avoidance of weight gain, links to health status in later life, and in establishing habits, which may be more difficult to begin in later life [167] [168]. The benefits for the elderly include retention of mobility, cognitive function and independence[169].

A report by PHE[170] has reported that people with lower socioeconomic status, older people, people with disabilities, women, minority ethnic groups (specifically Bangladeshi

---

165 Sarkar C, Webster C, Gallacher J. (2018) Neighbourhood Walkability and Incidence of Hypertension: Findings from the study of 429,334 UK Biobank participants. International Journal of Hygiene and Environmental Health. 21:3:458-468.

166 Vernon, D. (2014), Road Safety and Public Health, Royal Society for the Prevention of Accidents (RoSPA).

167 *Department of Health and Social Care. (2019) UK Chief Medical Officers' Physical Activity Guidelines. Available from: https://www.gov.uk/government/publications/physical-activity-guidelines-uk-chief-medical-officers-report*
168 *Department of Health. (2004) Choosing Health Summaries: Diet and Nutrition. Public Health White Paper.*
169 *Department of Health. (2004) Choosing Health Summaries: Diet and Nutrition. Public Health White Paper.*
170 *Public Health England. (2020) Health Matters: Physical Activity – Prevention and Management of Long Term Conditions. Available from:*
https://www.gov.uk/government/publications/health-matters-physical-activity

and Pakistani women), and lesbian, bisexual, transgender people are particularly vulnerable to physical inactivity[171].

Social and community influences (e.g. social isolation, social cohesion, social networks)

The Communities and Local Government (CLG) document Towards Lifetime Neighbourhoods: Designing sustainable communities for all[172] describes lifetime neighbourhoods as being *"sustainable communities that offer a good quality of life to all generations".*

They should aim to be:
   a. accessible and inclusive;
   b. aesthetically pleasing and safe (in terms of both traffic and crime), and easy;
   c. pleasant to access; and
   d. a community that offers plenty of services, facilities and open space.

Furthermore, we can add that lifetime neighbourhoods are likely to foster:
   a. a strong social and civic fabric, including volunteering, informal networks;
   b. a culture of consultation and user empowerment amongst decision-makers; and
   c. a strong local identity and sense of place.

Social cohesion is defined as the quality of social relationships and existence of trust, mutual obligations and respect in communities or the wider society[173]. This is closely related to levels of inequality or exclusion within a given community.

Social cohesion is also closely linked to social capital which the World Bank has defined as "…the institutions, relationships and norms that shape the quality and quantity of a society's social interactions... Social capital is not just the sum of the institutions which underpin a society – it is the glue that holds them together"*[174]*.

The physical environment can directly influence social capital and social cohesion, as social networks rely on high quality, accessible spaces where people can meet to pursue their hobbies and interests and interact socially. This includes transport infrastructure, which enables residents to integrate within and move outside of their own community.

171 *Public Health England. (2016) Health Matters: Getting Every Adult Active Every Day. Available from: https://www.gov.uk/government/publications/health-matters-getting-every-adult-active-every-day*

172 *Ed Harding, International Longevity Centre UK. (2007) Towards Lifetime Neighbourhoods: Designing Sustainable Communities for All. Department for Communities and Local Government.*

173 *World Health Organisation. (2003). Social Determinants of Health: The Solid Facts 2nd Edition.*

174 *The World Bank. (1999) What is Social Capital? PovertyNet.*

Social cohesion has been linked to volunteering, the empowerment of individuals and ethnic diversity. It also provides opportunities for communities to participate in the planning of healthcare services and social infrastructure, improving community cohesion and positively impacting mental health and well-being[175].

Social cohesion has been shown to positively correlate with a reduced fear of isolation and positive mental health. In contrast, inequalities within a population and crime and safety can erode social cohesion within a community[176].

According to one evidence review[177] social capital may have various effects on health:
   a. protect health by buffering against the effects of life events which may be damaging to health;
   b. have physiological effects, through the hormonal system, on the body's response to stress and functioning of the immune system;
   c. reduce isolation, which is associated with disease, accidents and suicide;
   d. enable people to cope with illness better and have better prognoses when ill; and
   e. reduce or protect against mental health problems, such as anxiety and depression.

A literature review conducted in 2017 found that social capital influences the self-management of chronic diseases, such as diabetes and chronic obstructive pulmonary disease, as well as self-reported health, depressive symptoms, body mass index, and positive health behaviours[178]. This review highlighted several ways in which social capital can influence health: "through a direct extension of resources to an individual via reciprocity exchange (e.g. caregiving, transportation to medical appointments), through its effect on health-related behaviours (e.g. tobacco and alcohol use, diet, exercise), or by its impact on other social determinants, such as education, employment and volunteering. Social capital also affects health by mitigating the threat of stress-inducing circumstances." Social capital can influence health through 'collective efficacy' where cohesive groups undertake health-promoting action together.

---

175 *Department for Communities and Local Government. (2008) Predictors of Community Cohesion: Multi-level Modelling of the 2005 Citizenship Survey.*
176 Department for Communities and Local Government. (2008) Predictors of Community Cohesion: Multi-level Modelling of the 2005 Citizenship Survey.
177 Cave, B., Curtis, S., Aviles, M. and Coutts, A. (2001) Health Impact Assessment for Regeneration Projects. Volume II Selected Evidence Base, East London and City Health Action Zone, University of London.
178 Cockerham, W. (2017) The Social Determinants of Chronic Disease. American Journal of Preventive Medicine. 52, S5-S12.

Multiple studies[179,180,181] suggest a positive correlation between social capital and physical and mental health. However, a systematic review[182] of systematic reviews found numerous non-significant or negative relationships between social capital and health. This review also found that the efficacy of social capital interventions on health remained unclear. It is difficult to assess whether an increase in health is due to an increase in social capital, which limits the ability to understand whether and how social capital interventions can improve health.

Vulnerable Groups

An article published in the International Journal for Equity in Health by Uphoff *et al* in 2013[183] describes social capital, at an individual level, as focusing on personal resources that emerge from social networks where individuals have good access to information, services and support. The article argues that cultural and socioeconomic aspects can act as a barrier to social capital. For example, some types of social capital may only be beneficial to those who have access to them through sufficient economic capital, such as expensive sports clubs.

A systematic review of social capital in children and adolescents found that social capital generated at both the family and community level can influence mental health and behavioural problems in young people, of importance is the young person's own network of social support[184]. Young people also "accrue indirect benefit from their parents having wider and higher quality social support networks"

Some population groups are believed to be at particular risk of social exclusion, including some black and minority ethnic groups, disabled people, lone parents, older people, carers, asylum seekers and refugees and ex-offenders[185].

[179] Cockerham, W. (2017) The Social Determinants of Chronic Disease. *American Journal of Preventive Medicine. 52*, S5-S12.

[180] Ehsan, A., et al. (2019) *Social Capital and Health: A Systematic Review of Systematic Reviews.* SSM Population Health. DOI:10.1016/j.ssmph.2019.100425

[181] Jennings, V and Bamkole, O. (2019) The Relationship between Social Cohesion and Urban Green Space: An Avenue for Health Promotion. International Journal of Environmental Research and Public Health. 16(3), 452.

[182] Ehsan, A., et al. (2019) Social Capital and Health: A Systematic Review of Systematic Reviews, SSM Population Health. DOI :10.1016/j.ssmph.2019.100425

[183] Uphoff, E., Pickett, K., Cabieses, B., Small, N. and Wright, J. (2013) A Systematic Review of the Relationships Between Social Capital and Socioeconomic Inequalities in Health: A Contribution to Understanding the Psychosocial Pathway of Health Inequalities, International Journal for Equity in Health.

[184] McPherson, K. (2014) The Association Between Social Capital and Mental Health and Behavioural Problems in Children and Adolescents: An Integrative Systematic Review. BMC Psychology.

[185] Wanless. D. (2003) Securing Good Health for the Whole Population. Population Health Trends. HM Treasury/Department of Health.

Living/ environmental conditions (e.g. noise, air quality, greenspace, housing, indoor environment)

Air Quality

The WHO recognises outdoor air pollution as a major environmental health problem for all countries including high-income countries[186]. There is a wealth of evidence showing the association of nitrogen dioxide and particulate matter on poor health outcomes. Epidemiological studies have shown that long-term exposure to air pollution (over years or a lifetime) reduces life expectancy, due to cardiovascular and respiratory diseases and lung cancer. Short-term exposure (over hours or days) to increased levels of air pollution can also have a range of health effects, including effects on lung function, asthma, as well as increases in respiratory and cardiovascular hospital admissions, and mortality[187]. Additionally, outdoor air pollution can influence productivity and contribute to social costs such as increasing days off work and school due to restricted health[188].

A Public Health England review[189] of interventions to improve outdoor air quality and public health found clear evidence that air pollution is the largest environmental risk to the health of the public in the UK. The review found that:

- it is estimated that between 28,000 and 36,000 deaths each year are attributed to human made air pollution;
- there is a close association with cardiovascular and respiratory disease, including lung cancer;
- there is emerging evidence that other organs may also be affected, with possible effects on dementia, low birth weight and diabetes; and
- it concluded that the most impactful interventions would be those that reduce emissions of air pollution at source.

