ARUP

West Yorkshire Combined Authority

Integrated Sustainability Appraisal of The Mayor's West Yorkshire Local Transport Plan

Scoping Report

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1. Introduction

1.1 Purpose of this Scoping Report

This Scoping Report, produced by Arup on behalf of the West Yorkshire Combined Authority (the 'Combined Authority'), presents a high-level environmental, social and economic context for West Yorkshire to support the new West Yorkshire Local Transport Plan (LTP).

Through understanding this context, alongside a review of relevant plans, programmes and strategies, key sustainability issues and opportunities for the LTP have been drawn out and used as the basis to develop the Integrated Sustainability Appraisal (ISA) framework (comprised of objectives and assessment criteria). This ISA framework will be applied in later stages of the ISA, to assess draft LTP policy and provide suggested mitigation to enhance the sustainability of the plan. This report is therefore not intended to be a transport evidence base. Further details on ISA methodology are presented within Section 3.

It is proposed that, alongside the requirements for a Strategic Environmental Assessment (SEA), the ISA also includes Sustainability Appraisal (SA), Health Impact Assessment (HIA) and Equality Impact Assessment (EqIA).

A Habitats Regulations Assessment (HRA) of the LTP will also be undertaken but will be reported separately, though with results feeding into the ISA as appropriate.

1.2 Development of the West Yorkshire Local Transport Plan

The new West Yorkshire Local Transport Plan will replace the West Yorkshire Transport Strategy 2040 (2017), which is the current LTP for West Yorkshire.

For consistency, this ISA will build on the previous ISA undertaken for the West Yorkshire Transport Strategy 2040. The previous scoping baseline work was undertaken by Atkins to inform the 2016 ISA of the West Yorkshire Transport Strategy 2040. This Scoping Report will consider and review international, national, regional, and local plans, contextual information and policies, ensuring relevant changes since 2016 are reflected in this ISA.

1.3 Structure and scope of the report

The Scoping Report and its appendices will:

- Define the proposed methodology for the ISA.
- Provide an updated review of plans, programmes and strategies.
- Provide an updated description of the baseline, including current and likely future social, economic and environmental characteristics (if current trends continue) of West Yorkshire.

- Provide an updated summary of the key sustainability issues and opportunities for West Yorkshire.
- Present the proposed ISA framework, based on our updated baseline and understanding of current sustainability issues and opportunities.
- Describe the scoping consultation process (with statutory consultation bodies and other relevant organisations/groups).
- Provide information on the next steps in the ISA process.

Given the strategic nature of the ISA and the Local Transport Plan, the Scoping Report has considered each key topic on a scale that is applicable to West Yorkshire and the Combined Authority's remit. In most instances, data has been considered on a regional level and where appropriate or readily available, this has been considered alongside information on a local, national or European level to understand the context in relevance to the ISA. As the data presented within this report is constrained by data which is publicly available, the temporal scope of data and presentation of maps can also vary depending on the source data's parameters.

1.4 Consultation on the scoping report

Consultation on this Scoping Report ensures that the ISA of the new Local Transport Plan has been robust, by gathering early views on how the ISA should be developed, including views on the baseline and the proposed ISA objectives. In addition to the statutory organisations, as required under the Environmental Assessment of Plans and Programmes Regulations 2004 (Natural England, Historic England and the Environment Agency), additional parties were consulted on issues relevant to the the ISA. These include:

- West Yorkshire Combined Authority officers with expertise in the areas covered by this Scoping Report
- Combined Authority's district partners
- Transport for the North

The following questions were asked to assist consultees in making responses:

1. Have there been any significant omissions of plans, programmes, strategies, or evidence relevant to identifying issues and opportunities within the ISA Scoping Report? If so, could you please identify a relevant source?
2. Do you agree that the baseline data that has been or will be collected provides a relevant and robust foundation to support the ISA?
3. Are you aware of any key data that could be used in support of the issues identified in the baseline and has been omitted? If so, could you please identify it?

4. Do you agree the proposed ISA objectives provide a sound and robust framework against which to assess the new Local Transport Plan?

Following the consultation, all feedback has been considered. This report has been updated with changes based on the consultation responses. The final ISA Framework will be used to assess the draft LTP within Stage B of the process explained in Section 3. For a full detailed list of consultation responses received and the actions taken, please see Appendix 3.

2. The Mayor's West Yorkshire Local Transport Plan

The West Yorkshire Combined Authority was established in 2014 to bring together economic development and transport functions across West Yorkshire in a more strategic way. The five West Yorkshire district councils are Bradford, Calderdale, Kirklees, Leeds and Wakefield. The Combined Authority has a statutory duty to produce and keep under review a Local Transport Plan for West Yorkshire. The West Yorkshire Transport Strategy 2040, adopted in 2017, is the current Local Transport Plan. It replaced the West Yorkshire Local Transport Plan 2011-2026 (LTP3) published in 2011.

The Combined Authority is currently developing a new Local Transport Plan covering the period 2025-2040. The new Local Transport Plan core principles and strategies will replace the West Yorkshire Transport Strategy 2040.

2.1 Key milestones for the LTP

Milestones for the new LTP development, at the time of writing this report, include:

- Public and stakeholder engagement: 8-week public and stakeholder engagement on vision, objectives, future scenarios, emerging policies – Summer 2024
- Public and stakeholder consultation: 12-week statutory consultation on new LTP preferred approach – Spring 2025
- Publication of the adopted LTP – End of 2025

2.2 LTP objectives

The Combined Authority is still in the process of defining the new LTP's vision and objectives. These will be ready in draft for the Phase 1 Engagement in mid-2024, per the above milestones.

3. ISA methodology

3.1 Purpose of the ISA

The ISA's aim is to promote sustainable development, health and equality, social, environment and economic considerations within the LTP. The ISA and the LTP will be run in parallel, allowing the integration of ISA recommendations to be included into the development of the new LTP.

The ISA will consider the requirements and scope of:

- Strategic Environmental Assessment (SEA) in accordance with the Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004/ 1633, '2004 Regulations' as amended);
- Sustainability Appraisal (SA) (as required by section 19 (5) of the Planning and Compulsory Purchase Act 2004);
- Equality Impact Assessment (EqIA) (as required by section 149 of the Equality Act 2010, as amended);
- Health Impact Assessment (HIA) (as outlined by national government policy).

In addition, the assessment of the LTP will also comprise a Habitats Regulations Assessment (HRA), as required under Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 (SI 1994/ 2716, '1994 Regulations', as amended). The relevant scoping and assessment will be within the HRA Stage 1 Screening Report.

For consistency, previous baseline work undertaken by Atkins to inform the 2016 ISA of the Transport Strategy 2040 has been used as a starting point for this report. The ISA framework (presented in Section 7 of this report) has also built upon the previous 2016 ISA framework. However, based on new or updated policy and data (highlighted within Sections 4 and 5 of this report, and further summarised in Section 6), the ISA framework has been refreshed to reflect the current baseline context for LTP.

3.2 ISA scope

This section outlines the scope of the ISA and how the methodology will incorporate the requirements set out by the each of the different types of assessment. The ISA components are shown in Figure 1. This report will not explore the HRA component of t he LTP assessment, as the HRA Stage 1 Report will be produced separately to this ISA.

Figure 1: ISA components

Each of the assessments broadly follows a similar approach consisting of screening, setting the baseline context, identifying where there are impacts on relevant topic areas, evaluating the effects in relation to those impacts and making recommendations for mitigation where needed.

By undertaking this methodology, it will be ensured that the LTP comprehensively considers environmental, economic and social effects during the development of the plan, strengthening the future policies.

The geographical scope of the ISA is the West Yorkshire region.

3.2.1 SEA and SA

SAs ensure environmental, economic and societal impacts are considered when plans are being created. SEA is similar but focuses on environmental impacts of plans. Both of these consider issues at the strategic level.

SA in the UK is mandatory for local plans and spatial development strategies under section 19 (5) of the Planning and Compulsory Purchase Act 2004, which requires planning authorities to carry out a sustainability appraisal of the proposals within Plans during their preparation. However, it has been included in this ISA to further enhance the assessment's sustainable outcomes.

SEA is mandatory under the Environmental Assessment of Plans and Programmes Regulations 2004 ('the SEA Regulations'). Regulation 12(3) and Schedule 2 of these regulations describes 'information for environmental reports' which need to be adhered to when creating policy.

The ISA Framework will meet the legislative requirements with the inclusion of key objectives and assessment criteria, outlined in Section 7.

3.2.2 EqIA

EqIAs ensure that discrimination does not occur when creating strategic plans and that policies meet the requirements of the Equality Act 2010. The Act imposes a duty on public bodies that shape policy, deliver services and/or employ people. The duty requires public bodies to:

- Have due regard to the need to eliminate discrimination;
- Advance equality of opportunity; and,
- Foster good relations between different people when carrying out their activities.

The ISA needs to consider in its scope the likely effects on discriminatory practices; the potential to alter the opportunities of certain groups of people; and/or the effect on relationships between different groups of people. In order to understand which groups of people (or individuals), may suffer discrimination, the Equality Act sets out a series of 'protected characteristics':

- Age;
- Disability;
- Gender reassignment;
- Marriage and civil partnership;
- Pregnancy and maternity;
- Race;
- Religion or belief;
- Sex; and,
- Sexual orientation.

The ISA framework will meet the legislative requirements with the inclusion of key objectives and assessment criteria outlined in Section 7. In addition, the ISA will be supported by an Equality Screening Assessment which will be within the appendices to the ISA report.

3.2.3 HIA

There is no statutory requirement to undertake HIA as part of the plan-making process. It is included to ensure a wider definition of potential impacts is considered with the ISA. HIA has one overarching aim: to ensure that plans and policies minimise negative and maximise positive health

impacts. The carrying out of the HIA follows the process set out by the UK's Department of Health in the Department of Health (2010) Health Impact Assessment of Government Policy.

Consideration of the determinants of health and the broad requirements of the Department of Health HIA screening questions have been integrated into the IA Framework. The Department of Health guidance states that 'the determinants of health are the focus of HIA. They are the social, economic, environmental and cultural factors that indirectly influence health and wellbeing. They include what we eat and drink; where we live and work; and the social relationships and connections we have with other people and organisations'. This includes natural environment, built environment, activities, local economy, community, lifestyle and people. The assessment team used the Department of Health determinants of health to help guide the framework for assessing how the LTP may affect health (i.e. by affecting the determinants of health). This is reflected in the IA Framework outlined in Chapter 7.

3.3 ISA stages

The ISA process follows the standard SEA stages:

- **Stage A – Scoping**: This stage is to set the context for the assessment with: a review of relevant plans, programmes and strategies; collection, analysis and summarisation of current and future baseline data; identification of key issues and opportunities for West Yorkshire; development of ISA objectives; preparation of the scoping report and consultation with statutory bodies and relevant organisations. This scoping stage encompasses all scoping work across the SEA, SA, EqIA and HIA.
- **Stage B – Assessment**: This stage is to consider the proposed policy options and assess their effects, using the framework developed in Stage A including assessing the vision and objectives of the Plan and reasonable alternatives, identifying mitigation measures, explaining why the preferred policy options were taken and to propose monitoring measures for the policies.
- **Stage C – Reporting**: This stage involves preparing the ISA report which explains Stage B.
- **Stage D – Consultation**: This stage involves consulting on the proposed Plan (LTP) and associated ISA, with feedback from the consultation considered and appropriately actioned.
- **Stage E – Post-Adoption**: This stage will involve issue of a Post-Adoption Statement following the adoption of the Plan, indicating how the assessment has been integrated into the plan.

These stages encompass all legislative and best practice requirements for each of the assessments explored previously in this section. This scoping report is currently within Stage A of the ISA process.

4. Relevant plans, programmes, and strategies review

4.1 Scope of the review

The LTP and the ISA will be influenced by a range of plans, programmes and strategies on international, national, regional and local scales. As these plans can direct and drive the LTP and the ISA, all relevant plans, programmes and strategies need to be considered when creating or updating the ISA framework. Therefore, this review has a fundamental role within the ISA. This is a requirement of the SEA Directive:

> *'The plan's relationship with other relevant plans and programmes' and 'the environmental protection objectives, established at international, (European) Community or national level, which are relevant to the plan…and the way those objectives and any environmental considerations have been taken into account during its preparation.' Directive 2001/42/EC - SEA Annex 1 (a), (e)*

4.2 Purpose of the document review

The first stage of completing the ISA baseline is therefore to review relevant plans, programmes and strategies. This review ensures the LTP and the ISA framework is set in the context of relevant plans, programmes and strategies by identifying key themes that should be reflected in the ISA framework.

The full list of the documents considered can be found in Appendix 1.

4.3 Key themes

Key themes in relation to environment, economy, health, and equality found from this review are summarised below. Relevant themes in this section have been considered and integrated into development of the ISA framework (as set out in Section 7 of this report).

4.3.1 Environmental

Climate change and energy

- Contribute to the Combined Authority's net zero carbon target of 2038;
- Reduce energy consumption and energy wastage;
- Reduce greenhouse gas (GHG) emissions, particularly carbon dioxide;
- Maximise the use of renewable energy;
- Increase energy efficiency and make use of new and clean technologies;
- Minimise the use of fossil fuels;
- Climate change adaptation;

- Climate change mitigation;
- Improve local air quality through, for instance, minimising traffic-related emissions; and
- Secure peatlands' carbon store and drive private investment in peatland restoration.

Transport

- Promote mixed-use development policies to reduce the need to travel;
- Encourage walking, cycling and the use of public transport;
- Reduce traffic congestion;
- Improve safety for all road users;
- Improve safety for all transport users, specifically vulnerable groups who are more likely to fall victims of or perceive crime, including women and girls, on public transport and at transit stops;
- Reduce transport-related social exclusion and inequalities;
- Promote inclusive and accessible transport infrastructure;
- Promote sustainable alternatives to car travel;
- Reduce dependency on the private car;
- Promote viable alternatives to road haulage, such as shipping and rail;
- Promote clean vehicle technology;
- Connect key regeneration sites;
- Promote integration, maintain and improve the public right of way and wider access network;
- Connect the area to the wider regional, national and international networks;
- Reduce environmental noise;
- Promote hydrogen's role in a decarbonised transport system;
- Improve public health and safety on public transport post Covid-19; and
- Improve transport infrastructure.

Natural resources and waste

- Ensure efficient resource use and minimise resource footprint;
- Raise awareness of resource use/depletion;
- Use secondary and recycled materials e.g., encourage circularity;
- Consider opportunities to maximise on-site re-use of materials;
- Employ waste reduction methods to minimise construction and maintenance waste;
- Reduce the amount of waste disposed of at landfill; and
- Cut down on food waste.

Land

- Brownfield/greenfield hierarchy of land use;

- Increase the amount of suitable land allocated to the planting of trees;
- Protect Green Belt land;
- Recognise that underdeveloped land can perform many functions, such as carbon storage and food production;
- Utilise agricultural land to improve access to healthy food;
- Utilise agricultural land to sustainably produce healthy food;
- Minimise and seek to reclaim derelict and contaminated land whilst taking into account any biodiversity interests; and
- Enhance farmland and soils.