According to the Lancet Commission on pollution and health[190] children are at high risk of pollution related disease and even extremely low-dose exposures to pollutants during windows of vulnerability in utero and in early infancy can result in disease, disability, and

---

186 WHO Topic Sheet. (2018) Ambient (outdoor) air quality and health. Available online at: https://www.who.int/news-room/fact-sheets.

187 Public Health England 2018. Guidance: Health Matters: air pollution. Available online at: https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution.

188 IOM Working for a Healthier Future. Scotland's Environment (2015) Air Quality, Health, Wellbeing and Behaviour. Available online at:
https://www.environment.gov.scot/media/1133/iom-seweb-aq-health-behaviour-review.pdf.

189 Public Health England (2019), Review of interventions to improve outdoor air quality and public health. Available online at:
https://assets.publishing.service.gov.uk/Review_of_interventions_to_improve_air_quality.pdf.

190 Landrigan, P.J., et al. (2018), The Lancet Commission on pollution and health, The Lancet 391:462-512.

death in childhood and across their lifespan. Research has shown that exposure to particulate matter affects children's lung development, including reversible deficits in lung function as well as chronically reduced lung growth rate and a deficit in long-term lung function.

Whilst there is no clear evidence of a safe level of exposure below which there is no risk of adverse health effects, there is sufficient evidence available to demonstrate that the adverse effects of air pollution on health outcomes is widely accepted. There is consensus that lowering levels of nitrogen dioxide and particulate matter ($PM_{2.5}$) will bring additional health benefits. Therefore, the evidence is judged to be strong.

Road traffic emissions

Evidence on the links between road traffic emissions and health is well established. A WHO report in 2000 stated that about 36,000–129,000 adult deaths a year are brought forward due to long-term exposure to air pollution generated by traffic in European cities. The main health damaging air pollutants released by road traffic are coarse particulate matter[191] (PM_{10}) and nitrogen dioxide (NO_2).

An evidence and policy review by the UK Health Alliance on Climate Change (2018)[192] notes that transport is a major cause of air pollution. In 2016, emissions from road transport accounted for 12% of PM_{10} and $PM_{2.5}$ in the UK and were the third largest source after industrial processes and combustion in residential, public, commercial and agricultural sectors. Furthermore, road transport is responsible for 80% of NO_2 levels near roadsides.

PM_{10}, comprises of particles that are less than 10μm in diameter. Road transport is a major source of PM_{10}, which is emitted from the combustion of vehicle fuels. An important property is the extent to which these particles may be deposited within the lungs and this is dependent on size of particles (smaller particles have a greater chance of reaching the deeper parts of the lungs). There is growing evidence that smaller respirable particulate matter may be more relevant to health than larger particles.

Studies have also suggested that particulate pollution of various sizes may exacerbate pre-existing asthma[193]. Associations with other conditions such as chronic obstructive pulmonary disease, lung cancer, and CVD [194][OBJ].

---

[191] Particulate Matter up to 10 micrometers in size.

[192] UK Health Alliance on Climate Change. (2018) Moving Beyond the Air Quality Crisis. Realising the Health Benefits of Acting on Air Pollution. Available from: http://www.ukhealthalliance.org/Moving-beyond-the-Air-Quality-Crisis

[193] Department of Health Committee of the Medical Effects of Air Pollutants. (1998) Quantification of the Effects of Air Pollution on Health in the United Kingdom.

[194] Public Health England. (2019) Review of Interventions to Improve Outdoor Air Quality and Public Health. Available from: https://assets.publishing.service.gov.uk/Review_of_interventions_to_improve_air_quality.pdf

It should be noted that exposure in an urban setting is complex and cumulative and interactive effects need to be considered. Furthermore, increasing temperatures related to climate change have also been shown to augment the negative health impact of PM, resulting in increased mortality[195].

The effects of road traffic related NO_2 on health are less well understood than the effects of PM_{10}. Numerous epidemiological studies have identified associations between NO_2 concentrations and respiratory health[196], but it may be that in these studies NO_2 is a key marker for traffic-related pollution such as PM more generally rather than having separate independent effects. Evidence associating NO_2 with health effects such as respiratory diseases has strengthened substantially in recent years, but a debate remains whether it is a causal factor or a marker for other traffic-related pollutants[197].

Quantifying short and long-term impacts of NO_2 pollution has been problematic due to uncertainties in the concentration-response functions available. It has been estimated that the direct effect of NO_2 on the health of the UK's population could be that between 600 and 6,000 deaths per year may have been brought forward by a matter of days or weeks as a result of exposure to NO_2 in the ambient air[198]. Likewise, it has been estimated that between 1,400 and 14,000 hospital admissions and between 200,000 and 2 million GP consultations for respiratory illnesses may arise as a result of exposure to the ambient NO_2 in the UK each year[199]. Ambient NO_2 is said to contribute to an average of 1-7 extra days of symptoms in asthmatics annually.

More recent research by PHE[200] has found that an estimated 1,933 new cases of disease attributable to NO_2 is predicted by 2035, per 100,000 population between 2017 and 2035. For $PM_{2.5}$ this figure is higher, at 2,248 new cases of disease per 100,000 population.

Whilst there is no clear evidence of a safe level of exposure below which there is no risk of adverse health effects, there is sufficient evidence available to demonstrate that the adverse

---

[195] Meng, X., Zhang, Y., Zhao, Z., Duan, X., Xu, X. and Kan, H. (2012) Temperature Modifies the Acute Effect of Particulate Air Pollution on Mortality in Eight Chinese Cities. Science of The Total Environment. 435– 436, 215–221.

[196] Health Scotland, MRC Social and Public Health Sciences Unit and Institute of Occupational Medicine. (2007) Health Impact Assessment of Transport Initiatives: A Guide. NHS Health Scotland.

[197] Public Health England. (2019) Review of Interventions to Improve Outdoor Air Quality and Public Health. Available from: https://assets.publishing.service.gov.uk/Review_of_interventions_to_improve_air_quality

[198] Searl A. (2004) A Review of the Acute and Long Term Impacts of Exposure to Nitrogen Dioxide in the United Kingdom. Institute of Occupational Medicine.

[199] Searl A. (2004) A Review of the Acute and Long Term Impacts of Exposure to Nitrogen Dioxide in the United Kingdom. Institute of Occupational Medicine.

[200] Public Health England. (2018) Estimation of Costs to the NHS and Social Care Due to the Health Impacts of Air Pollution.

effects of air pollution on health outcomes is widely accepted. There is consensus that lowering levels of NO_2 and particulate matter will bring additional health benefits.

Vulnerable groups

A UK Department for the Environmental, Food and Rural Affairs (DEFRA)[201] found that in England that there is a tendency for higher relative mean annual concentrations of nitrogen dioxide NO_2 and PM_{10} in the most deprived areas of the country. This distribution can largely be explained by the high urban concentrations driven by road transport sources, and the higher proportion of deprived communities in urban areas. If exceedances of National Air Quality Standards are considered, the correlation between poor air quality and deprivation is stronger, showing that when the most polluted areas are considered, the greatest burden is on the most deprived communities, and very little on the least deprived.

The review also identifies age as a key indicator of susceptibility to air pollution: *'children and elderly groups [are] deemed more susceptible to certain health impacts'.*
A similar report in 2017[202] assessing London air pollution exposure in 2013 found that populations living in most deprived areas are on average more exposed to poor air quality (NO_2 and PM_{10}) than less deprived areas. However, there is wide variation in pollution concentration values across the social gradient and inequalities in air pollution exposure are predicted to reduce by 2020 because of new policies aiming to reduce road transport emissions. Further, proportionally more people have been found to be exposed to exceedances of the NO_2 EU limit value in areas with a high proportion of Black/ African/ Caribbean/ Black British and Other ethnic groups.

A recent PHE[203] report has stated that children, older people, and people with chronic health problems such as pre-existing cardiovascular and respiratory conditions are the most vulnerable to air pollution.

According to the Lancet Commission on pollution and health[204] children are at high risk of pollution related disease and even extremely low-dose exposures to pollutants during

---

[201] Department of Environment, Food and Rural Affairs, Netcen, Department for Communities and Local Government. (2006) National Statistics. Air Quality and Social Deprivation in the UK: an Environmental Inequalities Analysis - Final Report to Department of Environment, Food and Rural Affairs AEAT/ENV/R/2170.

[202] Brook, R., King, K.(2017) Updated Analysis of Air Pollution Exposure in London. Aether

[203] Public Health England. (2019) Review of Interventions to Improve Outdoor Air Quality and Public Health. Available from:
https://assets.publishing.service.gov.uk/Review_of_interventions_to_improve_air_quality

[204] Landrigan, P.J., et al. (2018) The Lancet Commission on Pollution and Health, Lancet 391:462-512

windows of vulnerability in utero and in early infancy can result in disease, disability, and death in childhood and across their lifespan. Research has shown that long - term exposure to PM$_{2.5}$ affects children's lung development, including deficits in lung function[205,206].

Noise

Sound is produced when something vibrates and sends waves of energy through the air to our ears. Noise is typically defined as 'unwanted sound'[207]. Noise from environmental sources, in particular from road traffic, is increasingly accepted as influencing the health and well-being of individuals or populations[208]. The WHO has stated that *"Environmental noise is a threat to public health, having negative impacts on human health and well-being"*[209].

Hearing loss does not occur from typical exposure to environmental noise; it is more commonly associated with occupational exposure to much higher noise levels. In the everyday environment, the rsponse of an individual to noise is more likely to be

---

[205] Guo C, Hoek G, Chang LY, et al. (2019) Long-Term Exposure to Ambient Fine Particulate Matter (PM2.5) and Lung Function in Children, Adolescents, and Young Adults: A Longitudinal Cohort Study. Environ Health Perspect. 127(12):127008. DOI:10.1289/EHP5220

[206] Public Health England. (2019) Review of Interventions to Improve Outdoor Air quality and Public Health. Available from: https://assets.publishing.service.gov.uk/Review_of_interventions_to_improve_air_quality

[207] Basner, M., Babisch, W., Davis, A., Brink, M., Clark, C., Janssen, S., & Stansfeld, S. (2014) Auditory and Non-Auditory Effects of Noise on Health. Lancet, 383(9925), 1325-1332.

[208] European Environment Agency (2020). Environmental Noise in Europe 2020. Luxembourg.

[209] World Health Organization. (2009) Night Noise Guidelines for Europe.

behavioural or psychological (i.e. non-auditory)[210] but can also be physiological[211,212]. There are a wide range of non-auditory health effects that may be associated with exposure to environmental noise.

The 2018 WHO Guidelines on Environmental Noise for the European Region[213] undertook a series of systematic reviews synthesising exposure and associated impacts on health in order to develop a set of guidelines on how to protect human health. Recommendations were formulated based on the strength of evidence from various noise sources. The systematic reviews concluded that there was evidence for an association of road traffic and railway noise on CVD and metabolic disorders, sleep disturbance, annoyance, and cognitive impairment, with suggestive but weaker evidence (often due to lack of studies) for effects on mental health and birth weight.

A recent review[214] commissioned by DEFRA considered how evidence has changed since the publication of the WHO Environmental Noise Guidelines. Clark et al., 2020 found associations between noise and medication use and interview measures of depression and anxiety. Associations with some cancer outcomes were also observed however, the quality of evidence across studies remains low for these outcomes.

---

[210] Guski, R., Schreckenberg, D., & Schuemer, R. (2017). WHO Environmental Noise Guidelines for the European Region: A Systematic Review on Environmental Noise and Annoyance. International Journal of Environmental Research and Public Health, *14*(12), 1539

[211] van Kamp, I., Simon, S., Notley, H., Baliatas, C., & van Kempen, E. (2020) Evidence Relating to Environmental Noise Exposure and Annoyance, Sleep Disturbance, Cardio-Vascular and Metabolic Health Outcomes in the Context of IGCB (N): A Scoping Review of New Evidence. International Journal for Environmental Research and Public Health, 17, 3016.

[212] World Health Organisation. (2018) The World Health Organization Guidelines for Environmental Noise Exposure for the European Region. Copenhagen: Denmark.

[213] World Health Organisation. (2018) Environmental Noise Guidelines for the European Region. Available from: http://www.euro.who.int/en/publications/abstracts/environmental-noise-guidelines-for-the-european-region-2018

[214] Clark, C., Crumpler, C., & Notley, A. H. (2020) Evidence for Environmental Noise Effects on Health for the United Kingdom Policy Context: A Systematic Review of the Effects of Environmental Noise on Mental Health, Wellbeing, Quality of Life, Cancer, Dementia, Birth, Reproductive Outcomes, and Cognition. International journal of environmental research and public health, 17(2), 393. DOI: https://doi.org/10.3390/ijerph17020393

Vulnerable groups

A literature review by van Kamp and Davies in 2013 [215] looked at 62 papers published from April 2006 to April 2011, which included the impact of environmental noise on the health of vulnerable people, including primary school children, young adolescents, preschool children, the elderly, and children with autism, asthma and attention deficit hyperactivity disorder. A more recent report published by European Environment Agency in 2020[216] adds that shift workers, noise sensitive individuals, pregnant woman, and socio-economically disadvantaged individuals are also particularly vulnerable to noise. Both reviews agree, that while vulnerable groups of people may be more at risk from exposure to environmental noise than healthy adults, there is comparatively little research focusing on the adverse health effects of noise on vulnerable people.

A evidence review[217] of social inequalities in environmental noise exposure in WHO European region found higher noise exposures in groups with lower socioeconomic position. A study in London, looking to quantify socioeconomic and ethnic inequalities found that socioeconomic inequalities in road traffic noise were generally small. The odds of living within a 50dB contour of rail noise were 19% higher for black compared to white individuals[218].

Access to open space and nature
Numerous studies have found links between mental and physical health and access to green space. A recent systematic review of observational evidence has shown an association between long-term exposure to green space and cognition (intellect and cognisance) over the life course[219]. The association is seen cross-sectionally in both adults and children.

A review of the literature examining the association between access to green space and the mental wellbeing of children concluded that access to green spaces promoted

[215] van Kamp, I. and Davies, H. (2013) Noise and Health in Vulnerable Groups: A Review. Noise and Health.

[216] European Environment Agency. (2020) Environmental Noise in Europe. Available from: https://www.eea.europa.eu/publications/environmental-noise-in-europe

[217] Dreger, S., Schüle, S. A., Hilz, L. K., & Bolte, G. (2019) Social Inequalities in Environmental Noise Exposure: A Review of Evidence in the WHO European Region. International Journal of Environmental Research and Public Health. 16(6), 1011. DOI: https://doi.org/10.3390/ijerph16061011

[218] Tonne C, Milà C, Fecht D, et al. (2018) Socioeconomic and Ethnic Inequalities in Exposure to Air and Noise Pollution in London. Environ Int.115:170-179. doi:10.1016/j.envint.2018.03.023

[219] Keijezer, C et al. (2016), *Long-term Green Space Exposure and Cognition Across the Life Course: A Systematic Review. Current Environmental Health Reports* Vol 3(4): 468-477.

attention and memory, fostered supportive social groups and self-discipline and improved symptoms of attention deficit hyperactivity disorder[220].

A review by O'Brien et al. (2010) for the Forestry Commission[221] looked at papers examining the health effects of green space found evidence to support the view that access to open space and natural environments have health benefits, particularly through increased physical activity.

The literature review found that the proximity, size and amount of green space available to people in urban environments influenced physical and mental health outcomes. The review identified the key health benefits of green space as:

- 'long and short term physical benefits associated with obesity, life expectancy, heart rate and blood pressure;
- attention and cognitive benefits associated with restoration, mood and self-esteem;
- physical activity benefits associated with the use of greenspace;
- self-reported benefits in terms of health and life satisfaction; and
- community cohesion benefits through social contact fostered by greenspace.'
- The review suggests various mechanisms for the beneficial effects of green space including 'providing a space that promotes social interaction and inclusion, reducing social annoyances and crime' and 'reducing stress and restoring cognitive function and capacity to function with the demands of life'.

Research conducted by Mass et al. in 2006[222] has suggested that there is a positive association between the proportion of green space in a residential area and the perceived general health of residents, and that this relationship is strongest for lower socio-economic groups.

An evidence review by Natural England[223] showed that access to natural environments promotes physical activity including walking, gardening and children's play. The review

---

[220] McCormick, R. (2017) *Does Access to Green Space Impact the Mental Well-being of Children: A Systematic Review*. Vol 37 pages 3-7.

[221] O'Brien, L., Williams, K. and Stewart, A. (2010), *Urban health and health inequalities and the role of urban forestry in Britain: A review*, The Research Agency of the Forest Commission.

[222] Maas, J., Verheij, R., Groenewegen, P., de Vries, S. and Spreeuwenberg, P. (2006), *Green space, urbanity and health: how strong is the relation?* Journal of epidemiology and community health.

[223] Natural England Access to Evidence Information Note EIN019 (2016), Links between natural environments and physical activity: evidence briefing.

shows evidence that people with poorer health tend to benefit more from physical activity in natural environments. In addition, a systematic review of physical activity and green spaces concluded that, compared with indoor activities, physical activity in natural environments is associated with greater feelings of revitalisation, increased energy and positive engagement, and decreases in tension, confusion, anger and depression.[224] A review by Jia et al., 2020[225] found a positive association between access to green space and physical activity and a negative association between access to green space and television watching time, body mass index and weight status among children.

A literature review by Croucher et al. in 2007 for Greenspace Scotland[226] found a positive relationship between green space and general health, and also identified that 'the attractiveness or quality of greenspace is an important determination of green space use'. The review also identified links to mental health, stating that 'studies consistently show a relationship between levels of stress and access to urban green spaces' and identified 'activity and exercise, natural daylight, stimulation of the senses and aesthetic experience' as potential factors in reducing stress. Similarly, Wood et al. (2017) found that there was a positive relationship between access to green spaces and mental wellbeing, including in places with a nature focus and spaces designed for recreational and sporting activity[227].

A systematic review of the impact of green space on biodiversity and health found that, while reported effects of green space were overwhelmingly positive, 22% of the papers examined identified either no effect or negative effects[228].