Water

- Improve the quality of ground and surface water;
- Improve the biological and chemical quality of rivers;
- Make use of 'sustainable drainage systems' (SuDS);
- Minimise the risk and impact of flooding by controlling surface water management and floodplain management;
- Prevent inappropriate development in floodplains;
- Prepare for impacts of climate change, including sea level rise, coastal squeeze and coastal erosion;
- Manage water abstraction; and
- Deliver natural flood management.

Biodiversity

- Contribute to the delivery of local and national biodiversity action plans;
- Protect and enhance endangered species, habitats and geodiversity, including sites of geological importance;
- Protect and enhance existing wildlife and provide opportunities for new habitat creation;
- Increase tree cover and ensure the sustainable management of existing woodland;
- Protect, maintain and where possible enhance natural habitat networks and green and blue infrastructure, to avoid fragmentation and isolation of networks;
- Build and strengthen local partnerships that are important for developing local nature recovery strategies (LNRSs);
- Ensure relevant new development has a biodiversity net gain (BNG) of at least 10%;
- Protect and enhance designated nature conservation sites of international importance (SPA/SAC) and national importance (SSSI); and
- Promote access and understanding of nature and biodiversity.

Landscape

- Protect and enhance landscape and townscape character and local distinctiveness;
- Help to conserve historic buildings through sympathetic design;

- Conserve, protect and enhance designated and non-designated heritage assets;
- Improve access to buildings and landscapes of historic/cultural value;
- Use architectural design to enhance the local character and 'sense of place' of development;
- Achieving well-designed and beautiful places;
- Protect local distinctiveness; and
- Improve and protect green and blue infrastructure offer.

4.3.2 Economic

- Improve physical accessibility of jobs through the location of employment sites and transport links close to areas of high unemployment;
- Widen the number and range of accessible employment opportunities;
- Improve rail and road journey reliability for business users and commuters;
- Support local businesses;
- Support growth in employment and labour productivity;
- Support improvements in GVA per capita;
- Support the attraction of inward investment;
- Ensure transport affordability;
- Provide support for those affected by financial/inflationary pressures;
- Encourage and promote projects funded through Levelling Up;
- Promote economic recovery post Covid-19;
- Improve skills and training offer, especially digital skills;
- Promote tourism through utilising heritage and architecture; and
- Provide more and better apprenticeships.

4.3.3 Health

- Improve health in the UK and globally, taking account of the diverse factors influencing health, such as climate change, pollution, conflict, environmental degradation and poverty;
- Improve the health of everyone, and of the worst off in particular;
- Reduce health inequalities among different groups in the community (e.g. young children, pregnant people, black and minority ethnic people; older people, disabled people; low income households);
- Support the public to make healthier and more informed choices with regard to their health and adopt physically active lifestyles;
- Address pockets of deprivation;
- Provide inclusive access for people with disabilities, including non-mobility related disabilities, such as physical accessibility needs, sensory differences, neurodiversity, and hidden disabilities.

- Provide or improve access to local health and social care services;
- Provide opportunities for increased exercise, thus reducing the risk of obesity, particularly in children, and illnesses such as coronary heart disease, diabetes, dementia, and cancer, and a reduction of all cause mortality;
- Promote cycling and improve the greater inclusion of those less likely to cycle currently, for example older people, women, children and ethnic minority groups;
- Improve access to high quality nature;
- Provide for an ageing population;
- Promote healthy lifestyles through exercise, active travel and access to good quality and affordable food, which can assist in reducing both physical and mental illnesses;
- Support reductions in crime and anti-social behaviour;
- Tackle violence against women and girls;
- Reduce number of road casualties;
- Improve perceptions of communities as healthy and safe places to live, work, and visit;
- Build a strong physical activity system post Covid-19; and
- Provide and improve access to green and blue infrastructure.

4.3.4 Equality

- Protect human rights (e.g. the right to liberty and security of person) and fundamental freedoms (e.g. a right to freedom of thought, conscience and religion, freedom of expression, etc.);
- Prohibit discrimination, harassment and victimisation on such grounds as sex, race, language and religion;
- Promote equality of opportunity in the way services are planned, promoted and delivered;
- Treat everyone with dignity and respect;
- Recognise people's different needs, situations and goals and removes the barriers that limit what people can do and can be;
- Create sustainable communities which are active, inclusive, safe, tolerant, cohesive and fair for everyone - including those in other communities, now and in the future;
- Improve economic, social and environmental conditions particularly in the most deprived areas;
- Ensure fair access to and distribution of resources across the community;
- Improve connections to opportunities for deprived neighbourhoods;
- Assess and address the impacts upon diverse communities including cultural, racial, economic, generational, social (including disabilities) and religious mixes;
- Create a sense of belonging and wellbeing for all members of the community;
- Provide inclusive access for people with disabilities, including non-mobility related disabilities, such as physical accessibility needs, sensory differences, neurodiversity, and hidden disabilities.
- Minimise isolation for vulnerable people;

- Improve access to opportunities for disadvantaged groups;
- Minimise digital exclusion;
- Improve community safety; and
- Embed social value into projects.

5. Baseline information

An exercise has been undertaken to determine the West Yorkshire baseline context across a diverse range of key issues covering environmental, economic, health, and equality aspects. This exercise encompasses all scoping work across the SEA, SA, EqIA and HIA.

The baseline is set out to support development of the bespoke framework of ISA objectives, against which predicted effects and potential implications of the LTP can be assessed. (ISA methodology further detailed in Section 3.) This baseline information – in addition to the review of relevant plans, programmes, and strategies from the previous section – will then be used to create the ISA framework (as presented within Section 7 of this report). Therefore, this baseline context has a fundamental role within the ISA. The baseline evidence collated and analysed is summarised within this section.

The Environmental Assessment of Plans and Programmes Regulations 2004 require collation and analysis of data on:

> *'relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan' and the 'environmental characteristics of the areas likely to be significantly affected' (Annex I (b) (c))*
>
> *'any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC (Birds Directive) and 92/43/EEC (Habitats Directive)' (Annex I (c))*

Additionally, for the SA, EqIA and HIA, this baseline analysis must also consider social and economic aspects in addition to the environmental criteria specified in the SEA Directive. The baseline review provides the basis for assessing the effects of draft LTP policy.

A diverse range of topics have been explored to provide a broad and diverse baseline for the ISA Framework. These topics are on a range of issues and interlink between environmental, economic, and social (including health and equality) matters, mirroring the plans, programmes and strategies review outlined in Section 4.

We have utilised indicators per topic matter to ensure that the data collected is focussed and effective. These indicators are objective with datasets used over time to provide insight into general trends that West Yorkshire has previously, is currently and likely to experience in the future. This study draws upon reliable secondary sources of data.

As the ISA is an iterative process, future stages may identify additional issues and priorities that require the sourcing of additional data outside of those currently considered within this Scoping Report. Any future amendments that may be required will be shown in an addendum to this report.

This allows the ISA process to be flexible and responsive to any future legislative, policy or baseline condition changes, ensuring a continued robust baseline analysis for the ISA Framework.

Data is taken from the most recent and reliable publicly available sources, with information being accurate at the time of writing to our knowledge and understanding. Datasets used vary across the topics, due to the different methods and scale of data collection and analysis that has been undertaken by various organisations. Therefore, geographic and temporal scope of the data will vary.

For consistency, the analysis has been built upon work previously completed for the ISA of the Transport Strategy 2040 completed in 2016, as well as any further evidence from the Combined Authority and other public bodies.

Data has been collated and analysed for the following indicators in Section 5.1.

5.1 Scope of data analysis

Data has been collated and analysed for the following indicators in Table 1:

Table 1. Data Analysis Indicators

Theme	Indicators
Environmental	Population Greenhouse gas emissions Fuel consumption Climate change Local air quality Noise Light pollution Biodiversity, fauna and flora Landscape and townscape Heritage Green Belt Green and blue infrastructure Contaminated land Soil Water Waste and material assets
Economic	Employment GVA

	Economic sectors Levelling Up
Health	General health statistics Open space Active travel and physical activity Accessibility Road safety and accidents Obesity Crime Covid-19
Equality	Equality target groups Migration Multiple deprivation NEET levels

It is noted that these indicators have been grouped into multiple overarching topics; however, the indicators are interdisciplinary and, therefore, impact and influence each overarching topic.

Each of the following sections (5.2-5.5) contains an overarching summary for the data presented. Section 6 then further analyses this baseline data, by drawing out key sustainability issues and implications/opportunities for the LTP, supporting the development of the ISA objectives (which are presented in Section 7).

5.2 Environmental data

5.2.1 Population

Demographic forecasts for West Yorkshire indicate headline growth of some 6% over the period up to 2043, from 2.37 million (projected for 2023) to 2.51 million. This will be principally as a result of strong growth of the over 70s age group (which will increase by 37%) rather than variation in the 19 and under age group, which will remain roughly unchanged (ONS, 2020). This is illustrated in **Error! Reference source not found.**.

In spatial terms, there is a good deal of variation in how the population of West Yorkshire will change over the Local Transport Plan period as indicated in Table 2.

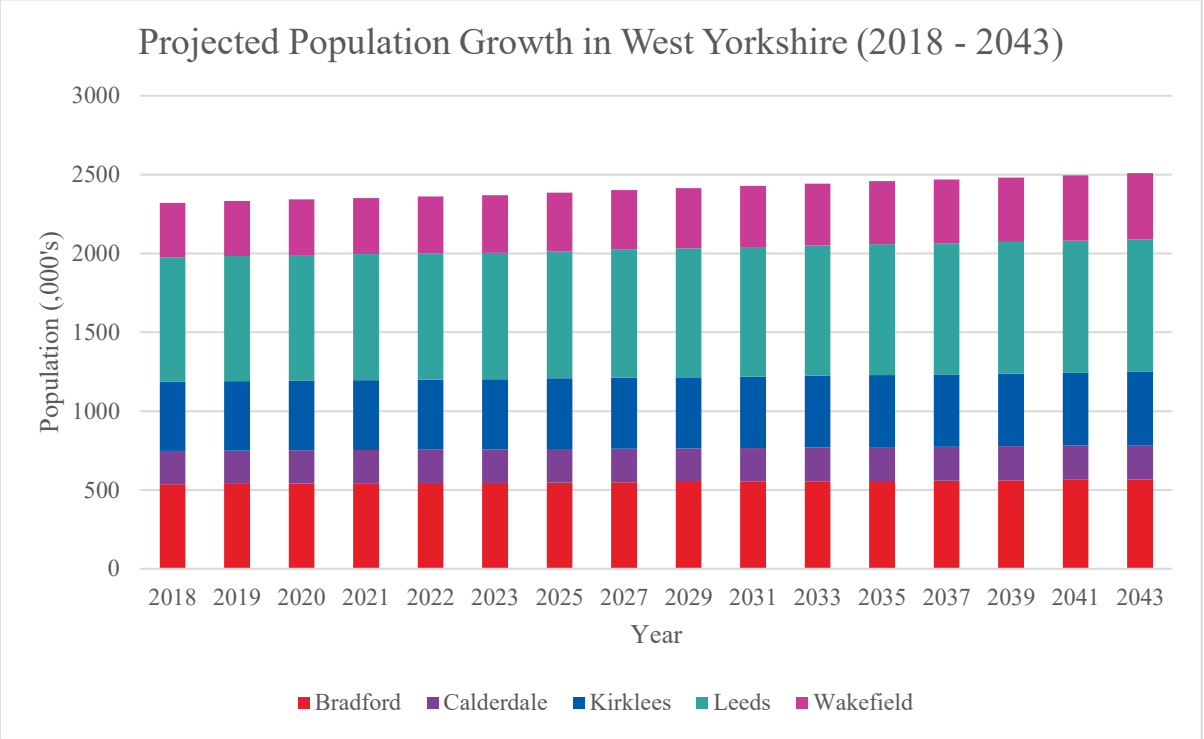


Figure 2: Projected Population Growth in West Yorkshire (2018 - 2043)

Source: Office for National Statistics 2018-based Subnational Population Projections.

Table 2 Projected Population Growth in West Yorkshire by District (2018 - 2043); in thousands

District	2018	2043	Change
Bradford	537.2	566.5	5%
Calderdale	210.1	217.5	4%
Kirklees	438.7	464.3	6%
Leeds	789.2	842.2	7%
Wakefield	345.0	418.9	21%
West Yorkshire	2,320.2	2509.4	8%

Source: Office for National Statistics 2018-based Subnational Population Projections.

Table 2 above shows that the population of Wakefield is projected to grow by 21% over the Local Transport Plan period, which is much more rapidly than the other districts in West Yorkshire that are all projected to grow at a similar rate between 5-8% (ONS, 2020).

5.2.2 Greenhouse gas emissions

Greenhouse gas is widely held to be responsible for changes to our climate. The most common greenhouse emissions include carbon dioxide (CO2), methane (CH4), and nitrous oxide (NO2), where road vehicles contribute mostly to CO2 emissions through the consumption of carbon-based fuels, associated with small amount of CH4 and NO2 emissions. If traffic levels continue to increase, greenhouse gas emissions are also likely to rise, although this may be mitigated by technical and other measures. Estimates of greenhouse gas emissions from road traffic in West

Yorkshire are taken from Department for Energy Security & Net Zero data (2023) for 2019- 2022. The findings are set out in Table 3. However, it is noted that this data was gathered during the Covid-19 Pandemic which reduced road traffic and therefore, impacted emission levels recorded.

Table 3 Estimates of Annual Greenhouse Gas Emissions from Road Traffic in West Yorkshire, 2019-2022 (ktonnes)

Local Authority	Year	Road Transport (A roads)	Road Transport (Motorways)	Road Transport (Minor roads)	Diesel Railways	Transport 'Other'	Transport Total
Bradford	2019	236.3	7.9	354.0	3.8	9.7	611.7
	2020	191.6	10.7	300.4	3.0	8.7	514.3
	2021	211.1	11.9	268.1	3.2	8.8	503.2
	2022	199.6	11.4	306.6	3.1	18.1	538.7
Calderdale	2019	125.5	147.6	114.5	8.1	7.1	402.9
	2020	100.3	121.0	97.3	6.3	6.2	331.1
	2021	110.9	132.4	87.6	6.8	6.6	344.4
	2022	102.5	122.8	102.8	6.5	10.9	345.5
Kirklees	2019	194.9	254.4	222.0	9.0	8.0	688.3
	2020	155.3	214.3	188.9	6.9	7.3	572.7
	2021	171.3	239.8	172.0	7.5	7.6	598.2
	2022	161.2	224.3	206.8	7.2	16.7	616.1
Leeds	2019	420.0	684.8	528.5	21.2	28.0	1682.4
	2020	331.7	584.4	445.8	16.2	18.4	1396.6
	2021	361.9	646.1	390.1	17.6	18.2	1433.9
	2022	348.8	609.6	456.0	16.8	32.9	1464.1
Wakefield	2019	254.7	337.0	192.5	18.6	12.0	814.9
	2020	209.7	273.8	163.8	14.7	10.7	672.8
	2021	226.2	311.9	151.0	15.8	11.4	716.3
	2022	207.5	269.0	170.3	14.9	16.3	678.0

Source: Department of Energy Security & Net Zero (2024)

The majority of road transport emissions are composited by emissions from A roads, Motorways, and Minor roads. Bradford had significantly less emissions from motorways and relatively more from A roads and minor roads, whereas motorways in Leeds took up a significantly higher proportion of road transport emissions. Overall, Leeds was estimated to have the highest amount of annual greenhouse gas emissions from road traffic in West Yorkshire, compositing 40% of the total transport emissions across the region in 2021.

Four-year data across 2019 – 2022 showed an overall reduction of transport emissions in West Yorkshire but the trend is not consistent. For most forms of transport (excluding road transport on

minor roads), emissions fall in 2020 due to Covid-19 restrictions affecting travel but rise again in 2021 once these restrictions are lifted. Emissions from transport continued to rise across all districts in 2022, except for Wakefield, which fell close to its 2020 levels. This gradual increase highlights the reopening of businesses, return to work, and travel. With 2022 emissions still remaining lower than those recorded in 2019, it is evident that active and sustainable travel options are becoming more popular.

The greenhouse gas emissions per capita was calculated according to this dataset and the Office for National Statistics population data, which shows that Wakefield generates the highest greenhouse gas emissions per capita from road transport (2.01 tonnes), followed by Leeds (1.79 tonnes), Calderdale (1.63 tonnes), Kirklees (1.35 tonnes), and Bradford (0.93 tonnes). The full Department for Energy Security & Net Zero dataset accounts for all emissions that occur within the boundaries of a local authority. However, it is considered that local authorities would not be able to directly influence some of these types of emissions, for instance from motorways, EU emissions trading schemes sites, or diesel railways.

Department for Transport (2023) has published journey emission comparisons that compares the greenhouse gas emission of example journeys across the UK via different transportation modes, demonstrating that the amount of greenhouse gas emission varies for the same journey according to different vehicle types. An example journey provided within West Yorkshire was Morley to Leeds, showing that an average electric car will release no direct emissions, followed by National Rail with a 0.26 kgCO2e (kilograms of carbon dioxide equivalent) direct emission, which is only 25% of the direct emission generated from motorbike, diesel or petrol cars. National Rail generates the least overall emissions with direct and indirect emissions combined (0.32 kgCO2e), followed by electric car (0.40 KGCO2e), where motorbike generates the highest overall emissions (1.29 kgCO2e).

According to the observed annual traffic growth for all road types in each district, the total road transport emissions of greenhouse gas have been estimated for the West Yorkshire road network and provided in the following table. This indicates that absolute emissions continue to fall across West Yorkshire and appear to show an overall reduction of 14% in emissions from 2018 to 2021 (Department of Energy Security & Net Zero, 2023). This is likely due to effects of the Covid-19 pandemic and potentially also improvements in engine efficiency and abatement technologies.

Table 4 Annual Greenhouse Gas Emissions from Transport in West Yorkshire (2018 – 2021)

Year	**2018**	**2019**	**2020**	**2021**
	Baseline (k tonnes)	(k tonnes)	(k tonnes)	(k tonnes)
Emissions of Greenhouse Gas from Transport	4188.3	4200.2	3487.5	3596.0

Source: Department of Energy Security & Net Zero (2023a)

From 2007 to 2014, there has been a sustained decline in greenhouse gas emissions in West Yorkshire, as seen on **Error! Reference source not found.**. However, this figure has gradually r isen again from 2014, followed by a sharp decrease in 2020 which is likely due to impacts of the Covid-19 pandemic.

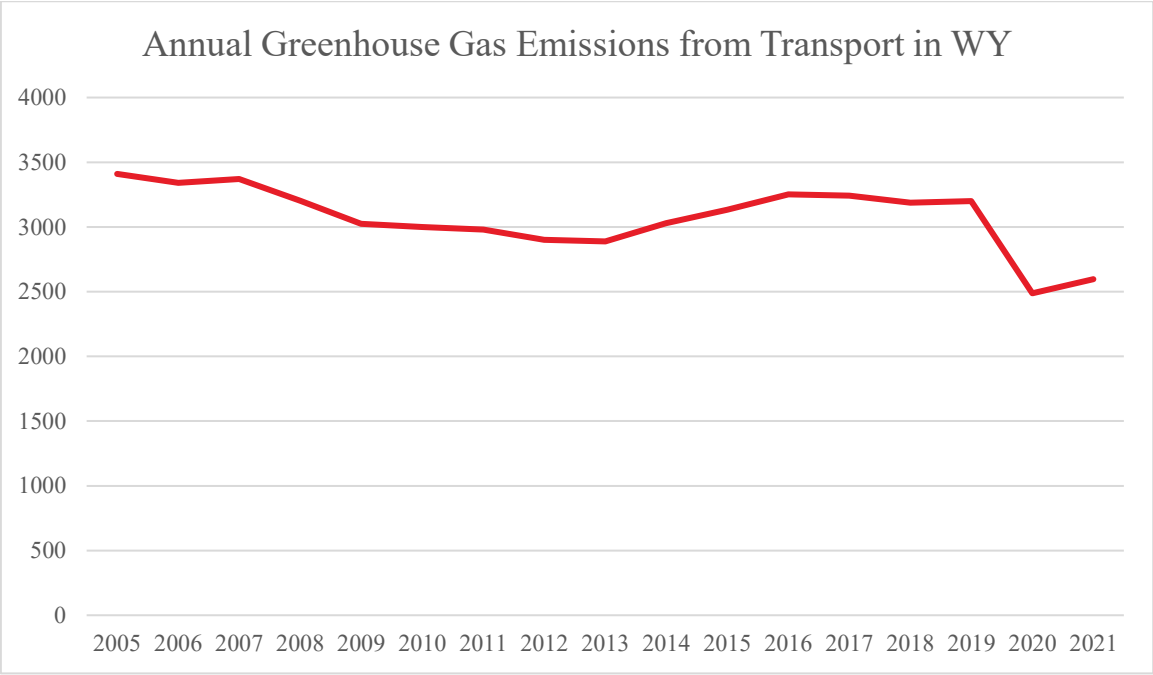


Figure 3: Annual Greenhouse Gas Emissions from Transport in West Yorkshire (2005 - 2021)

Source: Department of Energy Security & Net Zero (2023a)

5.2.3 Fuel consumption

Petrol cars are responsible for the most fuel consumption across all West Yorkshire districts, contributing to 31% of the total energy consumption from all vehicles in West Yorkshire. This is followed by diesel cars and HGV, which contribute 25% and 24% respectively. The road transport energy consumption per capita was calculated with data provided by Department of Energy Security & Net Zero and the Office for National Statistics, which shows that Leeds has the highest energy consumption per capita from petrol cars, reaching 0.18 tonne per capita, followed by Wakefield (0.17 tonne per capita), both exceeding the regional and national average of 0.16 tonne per capita. This is reflected in the data in Table 5.

Table 5. Road transport energy consumption at regional and local authority level in 2021 (in thousand tonnes of oil equivalent (ktoe))

Region	Buses	Diesel Cars	Petrol Cars	Motorcycles	HGV	Diesel LGV	Petrol LGV	All Vehicles
Bradford	5.1	45.5	61.6	0.7	15.6	28.3	1	157.8
Calderdale	2.3	25.8	31.6	0.3	28.3	18.1	0.6	106.8
Kirklees	3.7	46.2	57.8	0.5	47.9	31.5	1	188.7
Leeds	8.8	115.4	141.1	1.2	112.3	72.5	2.3	453.6
Wakefield	3.6	51.7	61.2	0.6	70.2	34.5	1	222.6
West Yorkshire	23.5	284.6	353.3	3.3	274.3	184.9	5.9	1,129.5
Yorkshire and the Humber	61.9	747.4	899.9	10	812.7	520.3	16.1	3,068.2
England	642.9	7,644.3	9,277.6	154.8	6,265.9	5,166.8	151.6	29,304

Source: Department of Energy Security & Net Zero (2023b)

5.2.4 Climate change

In 2022, the Met Office published the latest version of climate projections for the UK, including key findings from the UKCP18 projections. The Met Office is the UK's national weather service, sponsored by the Department for Science, Innovation and Technology. UKCP18 provides probabilistic projections for the UK's climate over the rest of the century and enables the user to specify projections based on high, medium and low emission scenarios at different spatial scales (e.g., national or administrative regions). Climate change projection data is currently only available at the Yorkshire and the Humber level, which is the region that covers West Yorkshire, South Yorkshire, North Yorkshire, East Riding of Yorkshire, and Lincolnshire. The findings for the Yorkshire and the Humber region are specified in Table 6 below.

Table 6 Climate predictions for the Yorkshire and Humber Region Based on the Updated UKCP09 Medium Emissions Scenario

Change in…	2030 – 2049	2080 – 2099
Mean annual temperature	Central estimate of increase is 1.1ºC; it is very unlikely to be less than 0.3ºC and is very unlikely to be more than 2.0ºC.	Central estimate of increase is 2.8ºC; it is very unlikely to be less than 1.2ºC and is very unlikely to be more than 4.6ºC.
Mean winter temperature	Central estimate of increase is 1.0ºC; it is very unlikely to be less than -0.1ºC and is very unlikely to be more than 2.1ºC.	Central estimate of increase is 2.4ºC; it is very unlikely to be less than 0.4ºC and is very unlikely to be more than 4.5ºC.
Mean summer temperature	Central estimate of increase is 1.2ºC; it is very unlikely to be less than 0.0ºC and is very unlikely to be more than 2.4ºC.	Central estimate of increase is 3.4ºC; it is very unlikely to be less than 1.2ºC and is very unlikely to be more than 5.7ºC.
Mean winter precipitation	Central estimate of change is 4%; it is very unlikely to be less than –8% and is very unlikely to be more than 18%.	Central estimate of change is 12%; it is very unlikely to be less than -7% and is very unlikely to be more than 36%.
Mean summer precipitation	Central estimate of change is -7%; it is very unlikely to be less than -30% and is very unlikely to be more than 18%.	Central estimate of change is -20%; it is very unlikely to be less than -50% and is very unlikely to be more than 13%.

Source: Met Office (2022)

The predicted climate trend did not change significantly compared to the 2016 baseline. The mean annual temperature will continue to increase, whereas mean precipitation will likely increase in the winter and decrease in the summer. All five councils and the Combined Authority have declared climate emergency to acknowledge the ongoing climate crisis. The year of declaration by each council and their relevant plans are displayed in Table 7:

Table 7 Climate Emergency Declaration by Each Council

Council	Year of Declaration	Published Plan(s)
Bradford	2019	Sustainable Development Action Plan 2020 – 2021
Calderdale	2019	Calderdale Climate Action Plan 2023 – 26
Kirklees	2019	Our Council Plan 2021 – 2023
Leeds	2019	• Best City Ambition • Climate Emergency Annual Report
Wakefield	2019	• Climate Change Action Plan • Climate Change Annual Report 2020/21 • Wakefield Electric Vehicle Infrastructure Strategy
West Yorkshire Combined Authority	2019	West Yorkshire Climate and Environment Plan

Source: City of Bradford MDC (2020a), Calderdale Council (2023), Kirklees Council (2024), Leeds Council, Wakefield Council (2024),

The City of Bradford MDC's Sustainable Development Action Plan 2020 – 2021 (2020a) sets out a package of measures to tackle climate change, including the identification of flagship projects, allocation of investments, new leadership approaches, and guiding principles. The guiding principles include ensuring a strong, healthy and just society, living within environmental limits, achieving a sustainable economy, and using sound science responsibly. The Action Plan and subsequent strategies and plan are underpinned by the UN's 17 Sustainable Development Goals (SDGs).

The Calderdale Climate Action Plan 2023 – 26 (Calderdale Council, 2023) was produced to help the council area meet the net zero target by 2038, and covered six key themes: working together to influence decisions, support community action, create warm and resilient buildings, grow a green economy, transform transport and how we get around, and work with land and nature to protect us in the long-term.

Kirklees's Our Council Plan 2021 – 2023 (2023) is Kirklees Council's action plan to meet net zero by 2038. It sets out the council's vision, approach, and values to develop a strong sustainable economy and great quality of life. The Plan outlines 9 shared outcomes, with 3 of them being

relevant to tackling climate change, including Clean and Green, Sustainable Economy, and Shared by People.

Leeds Council's Best City Ambition is an overall vision for Leeds to be carbon neutral by 2030, and focuses on 3 pillars including health and wellbeing, inclusive growth, and zero carbon. The plan includes actions to reduce carbon footprint, pollutions and greenhouse gas emissions, as well as promoting sustainable transport, low carbon economy, and reducing the impact of climate change. A Climate Emergency Report is produced annually to monitor the council's climate action performance.

Wakefield Council's Climate Change Action Plan (2020) supports Wakefield Council's aim to become carbon neutral by 2030 within the organisation, and by 2038 for the entire district. The Plan sets out incremental steps to achieve this, by avoiding, reducing, substituting, and compensating carbon emissions. The Plan is also supported by a range of documents including the Climate Change Annual Report 2020/21, and Electric Vehicle Infrastructure Strategy (Wakefield Council, 2024).

In June 2019, the Combined Authority declared a climate emergency for West Yorkshire. Since then, the Combined Authority has prioritised its commitment to reach the net zero target of 2038, with significant progress by 2030. Although reductions in car usage were observed across West Yorkshire following the Covid-19 pandemic, the rapid increase in usage in the following years makes it very challenging for West Yorkshire to achieve its net zero target (WYCA, 2021).

The transport sector emits the most carbon emissions of any sector within West Yorkshire, and this is dominated by road-transport and the private car (WYCA, 2021). In fact, almost 80% of the total passenger miles travelled by West Yorkshire residents are made by car. Modelling undertaken as part of part of the Combined Authority's Emission Reductions Pathways highlights the requirement for a 27% reduction in the passenger kilometres travelled by combustion engine cars, in parallel with the need to increase public transport and sustainable modes usage (WYCA, 2020). Cycling, by far, requires the largest increase at 2,125% and buses require the least increase at 52%.