A UK study by Houlden et al.[229] in 2019 was undertaken to test whether the amount of greenspace within a radius of individuals' homes was associated with mental wellbeing, testing the UK government guideline that greenspace should be available within 300m of homes. Findings showed that an increase in one hectare of greenspace within 300m of

224 Thompson Coon J., et al. (2011), Does participating in physical activity in outdoor natural environments have a greater effect on physical and mental wellbeing than physical activity indoors? A Systematic Review. Environmental Science & Technology 45: 1761.
225 Jia, P, Cao, X, Yang, H, et al. (2020), Green space access in the neighbourhood and childhood obesity. Obesity Reviews. 1– 12. https://doi.org/10.1111/obr.13100
226 Croucher, K., Myers, L., and Bretherton, J. (2007), The links between greenspace and health: a critical literature review, Greenspace Scotland.
227 Wood. L et al. (2017), Public green spaces and positive mental health – investigating the relationship between access, quantity and types of parks and mental wellbeing. Health and Place 48:63-71.
228 Lai, H., et al. (2019), The impact of green space and biodiversity on health. The ecological society of America 17:7, doi. Available online at: https://doi.org/10.1002/fee.2077.
229 Houlden V. et al. (2019), A spatial analysis of proximate greenspace and mental wellbeing in London. Applied Geography 109:102036.

residents was associated with a statistically significant increase in life satisfaction, worth and happiness.

Research conducted in Australia in 2019 by Astell-Burt and Feng[230], on over 46,000 adults over the age of 45, found that exposure to a higher proportion of tree canopy cover (as opposed to grassland alone) was associated with better mental health. Exposure to 30% or more tree canopy compared with 0% to 9% tree canopy was associated with 31% lower odds of incident psychological distress. The findings were adjusted for age, sex, income, economic status, couple status, and educational level and green spaces were counted when they occurred within one mile from the participant's home.

A systematic review by Zhang et al., 2020 based on fourteen studies found that there was a positive association between exposure to green space and mental health and wellbeing in adolescents, suggesting that improving accessibility, availability and quality of green space is likely to generate a positive impact on adolescents' mental well-being[231]. Similar results were observed among studies in women[232] and older adults[233], although the association was not observed for a change in green space in the latter.

Green space exposure was also positively associated with sleep in a systematic review by Shin et al., 2020[234] which revealed that eleven out of thirteen studies found an association between green space exposure and sleep quality and quantity.

230 Astell-Burt T. and Feng, X. (2019), Association of Urban Green Space with Mental Health and General Health Among Adults in Australia. JAMA Network Open 2019;2(7). doi:10.1001/jamanetworkopen.2019.8209.
231 Zhang Y, Mavoa S, Zhao J, Raphael D, Smith M. (2020). The Association between Green Space and Adolescents' Mental Well-Being: A Systematic Review. Int J Environ Res Public Health. Sep 11;17(18):6640. doi: 10.3390/ijerph17186640. PMID: 32932996; PMCID: PMC7557737.
232 Torres Toda M, Anabitarte Riol A, Cirach M, Estarlich M, Fernández-Somoano A, González-Safont L, Guxens M, Julvez J, Riaño-Galán I, Sunyer J, Dadvand P. (2020). Residential Surrounding Greenspace and Mental Health in Three Spanish Areas. Int J Environ Res Public Health. Aug 5;17(16):5670. doi: 10.3390/ijerph17165670. PMID: 32764502; PMCID: PMC7460179.
233 Noordzij JM, Beenackers MA, Oude Groeniger J, Van Lenthe FJ. (2020). Effect of changes in green spaces on mental health in older adults: a fixed effects analysis. J Epidemiol Community Health.74(1):48-56. doi: 10.1136/jech-2019-212704. PMID: 31630120; PMCID: PMC6929698.
234 Jong Cheol Shin, Kaustubh Vijay Parab, Ruopeng An, Diana S. Grigsby-Toussaint. (2020). Greenspace exposure and sleep: A systematic review. Environmental Research. Volume 182: 109081. ISSN 0013-9351, https://doi.org/10.1016/j.envres.2019.109081.

A systematic review and meta-analysis[235] analysing green and blue space and birth outcomes found that increase in residential greenness was statistically significantly associated with higher birth weight (0.001 (95%CI <0.001, 0.002) and lower odds (0.95, (95%CI 0.92, 0.97) of small for gestational age. There was no statistically significant association with preterm birth, low birth weight or pregnancy outcomes. This study provides emerging evidence on the effect of green and blue space and birth outcomes however, more studies are needed to further elucidate the association.

Housing & indoor environment

There is evidence linking housing quality and tenure with mental and physical health. According to the 2011/12 Subjective Well-being Annual UK Population Survey[236], 80% of those who owned their property reported 'medium' or 'high' levels of life satisfaction, compared with 67.8% of those who rented. Of those in rented accommodation, 0 to 6 out of 10 reported 'low' satisfaction with life, compared with 1 in 5 of those who owned their accommodation outright or with a mortgage. The Annual Population Survey (APS) dataset covering the period between January 2014 to December 2016 shows that people reporting the poorest personal well-being are more likely to rent their home and less likely to have a mortgage.[237]

A systematic review by Singh et al.[238] in 2019 suggested that prior exposure to housing disadvantage (overcrowding, mortgage delinquency, housing mobility, housing tenure, subjective perceptions of inadequate housing, eviction, and physical housing conditions) may impact mental health later in life.

The process of residential relocation can be a stressful life event, and involuntary residential relocation may have particular consequences including increased stress and isolation. Studies suggest that involuntary residential relocation can have a negative impact on wellbeing, particularly for older people[239].

235 Akaraci S, Feng X, Suesse T, Jalaludin B, Astell-Burt T. (2020). A Systematic Review and Meta-Analysis of Associations between Green and Blue Spaces and Birth Outcomes. International Journal of Environmental Research and Public Health. 17(8):2949. https://doi.org/10.3390/ijerph17082949
236 Randall, C. (2012), Measuring National Well-Being – Where we live, Office for National Statistics.
237 Office of National Statistics. (July 2018)., Understanding well-being inequalities: Who has the poorest personal well-being.
238 Singh, A. et al. (2019), Housing Disadvantage and Poor Mental Health: A Systematic Review, American Journal of Preventative Medicine: 57(2):262−272.
239 Wu, Y., Prina, A., Barnes, L., Matthews, F. and Brayne, C. (2015), Relocation at older age: results from the cognitive function and aging study, Journal of Public Health.

A natural experiment evaluating the effect of change in the built environment on mental health and subjective well-being found that relocating to East Village (former London 2012 Olympic Athletes' Village), repurposed to encourage healthy active living, did not affect overall mental health and well-being outcomes[240].

Economic factors

Access to work

The Marmot Review (2010)[241], which was commissioned by the Department of Health to look into health inequalities in England, looks at the differences in health and well-being between social groups. The report identified six policy objectives for reducing health inequalities, one of which was to *"create fair employment and good work for all".* The Review identified the importance of work for health: *"being in good employment is protective of health. Conversely, unemployment contributes to poor health".*

The Marmot Review 10 Years On (2020)[242] outlines areas of progress and decline since 2010. The report reiterates the importance of employment as being protective of health; "*Being in good employment is usually protective of health while unemployment, particularly long-term unemployment, contributes significantly to poor health…. Unemployment and poor-quality work are major drivers of inequalities in physical and mental health*."

Many of the documented linkages between access to work and health are often related to the negative impacts of unemployment, rather than the positive impacts of employment. However, it follows that maintaining high levels of employment opportunities has positive effects on health. Results from a systematic review conducted in 2016[243] found that evidence that employment can be beneficial for peoples' wellbeing, specifically their mental health.

---

240 Ram B, Limb ES, Shankar A, Nightingale CM, Rudnicka AR, Cummins S, Clary C, Lewis D, Cooper AR, Page AS, Ellaway A, Giles-Corti B, Whincup PH, Cook DG, Owen CG. (2020). Evaluating the effect of change in the built environment on mental health and subjective well-being: a natural experiment. J Epidemiol Community Health. 2020 Aug;74(8):631-638. doi: 10.1136/jech-2019-213591. PMID: 32332115; PMCID: PMC7320742.

241 Marmot, M., Allen, J., Goldblatt, P., Boyce, T., McNeish D., Grady, M. and Geddes, I. (2010) Fair society, healthy lives: Strategic review of health inequalities in England post-2010, The Marmot Review.

242 Marmot, M., Allen, J., Boyce, T., Goldblatt, P., Morrison, J. (2020) Health equity in England: The Marmot Review 10 years on. London: Institute of Health Equity.

243 Modini, M., Joyce, S., Mykletun, A., Christensen, H., Bryant, RA., Mitchell, PB., Harvey, SB. (2016) The mental health benefits of employment: results of a systematic meta-review. Australasian Psychiatry.

Employment is related to social and psychological well-being; a study commissioned by the Department of Work and Pensions[244] found that *"work meets important psychosocial needs in societies where employment is the norm"* and that *"work is central to individual identity, social roles and social status".*

Access to training
Training is a form of work involving the application of physical or mental effort to improve skills, knowledge or other personal resources which can improve chances of employment and career progression.