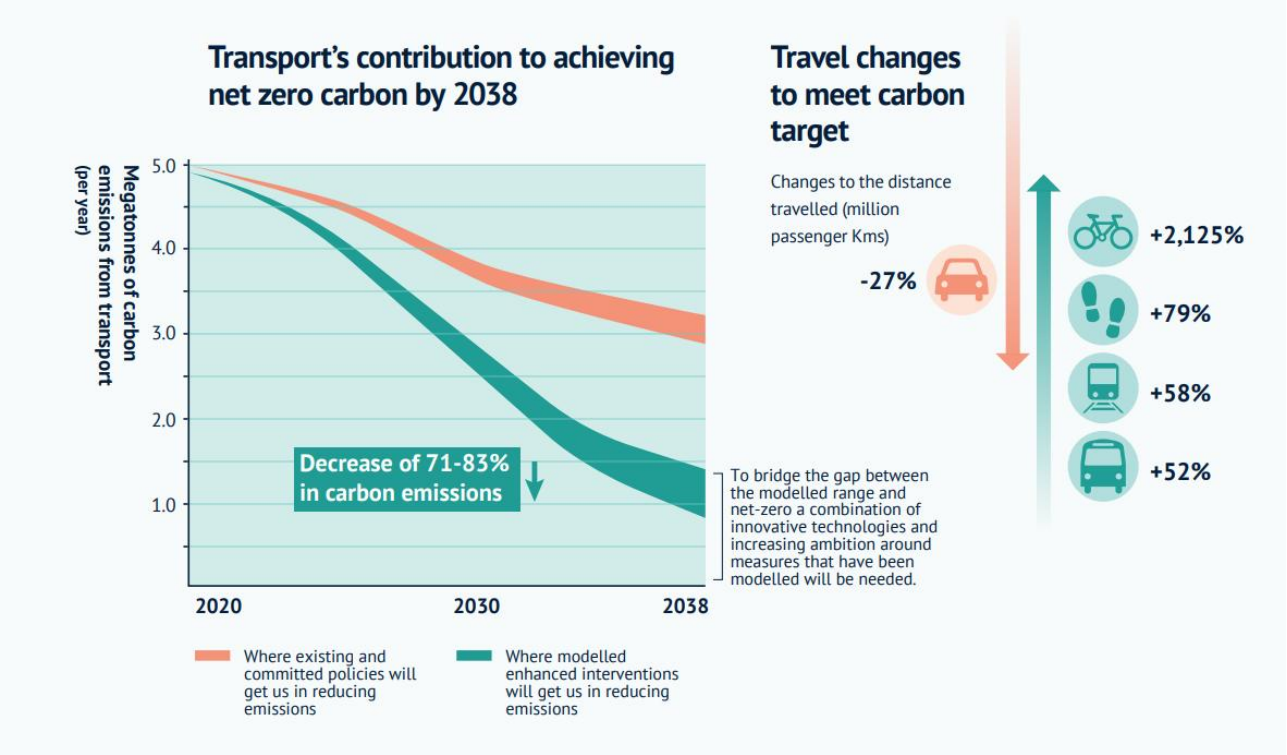


Figure 4: Transport contribution and changes necessary to meet carbon targets by 2038

Source: WYCA (2020)

Car ownership continues to increase across West Yorkshire, and in the third quarter of 2022, there were 1.3 million vehicles licensed across the region. This is 2.6% more than the previous year and 13% more than in 2016. In the same period, ultra-low emission vehicles represented just 3.7% of the vehicle stock in West Yorkshire (Department for Transport and Driver and Vehicle Licensing Agency, 2023). Whilst there is an increasing trend in the number of licensed ultra-low emission vehicles in West Yorkshire, it is not enough to contribute to the net zero target.

5.2.5 Local air quality

In general terms, high levels of air pollutants are experienced in residential properties in the immediate vicinity of busy roads. Every local authority is expected to monitor local air quality under the Environment Act 1995. The objective of the monitoring is to determine if the national air quality standards (AQSs) will be exceeded. In those cases where the AQSs are exceeded, local authorities are required to declare these areas as air quality management areas (AQMAs). Local Authorities are then required to produce an Air Quality Action Plan (AQAP). The AQAP will explain in more detail the current situation and put in place measures to improve conditions and work towards achieving the Government's objectives. There are currently 35 AQMAs in the West Yorkshire area, these are noted in Table 8 following.

Table 8 Air quality management areas in West Yorkshire

District	Number of AQMAs
Bradford	4 for NO2
Calderdale	8 for NO2
Kirklees	9 for NO2, 1 for PM10
Leeds	6 for NO2
Wakefield	8 for NO2
West Yorkshire	35 for NO2

Source: DEFRA (2022)

Nitrogen dioxide (NO2) and suspended particles (PM2.5 and PM10) are the key air pollutants being considered in the ISA. These pollutants are identified as being of particular concern with respect to compliance with the objectives in the Air Quality Strategy for England, Scotland, Wales, and Northern Ireland.

Figure 5: and Figure 6: show the concentration of NO2 and PM10 at different location across West Yorkshire, concerning emissions from road transport only (National Atmospheric Emissions Inventory, 2021).

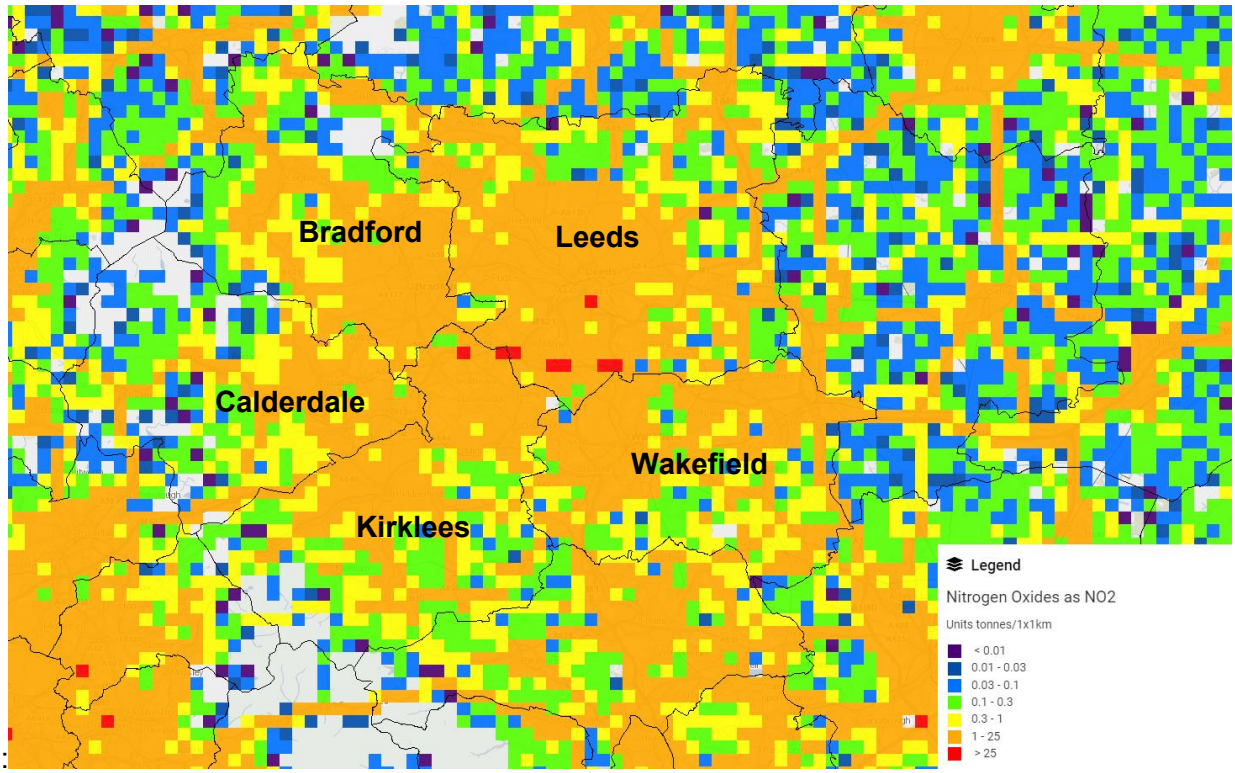


Figure 5: O2 Emissions from Road Transport in West Yorkshire

Source: National Atmospheric Emissions Inventory (2021)

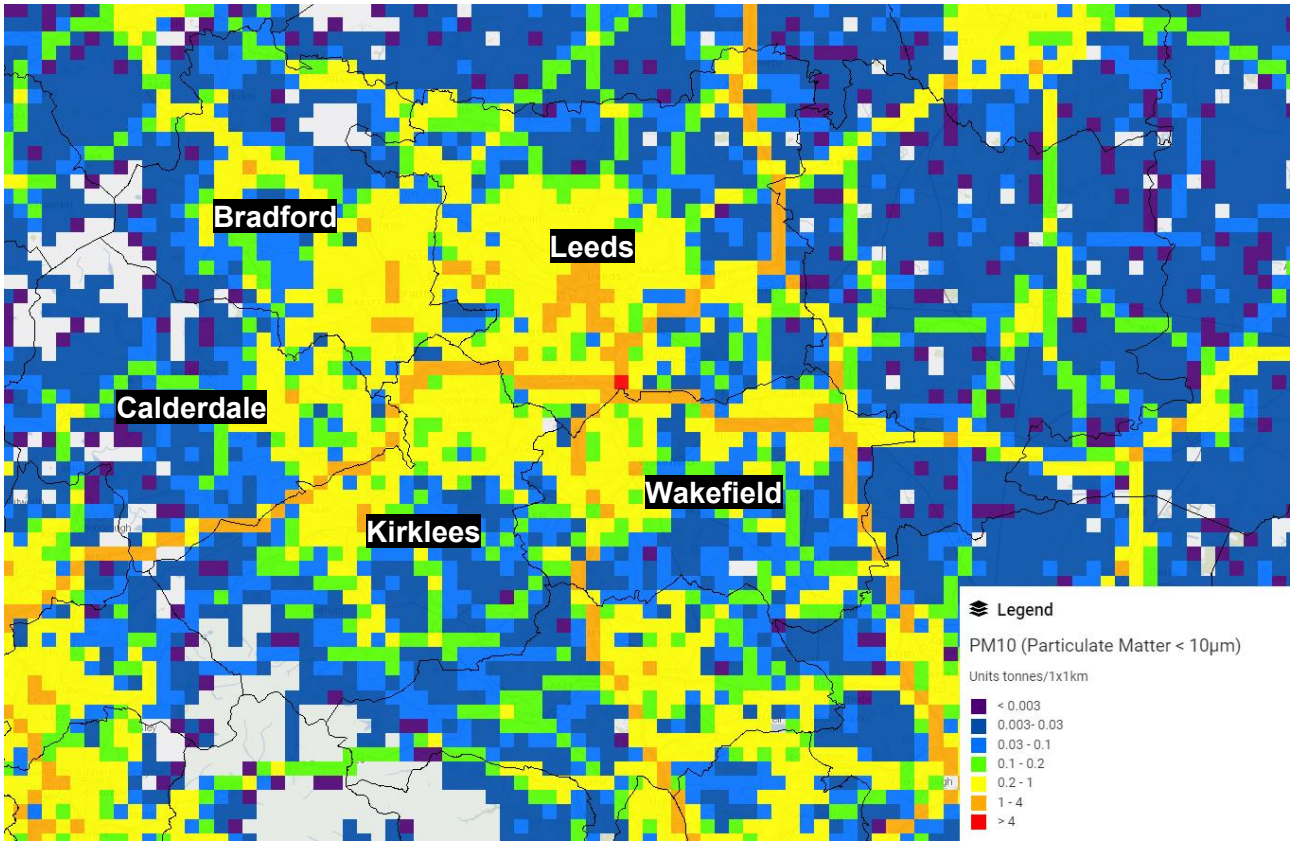


Figure 6: M10 Emissions from Road Transport in West Yorkshire

Source: National Atmospheric Emissions Inventory (2021)

The above maps are for estimated background concentrations only and will underestimate localised concentrations in heavily trafficked hotspots. A pattern of heavy pollution along major road networks can be seen from map, but cannot provide clear indication at local levels. It can also be seen that there are rural parts of West Yorkshire where the air quality is exceptionally good.

The latest Transport and Environment Statistics (Department for Transport, 2022) provided evidence that transport was the largest emitting sector of greenhouse gas emissions, producing 24% of the UK's total emissions in 2020. 33% of nitrogen oxides emissions and 14% of PM2.5 emissions came from transport during the same period. Nevertheless, evidence has shown that emissions of particularly harmful pollutants, such as carbon monoxide, particulate matter, and nitrogen oxides, have reduced following increasingly stringent exhaust emission limits (ONS, 2019).

All districts in West Yorkshire comply with the annual average PM10 standard of 40µg/m3 and are well below. However, the long-term trend in PM10 levels is unclear and there was little change in background levels over the period 2020 – 2022. Figures recorded in 2022 indicated that PM10 levels across West Yorkshire have been gradually increasing as illustrated in **Error! Reference s ource not found.**.

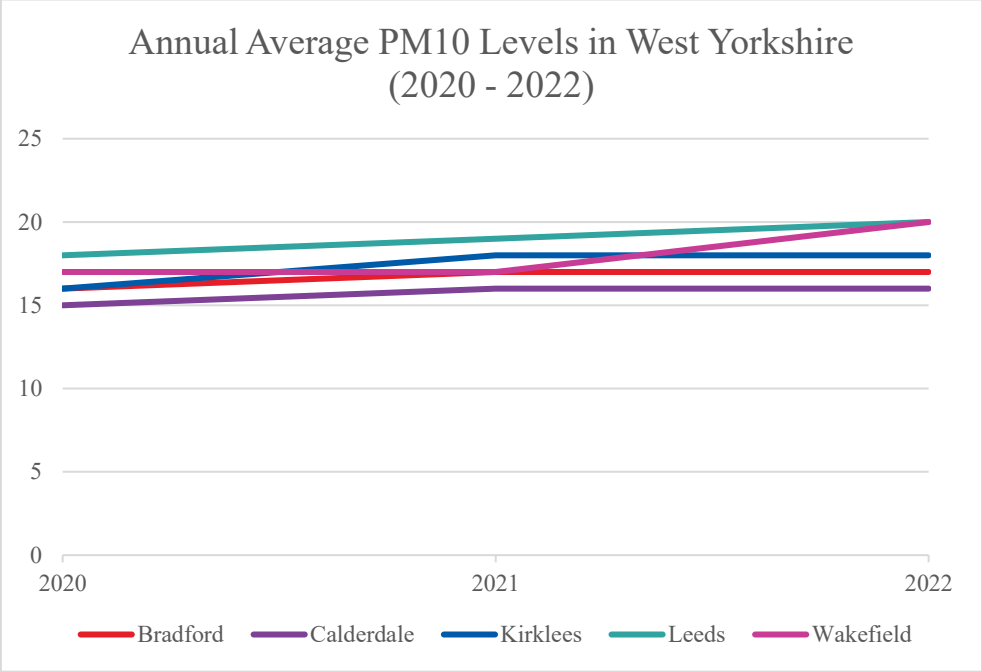


Figure 7: Monitored Annual Average PM10 Levels in West Yorkshire (2020 – 2022)

Source: DEFRA (2023)

5.2.6 Noise

In common with most urban areas in the UK, road traffic is the primary source of environmental noise experienced in West Yorkshire. Figure 8 indicates the levels of noise calculated in the area, expressed using the 'day, evening, night level' (Lden) measure.

From this it may be seen that many areas of West Yorkshire already experience high levels of traffic noise, principally associated with the motorway and trunk road networks.

There has been approximately 761 km of 'low noise' asphalt laid in West Yorkshire since 2000. Leeds is the district with most km of low noise asphalt laid since 2004, followed by Bradford and Kirklees (WYLTP, 2010). Figure 9: compares the actual lengths of 'low noise' asphalt laid within West Yorkshire to approximate percentage coverage of the principal road network within each district. It could be said that as an average 37% of the principal road network within West Yorkshire is surfaced with low noise asphalt. However, 6.7 – 9.2% of the population across West Yorkshire are still exposed to road, rail and air transport noise of more than 55 dB overnight, which is the noise levels that are known to increase blood pressure and the risk of heart attack (WYCA, 2016).

The Noise Action Plan: Roads (DEFRA, 2019) has been designed to address the management of noise issues and effects in agglomerations across the UK under the terms of the Environmental Noise (England) Regulations. These Regulations transpose Directive 2002/49/EC relating to the Assessment and Management of Environmental Noise. This directive is commonly referred to as the Environmental Noise Directive (END). The Action Plan has identified the approximate number of people and important areas in each agglomeration, aimed to assist the management of environmental noise in the context of Government policy on sustainable development.

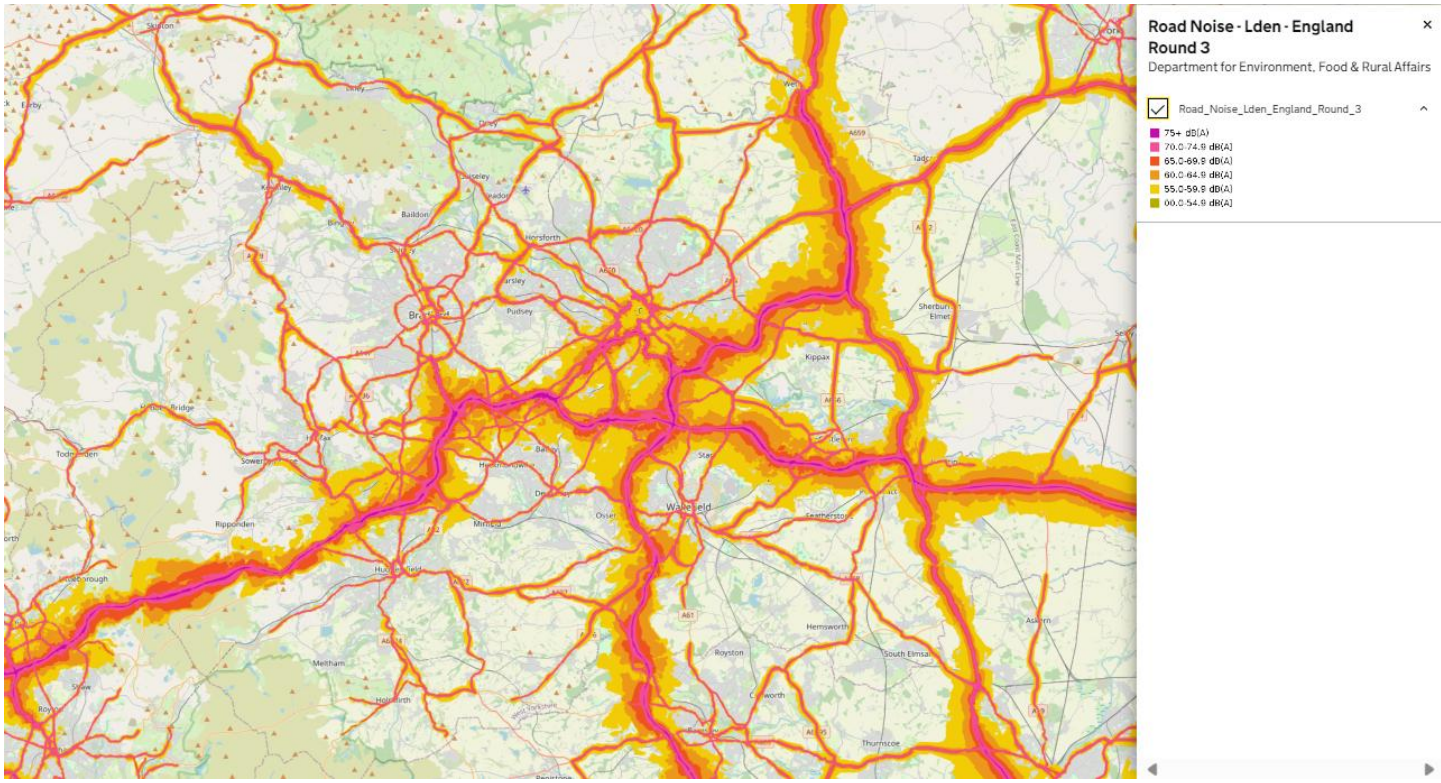


Figure 8: Road Traffic Noise in West Yorkshire

Source: DEFRA (2019)

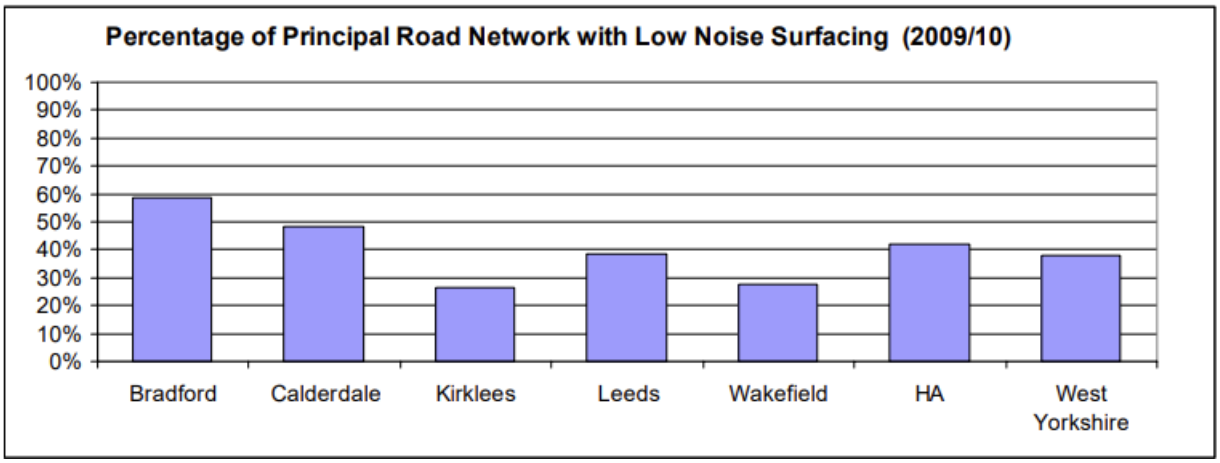


Figure 9: Percentage of Principal Network with Low Noise Surfacing

Source: WYLTP2 – Monitoring Report (2010)

A summary of the results of the noise mapping, including an evaluation of the estimated number of people exposed to road traffic noise are presented in Table 9. These are the number of people (rounded to the nearest thousand) exposed above various noise levels from the strategic mapping of road traffic noise in this agglomeration.

Table 9 People Exposed to Road Traffic Noise in West Yorkshire

Noise Level	No. of People – (Lden) (dB)	No. of People – (Lnight) (dB)	No. of People – (LA10,18h) (dB)
≥50	n/a	278,000	n/a
≥55	418,000	133,000	310,000
≥60	198,000	61,000	168,000
≥65	111,000	10,000	110,000
≥70	51,000	3,000	63,000
≥75	8,000	n/a	14,000

Source: DEFRA (2019)

Approximately 418 thousand people (18% of the total population) in West Yorkshire experience noise of over 55dB from road traffic monitored during day, evening, and night time. However, this number reduces by 68% during night time. 59 thousand people (2.5% of the total population) in West Yorkshire are exposed to road traffic noise over 70dB, which is the noise level that could damage hearing if experienced for a long period.

The estimated number of people (rounded to the nearest thousand) exposed above various noise levels from the strategic mapping of railway noise in this agglomeration is shown in Table 10 below:

Table 10 People Exposed to Railway Noise in West Yorkshire

Noise Level	No. of People – (Lden) (dB)	No. of People – (Lnight) (dB)	No. of People – (LAeq, 18h) (dB)
≥50	n/a	16,000	n/a
≥55	25,000	6,000	11,000
≥60	10,000	2,000	4,000
≥65	4,000	<500	1,000
≥70	1,000	<500	<500
≥75	<500	n/a	<500

Source: DEFRA (2019)

Approximately 25 thousand (1% of the total population) in West Yorkshire experiences noise of over 55dB from railway, monitored during day, evening, and night time. This number reduced by 76% at night time, but another 16 thousand people are exposed to railway noise of under 50dB overnight. Less than 1,500 people experience railway noise of over 70dB, which accounts for less than 0.1% of the total population in West Yorkshire.

Noise data at local authority level is not available in the latest edition of the Noise Action Plan. However, the estimated number of people and dwellings to be investigated due to noise from road

traffic and railway in each council area were outlined in the 2010 Noise Action Plan (DEFRA, 2010), provided below in Table 11 and Table 12:

Table 11 No. of Dwellings and Associated Population to be Investigated due to Road Traffic Noise in Each Council Area

Local Authority	No. of Dwellings	Associated Population
Bradford	2,550	5,600
Calderdale	350	800
Kirklees	2,350	4,900
Leeds	3,500	7,900
Wakefield	650	1,300
Total	**9,450**	**20,600**

Source: DEFRA (2010)

Table 12 No. of Dwellings and Associated Population to be Investigated due to Railway Noise in Each Council Area

Local Authority	No. of Dwellings	Associated Population
Bradford	100	200
Calderdale	< 50	< 100
Kirklees	< 50	< 100
Leeds	< 50	< 100
Wakefield	< 50	< 100
Total	**200**	**400**

Source: DEFRA (2010)

Overall, Leeds consists of the most dwellings and associated population to be investigated due to road traffic noise and Calderdale has the least. According to this data, railway noise is relatively insignificant compared to road traffic noise, generating 98% less dwellings and associated population to be investigated.

Noise pollution also has an impact on wildlife. Animals use sound to navigate, find food, attract mates, and avoid predators, and therefore, noise pollution can make it difficult for them to accomplish these tasks, which affects their health and ability to survive (National Geographic Society, 2024). Traffic noise can also lead to loss and fragmentation of habitats, changes in the behaviour of wildlife, and injury and death.

5.2.7 Light pollution

The Campaign to Protect Rural England (CPRE) warns that 'light pollution is rapidly increasing across this country.' The most up to date CPRE data for light pollution (2016) is displayed in **Error! R eference source not found.** and

Table 13. According to the data, light pollution is most significant around central areas within West Yorkshire. Largest areas of brightest night lights are present in Leeds, Wakefield and Bradford, covering 13.2%, 8.5% and 8.4% of their district area respectively. Rural areas near the edge of Bradford, Calderdale. Light pollution is caused by poor interior and exterior lighting design (including street and road lights), security lights and floodlights.

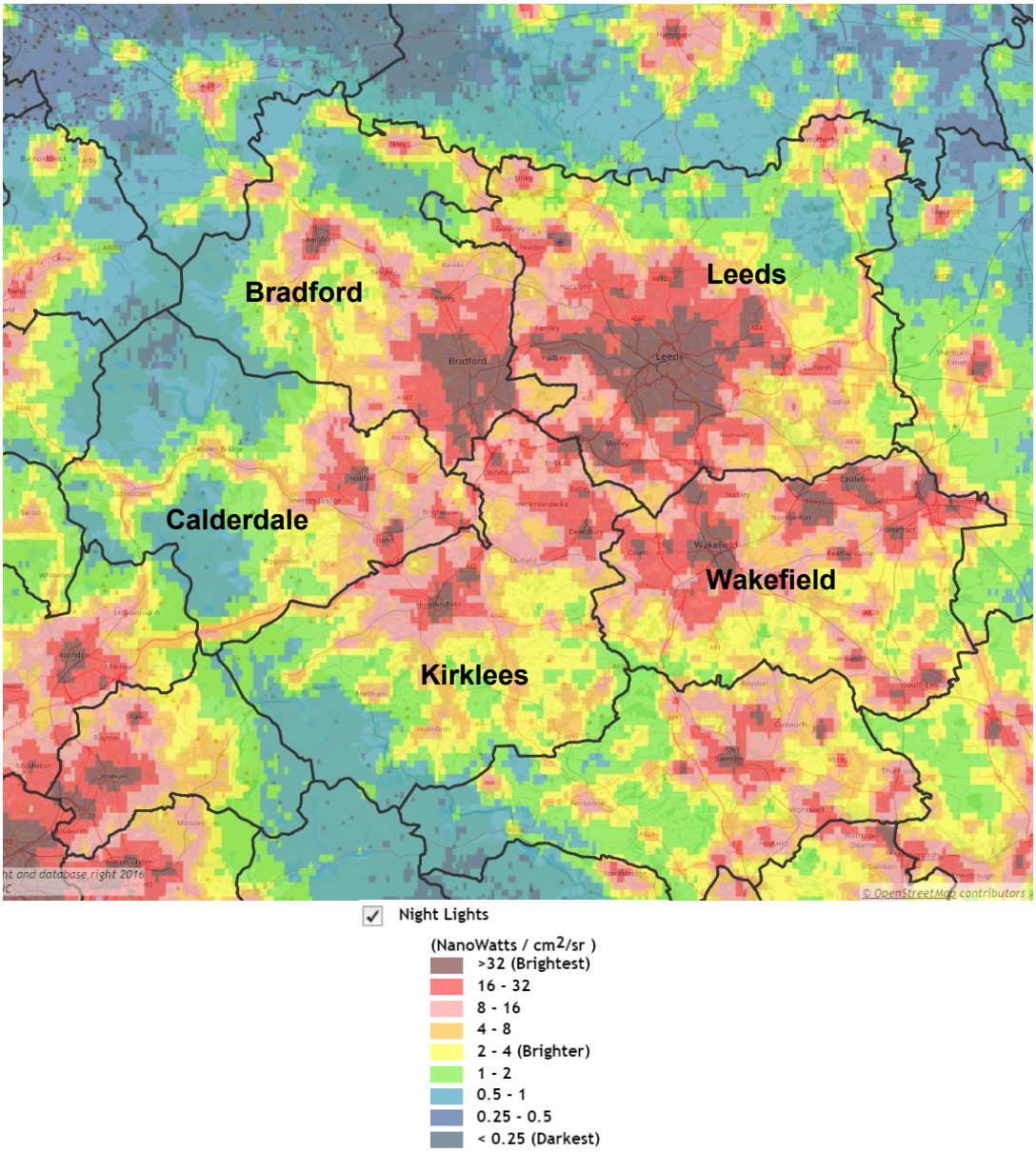


Figure 10: Light Pollution in West Yorkshire

Source: Campaign to Protect Rural England (2016)

Table 13 Light Pollution in West Yorkshire (in percentage)

Light Pollution Level	Bradford (% area covered)	Calderdale (% area covered)	Leeds (% area covered)	Kirklees (% area covered)	Wakefield (% area covered)
< 0.25 (low) (%)	0	0	0	0	0
0.25 – 0.5 (%)	0	1.9	0	0.1	0
0.5 – 1 (%)	20.4	34.1	7.7	14.3	0
1 – 2 (%)	15.5	18	15	18.2	6.1
2 – 4 (%)	13.7	14.2	14.5	20.4	21.9
4 – 8 (%)	16.6	14.3	15.2	16.6	20.7
8 – 16 (%)	13.2	11.2	16	17.8	20.4
16 -32 (%)	12.1	5.2	18.4	10.5	22.4
> 32 (high) (%)	8.4	1.1	13.2	2.1	8.5

Source: Campaign to Protect Rural England (2016)

Light pollution at night can disrupt natural behaviour patterns in both humans and wildlife, having a negative impact on their health and wellbeing (CPRE West Yorkshire, 2024). For example, it can prevent and interrupt sleep, which increases fatigue, stress, anxiety, and other health problems in humans. In animals, nocturnal lighting can impact on migration patterns, wake-sleep habits, and habitat formation (National Geograhpic Society, 2024).