The Marmot 2010 review highlighted the links between inequalities in educational outcomes and physical and mental health and identified *"Reducing the social gradient in skills and qualifications"* as a priority objective to reduce health inequalities. The review made policy recommendations including increasing lifelong learning opportunities, including work-based learning, to improve health outcomes.

The Marmot Review 10 Years On (2020)[245] review emphasised that to reduce health inequalities training and education are important both physical and mental health. Young adults who undertake training have been shown to have improved somatic and psychological symptoms compared with those who are unemployed. It was noted as particularly important for mental health, general well-being and for the longer-term social development of school leavers[246].

These findings are supported by the results from a systematic review[247] of 41 papers addressing learning at work. The review found that learning at work is beneficial for employee wellbeing, specifically increasing people's ability to cope with stress, improved feelings of self-esteem; hope; and purpose.

Vulnerable groups
A scoping study[248] investigating the impact of unemployment and precarious employment on the health of young people demonstrated that there is evidence that young people are especially vulnerable to health problems when unemployed or working in precarious conditions.

---

244 Waddell, G., Burton, A. K. (2007) Is work good for your health and well-being? The Stationery Office.
245 Marmot, M., Allen, J., Boyce, T., Goldblatt, P., Morrison, J. (2020) Health equity in England: The Marmot Review 10 years on. London: Institute of Health Equity.
246 Waddell G and Buton A. K. (2006) Is work good for your health and well-being? The Stationary Office.
247 What Works Wellbeing. (2017) Learning at work and wellbeing: what works?.
248 Vancea, M., Utzet, M. (2017) How unemployment and precarious employment affect the health of young people: a scoping study on social determinants.

Furthermore, supporting these findings, a recently published systematic review[249] commissioned by the Public Health Agency of Sweden found an association between unemployment among young people and poor mental health.

These findings are indicative that young people are particularly vulnerable to the negative health effects resulting from unemployment.

Access to education

There is a large body of evidence linking education, employment and income levels with physical and mental health. The WHO identifies a list of health determinants[250] that combine to affect the health of individuals and communities. Included in this list is: 'education – low education levels are linked with poor health, more stress and lower self-confidence'.

The majority of evidence linking education with health outcomes looks at educational attainment in the context of broader socio-demographic status. The PHE Health Profile for England states that *'Educational attainment is strongly linked with health behaviours and outcomes. Better-educated individuals are less likely to suffer from long term diseases, to report themselves in poor health, or to suffer from mental conditions such as depression or anxiety. Education provides knowledge and capabilities that contribute to mental, physical, and social wellbeing. Educational qualifications are also a determinant of an individual's labour market position, which in turn influences income, housing and other material resources associated with health'*. An evidence review by the Joseph Rowntree Foundation[251] states that improved qualifications can lead to better wages and employment, providing greater access to the health benefits associated with good and secure employment.

An evidence review by the Economic and Social Research Council[252] suggests that the level of education a person has correlates with positive life outcomes including health and wellbeing. An evidence review undertaken in the US[253] states that 'education is critical to social and economic development and has a profound impact on population health'. However, it goes on to note that 'the factors surrounding the relationship between

249 Bartelink, V, H, M., Guldbrandsson, K, K., Bremberg. (2019) Unemployment among young people and mental health: a systematic review.

250 World Health Organization (2017), Health Impact Assessment- The determinants of health. Available online at: http://www.who.int/hia/evidence/doh/en/.

251 Rowntree, J. (2014), Reducing Poverty in the UK: A collection of evidence reviews, Joseph Rowntree Foundation.

252 Economic and Social Research Council. Evidence Briefing: The wellbeing effect of education(July 2014), Available online at: https://esrc.ukri.org//the-wellbeing-effect-of-education/.

253 Zimmerman, E., Woolf, S. and Haley, A. (2016), Understanding the Relationship Between Education and Health: A Review of the Evidence and an Examination of Community Perspectives, AHRQ.

education and health are the subject of research in different disciplines that are of uneven quality, and closing the many holes in the evidence is a research priority'.

A multichannel sequence analysis study by Eisenberg-Guyot et al., 2020, based on data from 1985-2017 on 2779 respondents, found people who are less educated have poorer employment and worse self-rated health. The prevalence of poor/fair self-rated health and moderate mental illness was greatest among individuals who were minimally attached, returning to the labour force, and precariously employed[254.]

A study by Raghupathi et al., 2020[255] used empirical data from 26 Organisation for Economic Co-operation and Development (OECD) countries for the years 1995-2015 to assess associations between education and health indicators. They found that adults with higher educational attainment have better health and lifespans compared to less educated adults. Tertiary education was a critical factor influencing infant mortality, life expectancy, child vaccination, and enrolment rates. This research suggests that education in the early stages of life course has an important role in decreasing the social inequalities and improving health within population.

Access to and quality of services

Access to services and community facilities can affect health and wellbeing directly, through access to treatment and care, or access to fresh food retailers, and indirectly through issues such as access to social networks. The London Health Urban Development Unit[256] identified access to public services and social infrastructure as a key determinant of health and wellbeing.

A 2011 literature review by Quigley et al.[257] focusing on transport and community severance found that, the accessibility of local shops, community services and healthcare facilities may be affected by

- effects on the capacity of existing services;
- physical accessibility (i.e. distances travelled and transport connections);
- social and/or cultural access (i.e. communication issues); and
- separation imposed by a new piece of physical infrastructure.'

254 Eisenberg-Guyot J., Peckham T., Andrea SB., Oddo V., Seixas N., Hajat A., (2020) Life-course trajectories of employment quality and health in the U.S.: A multichannel sequence analysis. Social Science & Medicine, Volume 264,113327,ISSN 0277-9536, Available oneline at: https://doi.org/10.1016/j.socscimed.2020.113327.

255 Raghupathi, V., Raghupathi, W. The influence of education on health: an empirical assessment of OECD countries for the period 1995–2015. (2020). Arch Public Health 78, 20. Available online at: https://doi.org/10.1186/s13690-020-00402-5

256 NHS, Healthy Urban Development Unit (2013), HUDU Planning for Health- Rapid Health Impact Assessment Tool. Available online at: http://www.healthyurbandevelopment.nhs.uk/wp-content/uploads/2013/12/HUDU-Rapid-HIA-Tool-Jan-2013-Final.pdf.

257 Quigley, R. and Thornley, L. (2011), Literature Review on Community Cohesion and Community Severance: Definitions and Indicators for Transport Planning and Monitoring, Report to New Zealand Transport Agency.

A study by Iwasaki in 2010[258] suggests that access to social infrastructure including leisure and cultural facilities has been shown to play a key role in the recovery of people with mental illness and have an overall positive impact on health and wellbeing. A report by the New Zealand Government in 2007[259] identifies a number of reasons for participation in cultural and leisure activities including personal growth and development, to learn new skills for enjoyment and for entertainment, all of which can benefit health and wellbeing.

A survey by Randall in 2008 for the ONS[260] found that 5% of adults felt isolated due to difficulties accessing local shops and services, and 22% of adults knew someone who felt this way. Overall, the survey highlighted that alongside crime and cleanliness, the most important factors that made a place suitable to live was access to services, particularly health services.

Vulnerable Groups

A study by Hamer in 2004[261] suggested that groups impacted by disability and older people may experience greater barriers to health and social care services. However, a review by Bonaccorsi et al., 2020[262] found a positive association between overall access to services, destination and services and physical activity in older people (> 65 years of age).

Macroeconomic factors (e.g. economic development, gross domestic product)

Please refer to section 4 of this document ("What will be the impact on economic well-being").

258 Iwasaki. Y. Coyle, C. and Shank, J. (2010), Leisure as a context for active living, recovery, health and life quality for persons with mental illness in a global context, Health promotion international.

259 Ministry of Social Development, New Zealand Government (2007), Social Report: Leisure and Recreation. Available online at: http://socialreport.msd.govt.nz/2007/index.html.

260 Randall, C. (2012), Measure national well-being: Where we live 2012, Office for National Statistics Report.

261 Hamer, L. (2004), Improving patient access to health services: a national review and case studies of current approaches, Health Development Agency.

262 Bonaccorsi G, Manzi F, Del Riccio M, Setola N, Naldi E, Milani C, Giorgetti D, Dellisanti C, Lorini C. (2020). Impact of the Built Environment and the Neighborhood in Promoting the Physical Activity and the Healthy Aging in Older People: An Umbrella Review. International Journal of Environmental Research and Public Health. 17(17):6127. https://doi.org/10.3390/ijerph17176127

Assessment

The table below sets out a high-level health impact assessment of the introduction of remote working, based on the methodology described above. The evidence for the information is drawn from the health impact assessment of home and agile working in Wales conducted by Public Health Wales[263].

Health determinant Key guiding questions (*"Will introducing remote working in Wales…"*)	Positive (+) or Negative (-) Impact	Relevant vulnerable groups	Assessment and Mitigation
Lifestyle/Behaviour Factors Affecting Health *Affect diet?* *Affect physical activity?* *Affect use of alcohol, cigarettes, non-prescribed drugs?*		All vulnerable groups	<ins>**Positive**</ins> **Diet** • More time for home cooking planning, and preparing • More family-oriented meals **Physical activity** • No commute, therefore, individuals have much more free time for physical activity. • Flexibility within working hours allows for more ability to introduce physical activity into routine. <ins>**Negative**</ins> **Diet** More snacking if working at home <ins>**Mitigation:**</ins> Signposting to guidance that promotes healthy eating, for example Public Health Wales Eating Well at Home.