5.2.8 Biodiversity, flora and fauna

The Combined Authority understand the critical role that the natural environment plays in underpinning a healthy and resilient population, and supporting biodiversity and sustainable places, which is why they are working to protect it through several strategies and plans, some of which are outlined below.

A locally-led Local Nature Recovery Strategy (LNRS) is in development for West Yorkshire to help tackle biodiversity loss, climate change, and wellbeing. This strategy is one of around 50 spatial mapping and planning tools, which, together, will cover the whole of England and help to create a Nature Recovery Network of wildlife-rich places, as stated in the Environment Act 2021. It will be published by 2025 and must be updated every 3 to 10 years, but the following nature recovery projects have already taken place across West Yorkshire:

- A former landfill site in Bradford is now a wildflower meadow;
- The Yorkshire Wildlife Trust's Stirley Farm in Kirklees provides an opportunity for managing farmland in a way that is good for landscape, wildlife and people;

- St Aidan's in Leeds, a former opencast coal mine, is now an RSPB nature reserve rich in wetland habitats; and
- Lofthouse Colliery in Wakefield is now inhabited by chiffchaffs, cuckoos and blackcaps.

Figure 11: identifies the key areas of protection for biodiversity, flora, and fauna in West Yorkshire. So far, 34 sites in West Yorkshire have been designated as SSSIs for their wildlife or geological importance (Natural England, 2023).

In Bradford, there are currently 3 Sites of Special Scientific Interest (SSSIs). One of the SSSIs, Ilkley Moors constitutes part of the South Pennine Moors Special Protection Area (SPA) and Special Areas of Conservation (SAC), which is protected by the Conservation of Habitats and Species Regulations 2017 as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and has the highest levels of protection for habitats or species. There are 4 levels of designated nature conservation sites within Bradford District. In addition to the 4 SSSIs, there are 152 Local Wildlife Sites and 22 Geological Sites. These sites are non-statutory but they fulfil qualification criteria for one or more of the selection features (City of Bradford MDC, 2023).

In Calderdale, two-thirds of the borough is predominantly rural in nature. Much of western Calderdale is dominated by the high Pennine moorlands, which make up approximately 9,500ha of international ecological importance including the South Pennines SPA/SAC (Calderdale Council, 2023). The Calderdale's Natural Heritage is a Biodiversity Action Plan adopted by Calderdale Council in 2007, which included action plans for 5 priority habitats and 3 priority species across 2003 – 2010 (Calderdale Council, 2007).

In Kirklees, 3 designated SSSIs are identified in the Kirklees Development Plan (2019), which are the South Pennines Moors SPA/SAC, Park Clough, and Honley Station Cutting. As of 2015, there are 93 Local Wildlife Sites, 19 Local Geological Sites, and 6 Biodiversity Opportunity Zones across Kirklees area (Kirklees Council, 2015). Kirklees Council also holds a Biodiversity Action Plan (2009) which lists all species of principal importance within Kirklees area, as well as a Biodiversity Strategy which sets out objectives for Kirklees to work with key stakeholders, embed biodiversity considerations into all council services, and support biodiversity work in the wider district.

In Leeds, the Leeds Biodiversity Action Plan (1998) aims to maximise the effectiveness of resources and sets out roles of each stakeholder in delivering the plan across the Leeds area. The Plan has identified 4 Natural areas within Leeds, namely the Coal Measures Natural Area, the Southern Magnesian Limestone Natural Area, the Pennine Dales Fringe Natural Area, and the South Pennines Natural Area. The latest revision of Leeds Council's Biodiversity and Nature Recovery Update (2023) suggests that there are currently 14 Local Nature Reserves within the Leeds District, including Halton Moor and Killingbeck Meadows within the inner city.

In Wakefield, a Local Biodiversity Action Plan has been prepared as part of Wakefield Council's duty under the Natural Environment and Rural Communities Act 2006 to conserve nature and wildlife. The Plan reveals that protected sites cover just 2.7% of the District. There are 6 SSSIs, 1 SAC and 16 Local Nature Reserves within Wakefield. The SAC 'Denby Grange Colliery Ponds' is an 18.53ha site primarily designated for its important population of great crested newts (Wakefield Council, 2013). Of these, most are in unfavourable conditions and one (Nostell Brick Yard) has been destroyed by a landfill site (Natural England, 2023). There are also 86 Local Wildlife Sites, which consists of 60 former Wakefield Nature areas and 26 Sites of Scientific Interest (Wakefield Council, 2013).

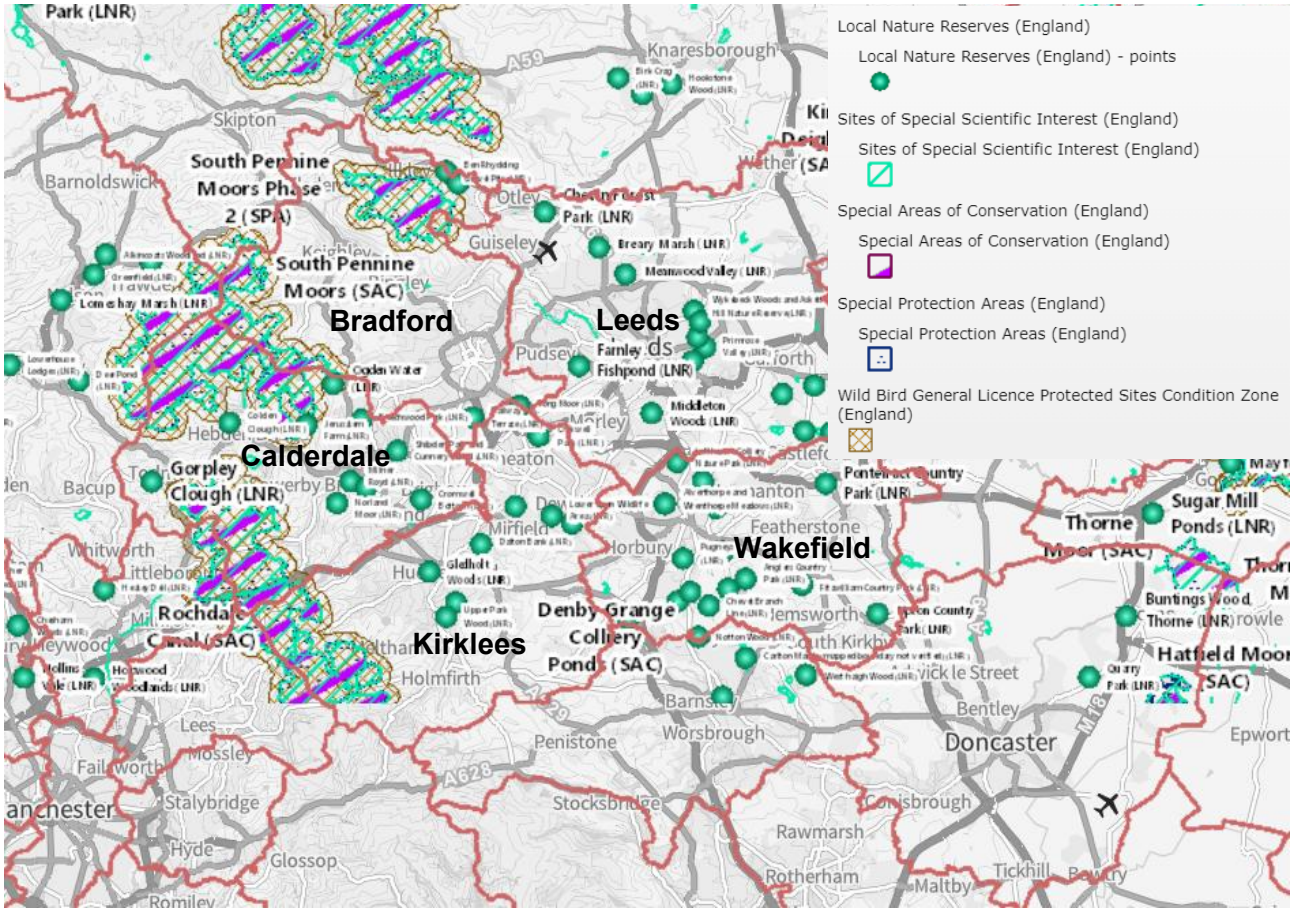


Figure 11: Key Environmental Constraints in West Yorkshire

Source: Natural England (2023)

Specifically in relation to the requirements of the Habitats Directive, and the potential need for an Appropriate Assessment under the Habitats Regulations, Table 14 indicates the European protected sites that are situated within West Yorkshire and, depending on the policies and interventions contained within the Local Transport Plan, may potentially be directly or indirectly impacted by it.

Table 14 European Protected Sites in West Yorkshire

Area	Brief Description
Denby Grange Colliery Ponds Special Area of Conservation (SAC)	Denby Grange Colliery Ponds (in Wakefield district) qualifies under Annex II of the Habitats Directive for supporting great crested newts (Triturus cristatus) in a pond created by coal mining activity and surround by wooded slopes.
South Pennine Moors SAC	The South Pennine Moors (spanning Barnsley, Kirklees and Calderdale districts) qualifies under Annex I of the Habitats Directive for supporting the habitat types Northern Atlantic wet heaths with Erica tetralix; European dry heaths; Blanket bogs; Transition mires and quaking bog; Old sessile oak woods with Ilex and Blechnum in the British Isles.
South Pennine Moors Phase 2 Special Protection Area (SPA)	The South Pennine Moors (spanning Barnsley, Kirklees and Calderdale districts) qualifies under Article 4.1 of the Birds Directive for supporting breeding short-eared owl (Asio flammeus), merlin (Falco columbarius) and golden plover (Pluvialis apricaria) and Article 4.2 for supporting an internationally important assemblage of breeding birds.
Peak District Moors (South Pennine Moors Phase 1) SPA	The Peak District Moors (in Bradford and Calderdale districts) qualifies under Article 4.1 of the Birds Directive for supporting breeding short-eared owl (Asio flammeus), merlin (Falco columbarius) and golden plover (Pluvialis apricaria).

Source: Natural England (2023)

Table 15 identifies the European Protected sites are situated adjacent to West Yorkshire and depending on the policies and interventions contained within Local Transport Plan may potentially be indirectly impacted by it.

Table 15 European Protected Sites Close to the Boundaries of West Yorkshire

Area	Brief Description
Kirk Deighton SAC	Kirk Deighton (approximately 350m from the Leeds City Council boundary) qualifies under Annex II of the Habitats Directive for supporting a breeding population of great crested newts in a large pond, set in a depression in grazed pasture.
Rochdale Canal SAC	Rochdale Canal qualifies under Annex II of the Habitats Directive for supporting floating water plantain (Luronium natans) in a botanically diverse waterplant community which also holds a wide range of pondweeds Potamogeton spp.
North Pennine Moors SAC	The North Pennine Moors qualifies under Annex I of the Habitats Directive for supporting the habitat types Northern Atlantic wet heaths with Erica tetralix; European dry heaths; Juniperus communis formations on heaths or calcareous grasslands; Calaminarian grasslands of the Violetalia calaminariae; Sciliceous alpine and boreal grasslands; Seminatural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia); Blanket bogs; Petrifying springs with tufa formation (Cratoneurion); Alkaline fens; Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeospsietalia ladani); Calcareous rocky slopes with chasmophytic vegetation; Siliceous rocky slopes with chasmophytic vegetation; and Old sessile oak woods with Ilex and Blechnum in the British Isles. It also supports the Annex I habitat, species rich Nardus grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe) and Annex II species, marsh saxifrage (Saxifraga hirculus).
North Pennine Moors SPA	The North Pennine Moors qualifies under Article 4.1 of the Birds Directive for supporting breeding hen harrier (Circus cyaneus), merlin (Falco columbarius) and peregrine falcon (Falco peregrines)

Source: Natural England (2023)

5.2.9 Landscape & townscape

The landscape character of West Yorkshire, as defined using Natural England's Countryside Character descriptions, is illustrated in Figure 12: and Figure 13: on the following page.

The western part of the sub-region, including most of Calderdale and Bradford districts and small parts of Kirklees and Leeds districts, falls within the Southern Pennines area. This area is typified by large scale sweeping landforms with an open character created by exposed gritstone moors at an altitude of 400-450m, deeply trenched by narrow valleys and wooded cloughs. There are also patches of mixed moorland and blanket bog with enclosed pasture of varying qualities at lower elevations, largely defined by drystone walls. The area is home to some valuable wildlife habitats on the open moorland and the moorland fringe including semi-natural boggy mires, acid flashes and wooded cloughs. The valley bottoms are densely populated, with stone buildings extending along valley sides, set against the backdrop of the moorland tops. The area also affords extensive views from elevated locations in all directions.

East of here, most of the rest of Calderdale, Kirklees and Bradford districts come within the Yorkshire Southern Pennine Fringe. The eastern slopes of the Pennines drop from upland in the west down to the east, dissected by numerous steep-sided valleys. The area is characterised by a predominance of local sandstone and 'gritstone' as a building material, notably in large and dominant industrial buildings. The urban areas are mainly confined by valleys creating dramatic views between settlements and the surrounding hillsides. The predominant non-urban land use is pastoral farming with strong linear patterns of walled enclosures on plateaux. The rest of the area is covered with predominantly broadleaved woodlands on steep valley sides forming important backdrops to the urban areas, and this provides an impression of a well wooded landscape even though tree cover is relatively sparse overall.

The larger part of the Leeds and Wakefield districts, together with parts of Bradford and Kirklees districts fall within the 'Nottinghamshire, Derbyshire and Yorkshire Coalfields' character area. This area is characterised by widespread evidence of industrial activity including mine buildings, former spoil tips, and iron and steel plants. The area has a complex mix of built-up areas, industrial land, dereliction and farmed open country. Many areas are affected by urban fringe pressures creating fragmented and downgraded landscapes, however there are substantial areas of intact agricultural land in both arable and pastoral use.

The eastern parts of Leeds and Wakefield Districts come within the Southern Magnesian Limestone area. This is an elevated ridge with smoothly rolling landform, dissected by dry valleys with long views over surrounding lowland. The main non-urban land use is intensively farmed arable land, reflecting the fertility of the area, characterised by large fields bounded by low cut thorn hedges creating a generally large scale, open landscape. There are a large number of country houses and estates with parkland, estate woodlands, plantations and game coverts in this

area, as well as woodlands combining with open arable land to create a wooded farmland landscape in some parts. The widespread use of creamy white Magnesian Limestone as a building material often combined with red clay pantile roofing is a unifying visual element in the area.