---

263 Public Health Wales. A Health Impact Assessment of Home and Agile Working in Wales in response to the COVID-19 pandemic. Available online at: https://phw.nhs.wales/news/home-working-can-enhance-mental-well-being

Health determinant Key guiding questions (*"Will introducing remote working in Wales…"*)	Positive (+) or Negative (-) Impact	Relevant vulnerable groups	Assessment and Mitigation
			Physical activity • Reduced levels of physical activity due to reduced active travel as a result of no commute.Homeworking may produce a more sedentary lifestyle. <u>**Mitigation:**</u> • Physical activity interventions and/or policies for example theTime to Move Scheme to mitigate negative effects on physical activity **Substance misuse** • Increase in substance misuse as a coping mechanism - social norms within workplace may be a protective factor and when removed this may create the risk of addictive behaviour patterns. [264]
Social and community influences on health		People on low income	<u>**Positive**</u> **Family organisation and roles**

---

[264] Press release, Public Health England July2021

Alcoholic liver deaths increased by 21% during year of the pandemic - GOV.UK (www.gov.uk)

Health determinant Key guiding questions ("*Will introducing remote working in Wales…*")	Positive (+) or Negative (-) Impact	Relevant vulnerable groups	Assessment and Mitigation
Affect family organisation and roles? *Affect neighbourliness?* *Affect social isolation?* *Affect social networks?* *Affect sense of belonging?* *Increase opportunities to access social networks?*		People living in isolated areas People unable to access services and facilities Young people Older people	• Working from home enables individuals to spend more time with their families, for example a lack of commuting provides additional time that can be spent with family members. • No commute, as the result of working from home, increases the time available for caring for family members or others. Additional time to look after children or elderly parents may ease the stress of doing this and therefore impact mental health and well-being. **Neighbourliness** • Increased value placed on our neighbourhoods as the result of spending more time at home and in our local area, shopping more locally and using local coffee shops to work. Increase in neighbourliness **<u>Negative</u>** **Family organisation and roles** • It may be much harder to balance the demands of working and family life and caring responsibilities whilst working from home, in particular for working women. **<u>Mitigation:</u>** • Post Covid-19, children will be enrolled in nurseries, schools, etc. so the negative impact on families and caring responsibilities will be somewhat mitigated.

Health determinant Key guiding questions (*"Will introducing remote working in Wales…"*)	Positive (+) or Negative (-) Impact	Relevant vulnerable groups	Assessment and Mitigation
			Social Isolation Reduced opportunities for interaction with colleagues and lack of 'water cooler' and 'kitchen conversations' that usually take place in office environments which has the potential to impact on individuals' sense of belonging to an organisation and teams. **Mitigation:** • A hybrid model of working from home/ usual place of work/ remote working hub can help mitigate negative effects on social isolation. **Social Networking** Loss of personal contact, face-to-face connectedness and social networks, which can cause social isolation, especially for those living on their own for whom the workplace offers their only social interaction. Impact of reduced interaction on well-being and productivity. **Mitigation:** A hybrid model combining working from home/working from office/ remote working hub can help mitigate negative effects on social isolation.

Health determinant Key guiding questions (*"Will introducing remote working in Wales…"*)	Positive (+) or Negative (-) Impact	Relevant vulnerable groups	Assessment and Mitigation
Living/environmental conditions affecting health ***Affect the indoor environment, housing, and living conditions?*** ***Affect the built environment?*** ***Affect air quality and reduce number of people exposed to poor air quality?*** ***Affect noise and reduce the number of people exposed to high levels of traffic noise?***		People living in isolated areas Children and young people Older people People with disabilities	**<u>Positive</u>** **Air Quality and Noise** • Less commuting and the potential to reduce noise and air pollution levels **<u>Negative</u>** **Indoor Environment, Housing and Living Conditions** • Housing or indoor environment may not be inappropriate for work due to lack of space, light, or access to digital services/infrastructure **<u>Mitigation</u>**: • provision of remote working hubs can mitigate negative effects on indoor environment, housing and living conditions in terms of space, light, digital infrastructure **Indoor Environment, Housing and Living Conditions** Muscoskeletal conditions may result because of homeworking due to inappropriate living conditions and equipment for agile working. • **<u>Mitigation</u>**: • Provision of remote working hubs can mitigate negative effects on muscoskeletal conditions as proper equipment for remote working will be provided via hubs. • Guidance to be circulated to employers to promote best practice

Health determinant Key guiding questions (*"Will introducing remote working in Wales…"*)	Positive (+) or Negative (-) Impact	Relevant vulnerable groups	Assessment and Mitigation
Contribute to access to green space?			**Air Quality and Noise** • Those working from home may experience noisy neighbours or live in areas of construction, which can provide disruptions to working environment. **<u>Mitigation:</u>** • A hybrid working pattern, and the provision of remote working hubs can mitigate the negative effect on noise if living in an area of high noise levels. **Built Environment** • There is the potential the policy may contribute to changes to the built environment – for example the impact of companies closing offices, or perhaps moving from city and town centres **Access to green space** • Increased flexibility and choice over location of work has the potential to contribute to workers' access to green space.
Economic conditions affecting health such as access to employment and education *Affect the income of individuals?*		People on low incomes Unemployed Children and young people	**<u>Positive</u>** **Income** • Positive: costs saved on commuting, car parking and other costs relating to commuting. **Productivity** • Positive: Increased productivity in workforce (based on short term studies done) **Opportunities and Access to Employment**

Health determinant Key guiding questions (*"Will introducing remote working in Wales…"*)	Positive (+) or Negative (-) Impact	Relevant vulnerable groups	Assessment and Mitigation
Allow individuals to access places of work and employment opportunities? ***Increase the range of employment opportunities for individuals?*** ***Allow individuals to access a range of educational opportunities?***		People living in isolated areas People with disabilities	• Positive: For those working in sectors where homeworking is feasible, it provides an opportunity for a change in patterns of working / more flexible models of working • Positive: More inclusive as individuals with disabilities and lone parents could join the workforce from or near their homes , which has the potential to remove barriers. • Positive: Opportunity to retain skills in rural areas for example through graduates working from home rather than migrating to cities. **Negative** **Income** • Negative: increased homeworking costs i.e. food/bills, increase in fuel poverty **Mitigation**: • Money saved in other areas, for example parking and fuel. There is also potential for the remote working hubs to mitigate against this increase in expenditure, depending on cost. **Productivity** • Negative: Decrease in productivity for some due to juggling other commitments such as family responsibilities, home schooling or caring responsibilities in addition to work demands. **Mitigation:**

Health determinant Key guiding questions (*"Will introducing remote working in Wales…"*)	Positive (+) or Negative (-) Impact	Relevant vulnerable groups	Assessment and Mitigation
			• Post Covid-19, children will be enrolled in nurseries, schools, etc. so the negative impact on families and caring responsibilities will be somewhat mitigated. **Opportunities and Access to Employment** • Negative: Increases in inequality as some workers unable to work remotely • Negative: Impact on career progression and salaries, particularly for younger people, if individuals are unable to work from home or do not have access to networking, training or mentoring whilst working agilely **Mitigation**: • To work alongside other government departments to explore and promote new opportunities for remote working, such as job pooling • To promote employment schemes which aim to support young people in their employment. Please also see Children's Rights Impact Assessment.
Access to and quality of services *Improve access and equity of access to health and social care services and facilities?*		People on low incomes Children and young people Older people	**Negative** **Transport** • Reduced public transport use with implication for the frequency and long-term sustainability of public transport services. **Information Technology** • Impact on those who are digitally excluded and lack digital knowledge, skills and literacy.

Health determinant Key guiding questions (*"Will introducing remote working in Wales…"*)	Positive (+) or Negative (-) Impact	Relevant vulnerable groups	Assessment and Mitigation
Affect access to and quality of transport? ***Affect access to and quality of information technology?*** ***Affect access to and quality of shops and commercial services?***		People living in isolated areas People with physical or learning disabilities/difficulties People unable to access services and facilities	• Mental well-being impacts, such as stress and frustration caused by experiencing technical difficulties or lack of training/support to equip individuals with knowledge and skills needed for agile/homeworking **Mitigation:** • Promote tutorials/ learning materials to improve digital literacy, such as Digital Communities Wales. • provide tutorials/ learning materials to improve digital literacy **Impact on older people in the workforce who may be less familiar with IT and platforms used by organisations for home / agile working.** **Digital Infrastructure** • Not all have access to digital infrastructure or stable network / broadband access, which makes working from home not possible / challenging. **Mitigation:** • provision of remote working hubs by government can mitigate negative effects on digital infrastructure • Impact of digital infrastructure on inequalities, through increasing inequity of access to digital services and access to employment opportunities. • provision of remote working hubs by government can mitigate negative effects on digital infrastructure

Health determinant Key guiding questions (*"Will introducing remote working in Wales…"*)	Positive (+) or Negative (-) Impact	Relevant vulnerable groups	Assessment and Mitigation
Macroeconomic factors *Affect economic development?* *Affect gross domestic product?* *Affect government policies?*		All vulnerable groups	<u>**Positive**</u> **Economic Development** • Environmental gain from reduced travel and car use and economic output • Sustainability can be promoted including active travel and transport **Government Policies** • Home and agile working can provide scope for regeneration of some communities and neighbourhood in Wales to promote local foundational economies • Opportunities to promote better spatial planning policies • Workplace policies reviewed to protect health and wellbeing of employed who need to work from home

** Evidence Table and Gap Analysis **

The table below summarises selected key evidence used in the Health Impacts Assessment, and highlights key gaps.

Evidence/data required	Source
Lifestyle/Behaviour Factors Affecting Health	Achraf, A., Brach, M., Trabelsi, K., Chtourou, H,, Boukhris, O., Masmoudi, L., Bousaziz, B., Bentlage, E., How, D., Ahmed, M., Mueller, P., Mueller, N., Aloui, A., Hammouda, O., Paineiras-Domingoes,L, L., Braakman-jansen, A., Wrede, C., et al (2020) 'Effects of COVID-19 home confinement on physical activity and eating behaviour Preliminary results of the ECLB-COVID19 international online-survey', medRxiv. [Online]. Available at: https://www.medrxiv.org/content/10.1101/2020.05.04.20072447v1
	Jacobs, E. (2020) 'Homeworking: isolation, anxiety and burnout', *Financial Times.* [Online]. 16 April. Available at: https://www.ft.com/content/315095c0-7da0-11ea-8fdb-7ec06edeef84
	Public Health England (2020) *Excess Weight and COVID-19: Insights from new evidence*. [Online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907966/PHE_insight_Excess_weight_and_COVID-19__FINAL.pdf
	Jakobsson, J., Malm, C., Furberg, M., Ekelund, U. and Svensson, M. (2020) 'Physical Activity During the Coronavirus (COVID-19) Pandemic: Prevention of a Decline in Metabolic and Immunological Functions', *Frontiers in Sports and Active Living.* [Online]. Available at: https://www.frontiersin.org/articles/10.3389/fspor.2020.00057/full
	Martinez-Ferran, M., de la Guía-Galipienso, F., Sanchis-Gomar, F., Pareja-Galeano, H. (2020) 'Metabolic Impacts of Confinement during the COVID-19 Pandemic Due to Modified Diet and Physical Activity Habits', *Nutrients 2020, 12,1549.* [Online]. Available at: https://pubmed.ncbi.nlm.nih.gov/32466598/
	Masmoudi, L., Bousaziz, B., Bentlage, E., How, D., Ahmed, M.,Mueller, P., Mueller, N., Aloui, A., Hammouda, O., Paineiras-Domingoes,L, L., Braakman-jansen, A., Wrede, C., et al (2020)

Evidence/data required	Source
	'Effects of COVID-19 home confinement on physical activity and eating behaviour Preliminary results of the ECLB-COVID19 international online-survey', *medRxiv.* [Online]. Available at: https://www.medrxiv.org/content/10.1101/2020.05.04.20072447v1

Bouziri, H., Smith, D. R.M., Descatna A., Dab, W. and Jean, K.(2020) 'Working from home in the time of COVID-19: how to best preserve occupational health?' *BMJ Journals.* [Online]. Available at: https://oem.bmj.com/content/77/7/509 |
| **Social community influences on health** | Zhang, S., X., Wang, Y., Rauch, A. and We, F. (2020) 'Unprecedented disruption of lives and work: Health, distress and life satisfaction of working adults in China one month into the COVID-19 outbreak', *Science Direct.* [Online]. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0165178120306521 Thomason, B. and Williams, H. (2020) 'What Will Work-Life Balance Look Like After the Pandemic?' *Harvard Business Review.* [Online]. 16 April. Available at: https://hbr.org/2020/04/whatwill-work-life-balance-look-like-after-the-pandemic

Andrew, A., Cattan, S., Dias, M. C., Farquharson, C., Kraftman,L., Krutikova, S., Phimister, A. and Sevilla, A. |

Evidence/data required	Source
	(2020) 'How are mothers and fathers balancing work and family under lockdown?',
	Institute for Fiscal Studies. [Online]. 27 May. Available at: https://www.ifs.org.uk/publications/14860 Jacobs, E. (2020) 'Homeworking: isolation, anxiety and burnout', *Financial Times.* [Online]. 16 April. Available at: https://www.ft.com/content/315095c0-7da0-11ea-8fdb-7ec06edeef84
	Royal Town Planning Institute (2020) 'Plan the World we need: The contribution of planning to a sustainable, resilient and inclusive recovery', *Royal Town Planning Institute Research*
	Paper. [Online]. 19 June. Available at: https://www.Royal Town Planning Institute.org.uk/media/5688/plantheworldweneed_june2020.pdf
	Taylor, K. and Griffith, R. (2020) 'Who can work from home and how does it affect their productivity?' *Economics Observatory.*
	[Online]. Available at: https://www.coronavirusandtheeconomy.com/question/who-can-work-home-and-how-does-it-affect-their-productivity
	(Marston, H. R., Musselwhite, C. and Hadley, R. (2020)
	'COVID-19 vs Social Isolation: the Impact Technology can have on Communities, Social Connections and Citizens', *British Society of Geronotology.* [Online]. 18 March. Available at: https://ageingissues.wordpress.com/2020/03/18/COVID-19-vs-social-isolation-the-impact-technology-can-have-on-communities-social-connections-and-citizens/
	CIPD (2020) *Megatrends Working from home: what's driving the rise in remote working?* [Online]. Available at: https://www.cipd.co.uk/knowledge/work/trends/megatrends/working-home-rise#:~:text=2%20Apr%202020-,Megatrends%3A%20Working%20from%20home%20%E2%80%93%20what's%20driving,the%20rise%20in%20remote%20working%3F&text=As%20a%20key%20component%20of,agile%20response%20to%20unexpected%20challenges.
	Cowan, K. (2020) *Survey results: Understanding people's*

Evidence/data required	Source
	concerns about the mental health impacts of the COVID-19 pandemic. [Online]. Available at: https://acmedsci.ac.uk/file-download/99436893
	Farooq, A., Laato, S. and Najmul Islam, A. K. M. (2020) 'Impact of Online Information on Self-Isolation Intention During theCOVID-19 Pandemic: Cross-Sectional Study', *Journal of Medical Internet Research.* [Online]. Available at: https://www.jmir.org/2020/5/e19128/
	Mind (2020) *The mental health emergency: How has the coronavirus pandemic impacted our mental health?* [Online].Available at: https://www.mind.org.uk/media-a/5929/the-mental-health-emergency_a4_final.pdf
	King, T., Hewitt, B., Crammond, B., Sutherland, G., Maheen,H., Kavanagh, A. (2020) 'Reordering gender systems: can COVID-19 lead to improved gender equality and health?', *The Lancet.* [Online]. 19 June. Available at: https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2931418-5
	Sonnentag, S. (2012) 'Psychological Detachment From Work During Leisure Time: The Benefits of Mentally Disengaging From Work', *Association for Psychological Science.*[Online]. Available at: https://www.researchgate.net/publication/228079939_Psychological_Detachment_From_Work_During_Leisure_Time_The_Benefits_of_Mentally_Disengaging_From_Work
Living/environmental conditions affecting health	CIPD (2020) *Megatrends Working from home: what's driving the rise in remote working?* [Online]. Available at: https://www.cipd.co.uk/knowledge/work/trends/megatrends/working-home-rise#:~:text=2%20Apr%202020-,Megatrends%3A%20Working%20from%20home%20%E2%80%93%20what's%20driving,the%20rise%20in%20remote%20working%3F&text=As%20a%20key%20component%20of,agile%20response%20to%20unexpected%20 challenges. Holliss, F. (2017) *To solve the housing crisis we need new ideas,not garden cities.* The Guardian. 9 February. [Online]. Available at:https://www.theguardian.com/housing-network/2017/feb/09/housing-crisis-worklife-garden-cities

Evidence/data required	Source
O2 (2020) *The Flexible Future of Work.* [Online]. 18 May.Available at: https://news.o2.co.uk/2020/05/20/the-flexiblefuture-of-work/ Magrini, E. (2020) 'How will coronavirus affect jobs in different parts of the country?' *Centre for Cities.* March. [Online}. Available at: https://www.centreforcities.org/blog/how-willcoronavirus-affect-jobs-in-different-parts-of-the-country/ Moeckel, R. (2016) 'Working from Home: Modeling the Impact of Telework on Transportation and Land Use', *Science Direct.* Available at: https://reader.elsevier.com/reader/sd/pii/S2352146517308803 Breach, (2020) *How easy is it for people to stay at home during the coronavirus pandemic?* Centre for Cities. 7 April. [Online]. Available at: https://www.centreforcities.org/blog/how-easyis- it-for-people-to-stay-at-home-during-the-coronavirus-pandemic/ Bouziri, H., Smith, D. R.M., Descatna A., Dab, W. and Jean, K. (2020) 'Working from home in the time of COVID-19: how to best preserve occupational health?' *BMJ Journals.* [Online]. Available at: https://oem.bmj.com/content/77/7/509 Montreuila and Lippel (2003) 'Telework and occupational health: a Quebec empirical study and regulatory implications',