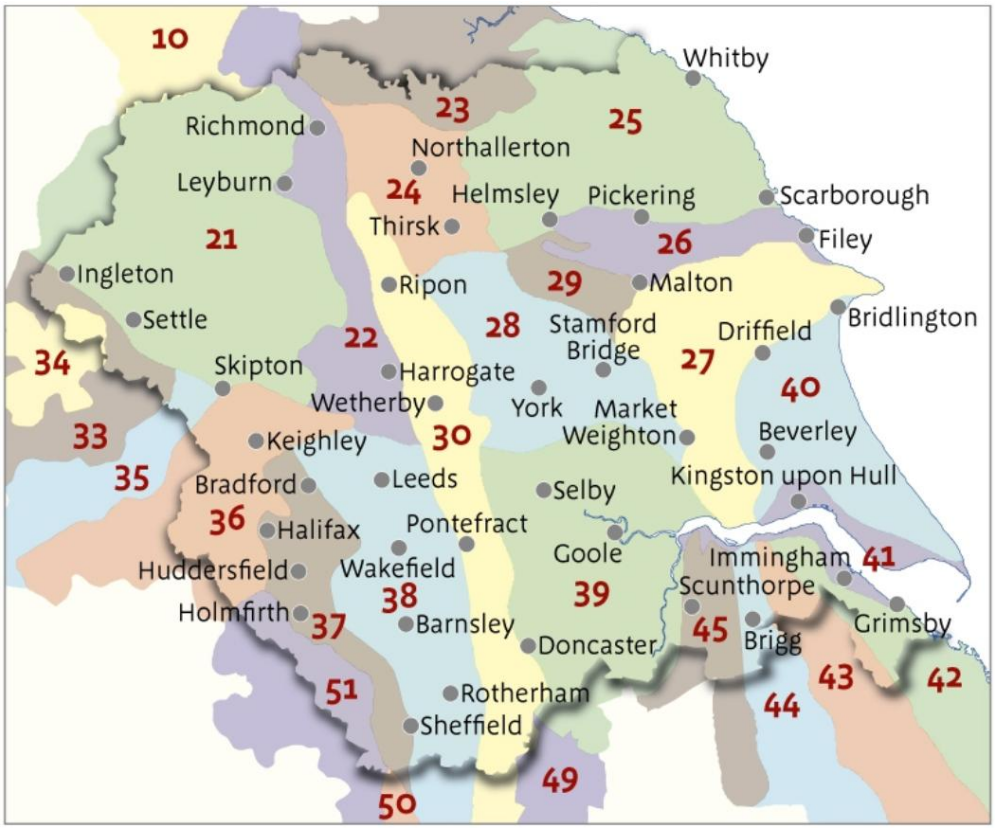


Figure 12: National Character Areas in Yorkshire and the Humber

Source: Natural England (2014)

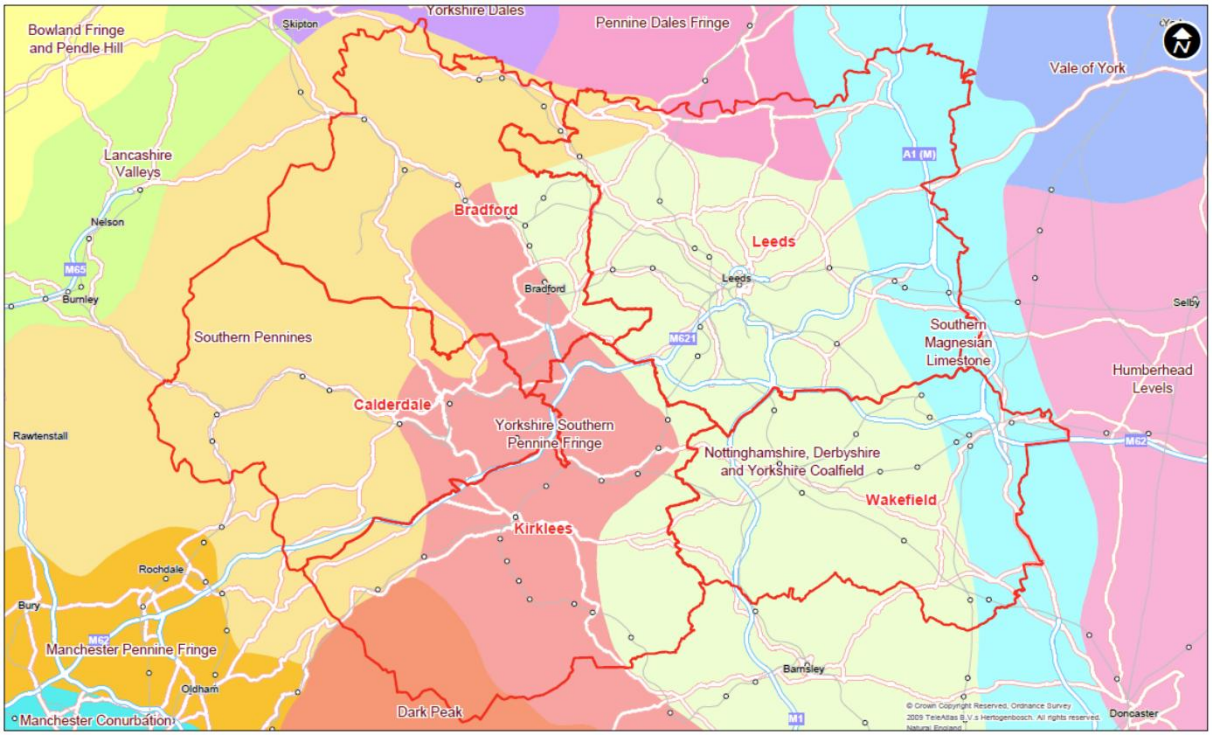


Figure 13: National Character Areas in West Yorkshire

Source: West Yorkshire Transport Strategy 2016 ISA Report – Appendices (2016)

National Character Areas

England has been divided into 159 areas with similar landscape character, which are called National Character Areas (NCAs). Natural England provides a summary of the NCAs including a description, the key facts, and opportunities of the area. Those relevant to West Yorkshire are set out below:

- **NCA 30 Southern Magnesian Limestone:** The Southern Magnesian Limestone National Character Area (NCA) is mainly defined by the underlying Permian Zechstein Group, formerly known as the Magnesian Limestone. It creates a very long and thin NCA that stretches from Thornborough in the north down through north Derbyshire to the outskirts of Nottingham further south. The limestone creates a ridge, or narrow belt of elevated land, running north–south through the NCA, forming a prominent landscape feature. The geology has influenced many aspects of the landscape, from use of its limestone resource as a local building material to the specialised limestone grasslands associated with limestone areas.

  The presence of the ridge, and the drift deposits covering much of it, has produced light, fertile soils that have attracted settlement for more than 13,000 years. The important archaeological evidence and mammal fossils found at Creswell Crags and the impressive barrows and henge monuments at Thornborough Henges (three intact henges) are nationally important geological and archaeological features that provide a historic link to the story of human settlement and society within the area and beyond. Opportunities to maintain the landscape setting of these important sites and increase access to and engagement with them need to continue to be secured.

  The NCA comprises of open, rolling arable farmland enclosed by hedgerows, with plantation woodlands, historic estate properties and parkland. The localised networks of grasslands and semi-natural habitats have become fragmented, and many species face challenges moving through the NCA. In places, rivers and dry valleys dissect the plateau from west to east, creating wetland habitats. Impacts on this agricultural landscape include limestone, coal and some sand and gravel extraction, associated infrastructure and tips; many of which have now been restored. The pace of settlement and industrial development expansion has been greater in the north than in the south, but the landscape still retains its essential rural character.

  Sustainable food production is important in this largely rural area, to maintain the quality of the fertile soils and reduce erosion. The farmed landscape also contributes to the tranquillity of this NCA, and is valued as a contrast to the more urban, industrialised areas to the west and where major road infrastructure crosses the NCA. Parkland trees and plantations associated with country estates give a well-wooded feel in some areas of the NCA. There are more wooded areas within the NCA now than were recorded at the time of managing and maintaining these key landscape characteristics will be important in retaining the ‘essence’ of the Southern

Magnesian Limestone NCA. There is a need to promote sustainable agriculture and appropriate hedgerow and woodland management and planting. Appropriate habitat enhancement and links are fundamental to this, along with guiding suitable development and appropriate mitigation of the impacts of changes to the landscape (Natural England, 2013).

- **NCA 36 Southern Pennines:** The Southern Pennines are part of the Pennine ridge of hills, lying between the Peak District National Park and the Yorkshire Dales National Park. This is a landscape of large-scale sweeping moorlands, pastures enclosed by drystone walls, and gritstone settlements contained within narrow valleys. The area contains internationally important mosaics of moorland habitats that support rare birds such as merlin, short-eared owl and twite. The peat soils, including blanket bog, store significant volumes of carbon. With its high rainfall and impervious rocks it is an important area for water supply, with many reservoirs supplying water to nearby conurbations. The Southern Pennines are also important for recreation due to the extensive open access areas and footpaths, and the sense of escapism they offer, along with the ease of access from large towns. This dramatic landscape has inspired many, such as the Brontës and Ted Hughes. Future challenges for the area include managing the land to reduce downstream flooding, restore blanket bog and improve water quality, and managing increased recreational demand (Natural England, 2014).
- **NCA37 Yorkshire Southern Pennine Fringe:** The Yorkshire Southern Pennine Fringe National Character Area (NCA) is a transitional landscape from the upland areas of the Southern Pennines NCA in the west through to the low-lying land of the Nottinghamshire, Derbyshire and Yorkshire Coalfield NCA to the east. The most striking aspect of the landscape is the mingling of predominantly ‘gritstone’ industrial towns and villages with the strong valley forms and pastoral agriculture of the Pennine foothills. The gritstone industrial buildings and settlements bring a sense of visual unity to the landscape. The landscape is dominated by industrial buildings and structures such as factories, chimneys, railways and canals. Travellers crossing the NCA from west to east experience a change from pastoral treeless hill tops, where drystone walls are the predominant field boundary, to wooded valleys, where large urban settlements such as Bradford, Huddersfield and Sheffield are focused in the valleys and were built up around the former industries such as coal mining, steelmaking and the woollen industry. The World Heritage Site of Saltaire stands as an example model town built with the wealth produced by the industries prevalent in this area. In the east, settlements are separated by areas of arable farming with hedgerows and lowland meadows.

  The NCA is characterised by steep slopes that are cut through by narrow rivers, notably the Don, the Calder, the Hebble Brook and the Colne in the north and the Sheaf, the Rivelin and the Loxley in the south near Sheffield, which open up into valleys on lower land. The river corridors provide links through the NCA from the uplands into the towns and cities in the valleys, supplying not only water for the large population in these areas but also opportunities

for people to access and enjoy the natural environment and for species movement through the landscape.

The presence of locally accessible minerals and materials and the fast-flowing water from the uplands attracted development of woollen towns in the north and iron ore and smelting in the south, notably around Sheffield. The presence of more than 5,000 listed buildings and 20 Registered Parks and Gardens reveals the industrial wealth that was used to shape the area and still provides strong sense of place today. The consistent use of local sandstone helps to retain identity and links to the geology of the area.

There are many opportunities to provide increased access and recreation for the large populations living in the valleys of the NCA, encouraging them to engage with the wider countryside both between settlements and up into the more upland areas. The geology of the area has had such a strong influence on the development of the local history and sense of place that opportunities should be taken to recognise, maintain and engage people with these features (Natural England, 2013).

- **NCA 38 Nottinghamshire, Derbyshire and Yorkshire Coalfield**: The Nottinghamshire, Derbyshire and Yorkshire Coalfield is an area that has seen great change over the past few centuries. The impact of widespread industrialisation and development on the landscape and settlement pattern within the National Character Area (NCA) is clear, influencing the visual and ecological landscape. The geological deposits of coal and iron, along with the water supply, brought mass industrialisation to the area to exploit these resources. A generally low-lying area, with hills and escarpments above wide valleys, the landscape embraces major industrial towns and cities as well as villages and countryside. Over half of the NCA (64 per cent) is currently designated as Green Belt land; this maintains some distinction between settlements and represents areas that are often under pressure for development and changes in land use. Very little of the NCA is designated for geology or nature conservation, but instead the landscape is dotted with many pockets and patches of habitat where species find refuge. This is often on land that was once worked for minerals or occupied by major industry, and as these enterprises have declined the land they once dominated has opened up with opportunities to create a new landscape which will continue to provide a strong sense of place for local populations.

  The large populations of the towns and cities within the NCA mean that there will be opportunities to better engage people with the natural and historical environment, creating new access and recreational openings that deliver a better quality of life while also helping people and wildlife to adapt to a changing climate.

  The NCA is an important area nationally for history, especially in relation to industrialisation and the story of its impact on the landscape. Opportunities should be taken to restore and maintain

historical features in the landscape and to explore how they can be interpreted and used to educate and engage people with the landscape.

Rivers and waterways are an important feature in the landscape, often linking rural and urban areas and increasingly providing green corridors and tranquil settings for both people and wildlife. The source of the water is outside the NCA, as is the case for a number of ecosystem services, and the large population means that the area is a key user of ecosystem services (such as water) that are provided by surrounding NCAs. A key challenge will be to improve links between this NCA and others in order to get a better understanding of the delivery of ecosystem services and how they can be improved (Natural England, 2015).