Evidence/data required	Source
	Safety Science. [Online]. Available at: https://www.sciencedirect.com/science/article/pii/S0925753 502000425
	Moran, S. (2020) 'Remote working beyond COVID-19',
	globalwebindex. [Online]. 28 April. Available at: https://blog.
	globalwebindex.com/chart-of-the-week/remote-working-beyond-COVID-19/
	Holliss, F. (2016) 'Home-based Workers of the World Unite!'
	RSA. 30 November. [Online]. Available at: https://www.thersa.org/discover/publications-and-articles/rsa-blogs/2016/11/home-based-workers-of-the-world-unite
	Welsh Government (2020) *Framework for regional investment in Wales.* [Online]. Available at: https://gov.wales/framework-for-regional-investment-in-wales
	Welsh Government (2019) *The Foundational Economy.* [Online].Available at: https://gov.wales/foundational-economy
	Rodriguez, J. and Ifan, G. (2020) 'COVID-19 and the Welsh economy: working from home'. *Cardiff University Wales Fiscal*
	Analysis. [Online]. 8 July. Available at: https://www.cardiff.ac.uk/__data/assets/pdf_file/0011/2425 466/Covid_economy_report_2.pdf
Economic conditions affecting health such as access to employment and education	Rodriguez, J. (2020) 'COVID-19 and the Welsh economy: shutdown sectors and key workers', *Cardiff University Wales Fiscal Analysis.* [Online]. 19 June. Available at: https://www.cardiff.ac.uk/__data/assets/pdf_file/0017/2410 343/COVID-19 -andthe-Welsh-economy-shutdown-sectors-and-key-workers-briefing-paper.pdf
	Thomas, G. (2020) 'Coronavirus: the impact on the Welsh economy', *Senedd Research.* [Online]. 1 July. Available at:

Evidence/data required	Source
	https://seneddresearch.blog/2020/07/01/coronavirus-the-impact-on-the-welsh-economy/)

Banks, J., Karjalaninen, H. and Propper, C. (2020) 'Recessions and health: the long-term health consequences of responses to the coronavirus', *Institute for Fiscal Studies.* [Online]. 9

April. Available at: ttps://www.ifs.org.uk/publications/14799

Fadel, M., Salomon, J. and Descatha, A. (2020) 'Coronavirus outbreak: the role of companies in preparedness and responses',

PubMed.gov. [Online]. Available at: https://pubmed.ncbi.nlm.nih.gov/32119831/

Choudhury, P., Larson, B. Z. and Foroughi, C. (2019) 'Is It Time to Let Employees Work from Anywhere?' *Harvard Business Review.* 14 August. [Online]. Available at: https://hbr.org/2019/08/is-it-time-to-let-employees-work-from-anywhere

Montreuila and Lippel (2003) 'Telework and occupational health: a Quebec empirical study and regulatory implications',

Safety Science. [Online]. Available at: https://www.sciencedirect.com/science/article/pii/S0925753502000425

CIPD (2020) *Megatrends Working from home: what's driving the rise in remote working?* [Online]. Available at: https://www.cipd.co.uk/knowledge/work/trends/megatrends/working-home-rise

Royal Town Planning Institute (2020) 'Plan the World we need: The contribution of planning to a sustainable, resilient and inclusive recovery', *Royal Town Planning Institute Research Paper.* [Online]. 19 June. Available at: https://www.Royal Town Planning Institute.org.uk/media/5688/plantheworldweneed_june2020.pdf |

Evidence/data required	Source
	Moran, S. (2020) 'Remote working beyond COVID-19', *globalwebindex.* [Online]. 28 April. Available at: https://blog.globalwebindex.com/chart-of-the-week/remote-working-beyond-COVID-19/). Bick, R., Chang, M., Wang, K. W. and Yu T. (2020) *A blueprint for remote working: Lessons from China.* McKinsey Digital. [Online].
	Available at: https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/a-blueprint-for-remoteworking-lessons-from-china Million for Work Flexibility (2020) *The Business Case: How Work Flexibility Improves Productivity*. [Online]. Available at: https://www.workflexibility.org/the-business-case-how-work-flexibility-improves-productivity/
Access and quality of services	Healthwatch, National Voices and Traverse (2020) *The Doctor*
	Will Zoom You Now: getting the most out of the virtual health and care experience. [Online]. Available at: https://www.nationalvoices.org.uk/sites/default/files/public/publications/the_dr_will_zoom_you_now_-_insights_report.pdf
	Welsh Government (2020) *Framework for regional investment in Wales.* [Online]. Available at: https://gov.wales/framework-for-regional-investment-in-wales
	Green, L., Morgan, L., Azam, S., Evans, L., Parry-Williams, L.,Petchey, L. and Bellis, M. A. (2020) *A Health Impact Assessment of the 'Staying at Home and Social Distancing Policy' in Wales in response to the COVID-19 pandemic.,* [Online]. Available at: https://whiasu.publichealthnetwork.cymru/files/4515/9618/5918/HIA_Rapid_Review_of_SAH_Policy_Main_Report.pdf
	Holliss, F. (2017) *To solve the housing crisis we need new ideas,not garden cities.* The Guardian. 9 February. [Online]. Available at: https://www.theguardian.com/housing-network/2017/feb/09/housing-crisis-worklife-garden-cities

Evidence/data required	Source
	Holmes, E.A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely,S., Arsenault, L., Ballard, C., Christensen, H., Cohen Silver, R., Everall, I., Ford, T., John, A., Kabir, T., King, K., Madan, I., Michie, S., Przybylski, A. K., Shafran, R., Sweeney, A., Worthman, C. M., Yardley, Cowan, K., Cope, C., Hotopf, M. and Bullmore, E. (2020) 'Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science', *The Lancet.* [Online]. 15 April. Available at: https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(20)30168-1/fulltext Moeckel, R. (2016) 'Working from Home: Modeling the Impact of Telework on Transportation and Land Use', *Science Direct.* Available at: https://reader.elsevier.com/reader/sd/pii/S2352146517308803 Marston, H. R., Musselwhite, C. and Hadley, R. (2020) 'COVID-19 vs Social Isolation: the Impact Technology can have on Communities, Social Connections and Citizens', *British Society of Geronotology.* [Online]. 18 March. Available at: https://ageingissues.wordpress.com/2020/03/18/COVID-19-vs-social-isolation-the-impact-technology-can-have-on-communities-social-connections-and-citizens/
Macroeconomic	Royal Town Planning Institute (2020) 'Plan the World we need: The contribution of planning to a sustainable, resilient and inclusive recovery', *Royal Town Planning Institute Research Paper.* [Online]. 19 June. Available at: https://www.RoyalTown Planning Institute.org.uk/media/5688/plantheworldweneed_june2020.pdf Rodriguez, J. (2020) 'COVID-19 and the Welsh economy: shutdown sectors and key workers', *Cardiff University Wales Fiscal Analysis.* [Online]. 19 June. Available at: https://www.cardiff.ac.uk/__data/assets/pdf_file/0017/2410

Evidence/data required	Source
	343/COVID-19 -andthe-Welsh-economy-shutdown-sectors-and-key-workers-briefing-paper.pdf

Rodriguez, J. and Ifan, G. (2020) 'COVID-19 and the Welsh economy: working from home'. *Cardiff University Wales Fiscal Analysis.* [Online]. 8 July. Available at: https://www.cardiff.ac.uk/__data/assets/pdf_file/0011/2425466/Covid_economy_report_2.pdf

Royal Town Planning Institute (2020) 'Plan the World we need: The contribution of planning to a sustainable, resilient and inclusive recovery', *Royal Town Planning Institute Research Paper.* [Online]. 19 June. Available at: https://www.Royal

Town Planning Institute.org.uk/media/5688/plantheworldweneed_june2020.pdf

Scott, L. (2020) 'How coronavirus is widening the UK genderpay gap', *The Guardian.* [Online]. 7 July. Available at: https://www.theguardian.com/world/2020/jul/07/how-coronavirus-is-widening-the-uk-gender-pay-gap

King, T., Hewitt, B., Crammond, B., Sutherland, G., Maheen,H., Kavanagh, A. (2020) 'Reordering gender systems: can COVID-19 lead to improved gender equality and health?', *The Lancet.* [Online]. 19 June. Available at: https://www.thelancet.com/action/showP Nay, O. (2020) 'Can a virus undermine human rights?' *PubMed. gov.* [Online]. 21 April. Available at: https://pubmed.ncb.nih.gov/32325013/

Quilter-Pinner, H., Webster, S. and Parkes, H. (2020) 'Guaranteeing the right start: Preventing youth unemployment after COVID-19', *Institute for Public Policy Research.* [Online]. 3 July. Available at: https://www.ippr.org/research/publications/ guaranteeing-the-right-start |
| **More evidence is required for effects of** | Evidence gap for impact of agile working on:
• Those with physical or learning disabilities or challenges
• Working parents, lone parents, and those with caring responsibilities |

Evidence/data required	Source
agile working on specific groups of people	- Older people - Those who live on their own - Critical workers including those in health and social care sectors - Those who are at risk of Violence Against Women, Domestic Violence and Sexual Abuse