5.2.10 Heritage

The key heritage features of the LTP area are indicated in Figure 14: H:

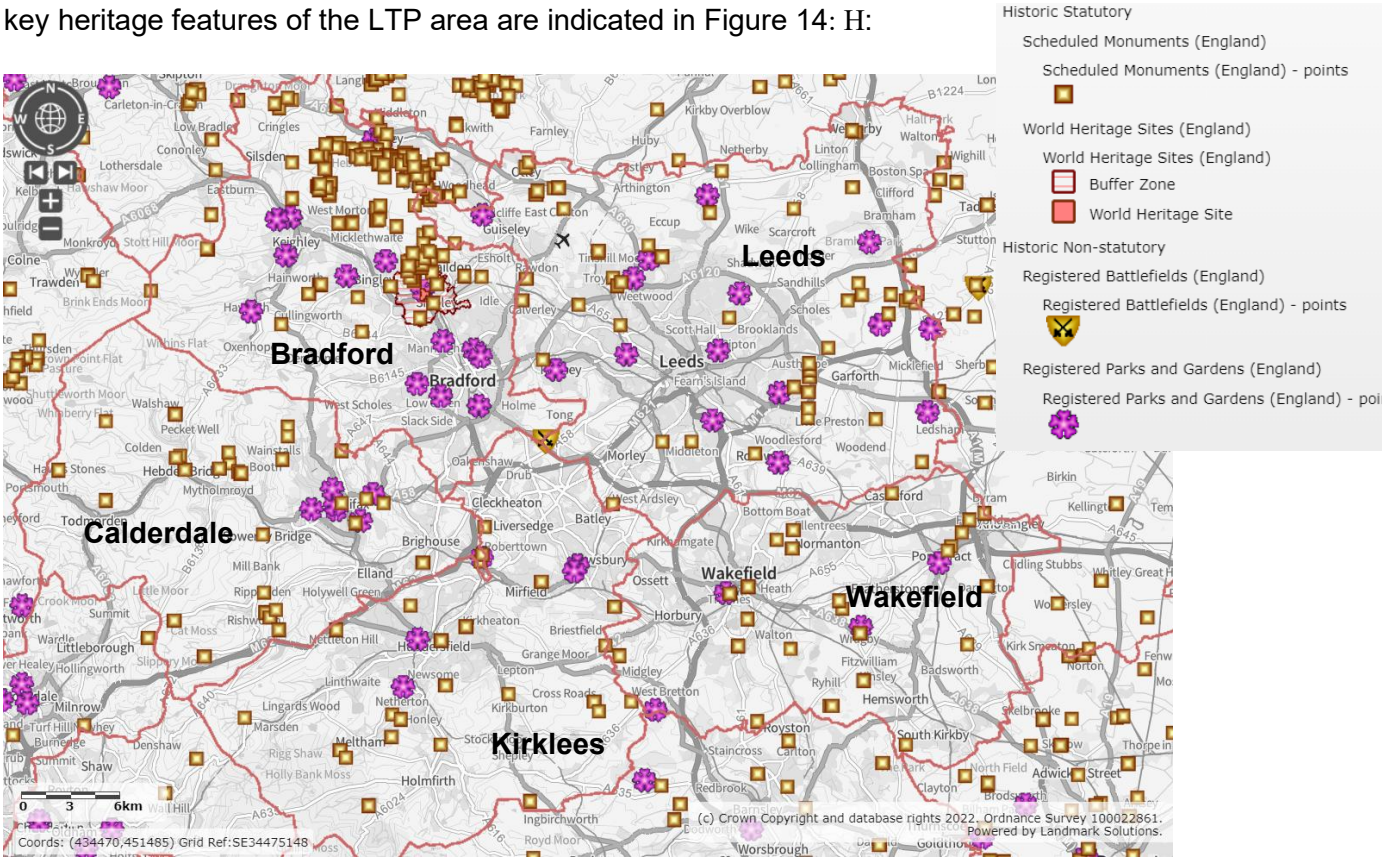


Figure 14: Heritage Features in West Yorkshire

Source: Historic England (2018)

The most important feature is the World Heritage Site at Saltaire near Bradford, which was designated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2001. The area is a purpose-built ‘model’ Victorian industrial village that was built in the nineteenth century by the Victorian philanthropist Sir Titus Salt, to provide self-contained living space for the workers at his woollen mills.

Bradford has 2,294 buildings listed by the Secretary of State as being of special architectural or historic interest (Listed building), these range from large industrial mill complexes to weaver's cottages and from agricultural farmsteads to stately halls and manor houses (Historic England, 2023). There are also 59 Conservation Areas and a World Heritage Site (City of Bradford MDC, 2023).

Calderdale has 2,131 listed buildings in total, which consist of 16 Grade I listed buildings, 109 Grade II* listed buildings, and 2,006 Grade II listed buildings. 34 scheduled monuments are also designated, no battlefield or World Heritage Sties were identified within Calderdale (Historic England, 2023). Calderdale area currently have 21 designated conservation areas, which are supported by the council's Conservation Strategy (2011) and Action Plan (2011) to establish clear priorities for the preservation and enhancement of Calderdale's heritage (Calderdale Council, 2023).

Kirklees area comprises just under 3,000 listed buildings, of which 10 are Grade I listed buildings, 72 are Grade II* listed buildings, and 2,900 are Grade II listed buildings. There are also 22 scheduled monuments and 1 battlefield in Kirklees (Historic England, 2023). Kirklees Council has designated 60 conservation areas, where 20 of the areas have their own appraisals (Kirklees Council, 2024).

Leeds currently has over 3,300 listed buildings, including 46 Grade I listed buildings, 104 Grade II* listed buildings and 2,219 Grade II listed buildings, alongside 60 scheduled monuments and 1 battlefield (Historic England, 2023). 86 conservation areas are designated within Leeds, of which 54 have appraisal and management plans. Development in such areas will be restricted with relevant planning control measures (Leeds Council, 2022).

In Wakefield, there are 25 Scheduled Ancient Monuments, 26 Grade I listed buildings, 56 Grade II* listed buildings and 655 Grade II listed buildings. There are 13 entries to Historic England's Heritage at Risk Register, including 1 Grade I, 4 Grade II* and 1 Grade II listed buildings. There are 6 scheduled monuments and a conservation area on the register (Historic England, 2023). There are 29 conservation areas in Wakefield (Wakefield Council, 2023), together with 3 registered historic parks and gardens, and a locally designated site of a historic battle in the district (Historic England, 2023).

Heritage buildings at risk

Historic England's Heritage at Risk programme aims to understand the overall state of England's heritage by assessing a number of different components. They aim to identify the features that are facing the greatest pressures and threats and then assess how to mitigate those pressures, estimating the level of resources that are needed to 'make safe' the UK's legacy of historic places.

The 2023 Heritage at Risk Register from Historic England includes conservation areas at risk as well as Grade I and II listed buildings, scheduled monuments, registered parks and gardens, registered battlefields and protected wreck sites. A total of 119 heritage at risk sites across the different West Yorkshire districts are shown in Table 16 below. This number includes a registered battlefield shared between Bradford, Leeds, and Kirklees councils (Battle of Adwalton Moor, Drighlington) (Historic England, 2023). There has been a slight decrease in the total number of registers since the 2022 survey (Historic England, 2022).

Table 16 Number of Heritage at Risk Sites for West Yorkshire Districts

District	Bradford	Calderdale	Leeds	Kirklees	Wakefield
No. of Heritage at Risk sites	27	24	30	25	13

Source: Historic England (2023)

Registered parks and gardens

The Historic England's 'Register of Historic Parks and Gardens of special historic interest in England', established in 1983 currently identifies over 1,600 sites assessed to be of national importance (Historic England 2023). A total of 48 was found in West Yorkshire, the number of sites within each district is shown in Table 17:

Table 17 Number of Registered Historic Parks and Gardens for West Yorkshire Districts

District	Bradford	Calderdale	Leeds	Kirklees	Wakefield
No. of Registered Historic Parks and Gardens	16	7	15	6	4

Source: Historic England (2023)

5.2.11 Green Belt

Green Belt is a statutory land use designation that is allocated in local development plans. A Green Belt designation will afford the allocated land protection from inappropriate development unless there are exceptional circumstances. The designation of Green Belt land aims to prevent urban spreading, in order to maintain the more open areas that are largely undeveloped. Each local authority designates its own Green Belt. Most of the land between the main urban areas of West Yorkshire is designated as Green Belt, including that surrounding the Leeds conurbation.

The latest CPRE Green Belt factsheet (2018) states that 249,505 hectares in South and West Yorkshire is designated as Green Belt (out of a total area of 1.6 million hectares of Green Belt in England). A portion of this Green Belt forms part of the buffer zone that protects views of the Saltaire World Heritage Site in Bradford. The following **Error! Reference source not found.** s hows the designated Green Belts in this area. 6.5% of the Green Belt in the South and West

Yorkshire region, or 16,351 hectares, is open access land; the highest amount and proportion of open access land of any Green Belt in England.

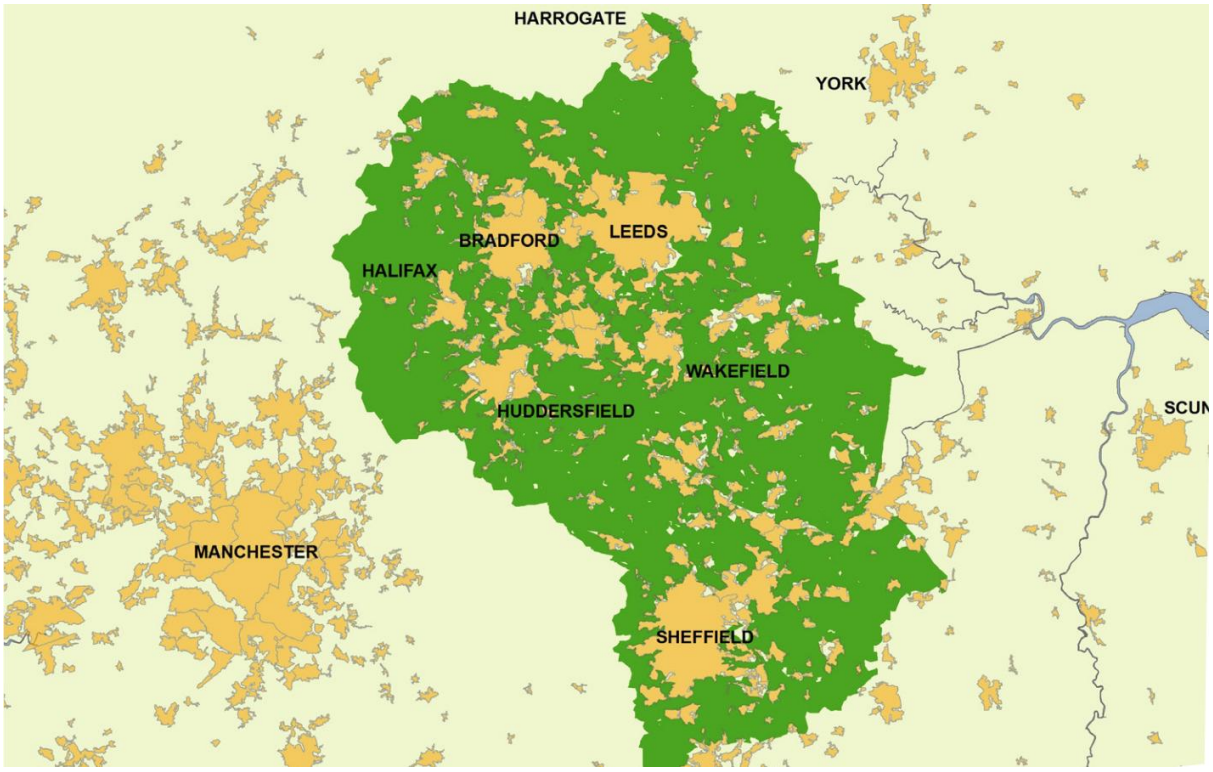


Figure 15: Green Belt in South and West Yorkshire

Source: CPRE (2018)

5.2.12 Green and blue infrastructure

The current West Yorkshire Plan identified 'enhance green and blue corridors and networks' as one of the priorities within the Green and Blue Infrastructure Strategy, where green and blue infrastructure need to be integrated with the transport routes that link towns, cities, and rural areas (WYCA, 2018). **Error! Reference source not found.** below maps green infrastructure corridors in W est Yorkshire. The region does not consist of any Areas of Outstanding Natural Beauty (AONB) and only a small part of designated national park falls within the boundary of the Kirklees district (Natural England, 2023).

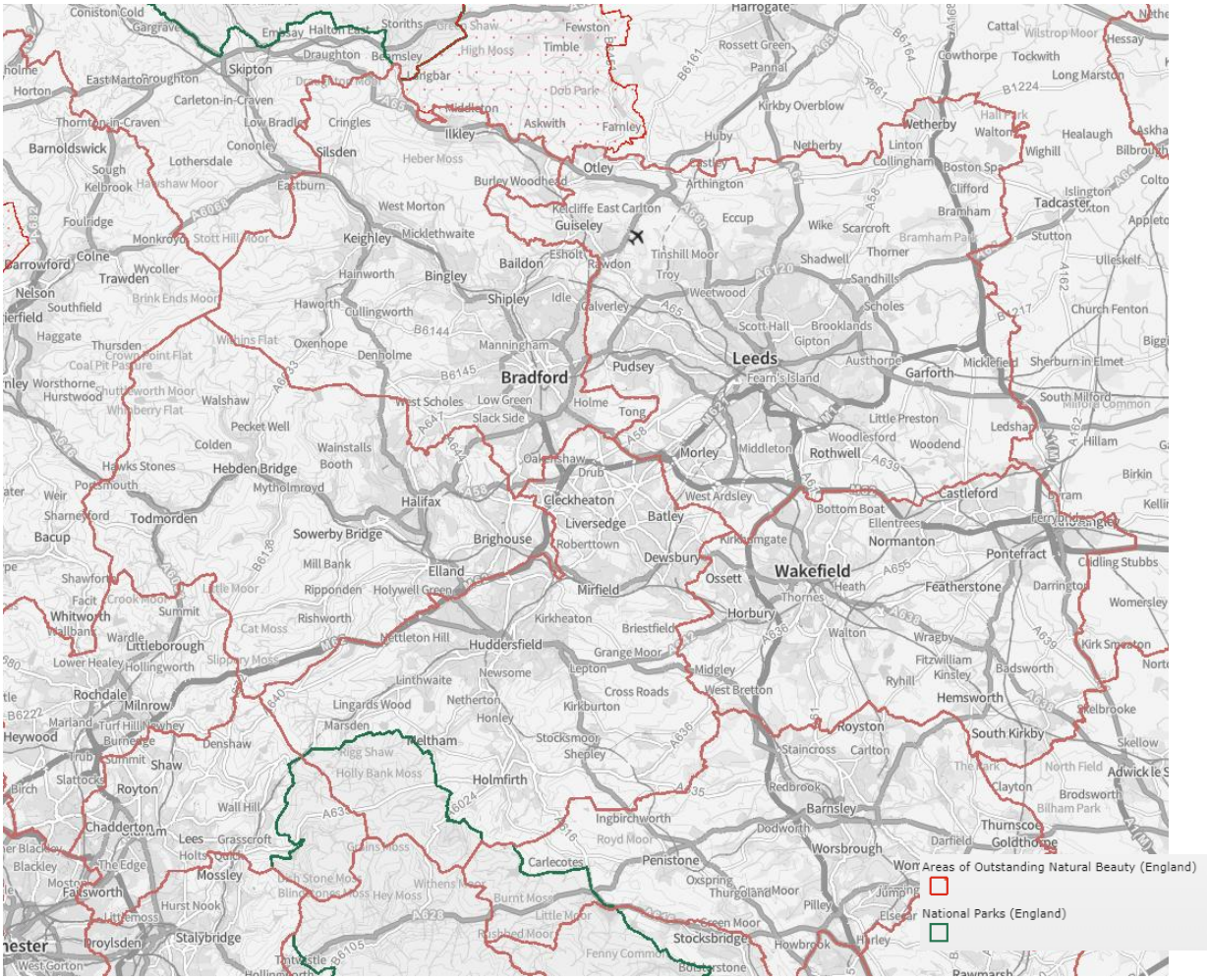


Figure 16: West Yorkshire Green Infrastructure Corridors

Source: Natural England (2023)

A key green infrastructure project in West Yorkshire is White Rose Forest; England's largest community forest working in partnership with local authorities, landowners, businesses, and communities to increase woodland across the region to improve the natural environment. This regenerative nature recovery scheme is working to plant millions of trees in urban centres and rural spaces to help manage flood risk, mitigate climate impacts, and provide space for healthy lifestyles. Their aim is to increase tree cover in North and West Yorkshire from 11% to 19% by 2050, which will annually sequester up to 50% of residual CO^2 emissions by 2050 (White Rose Forest, 2021).

A key project under the White Rose Forest scheme is Green Streets, which aims to increase tree canopy coverage along cycle paths and active travel routes across North and West Yorkshire. The map below highlights the Green Streets areas in West Yorkshire.

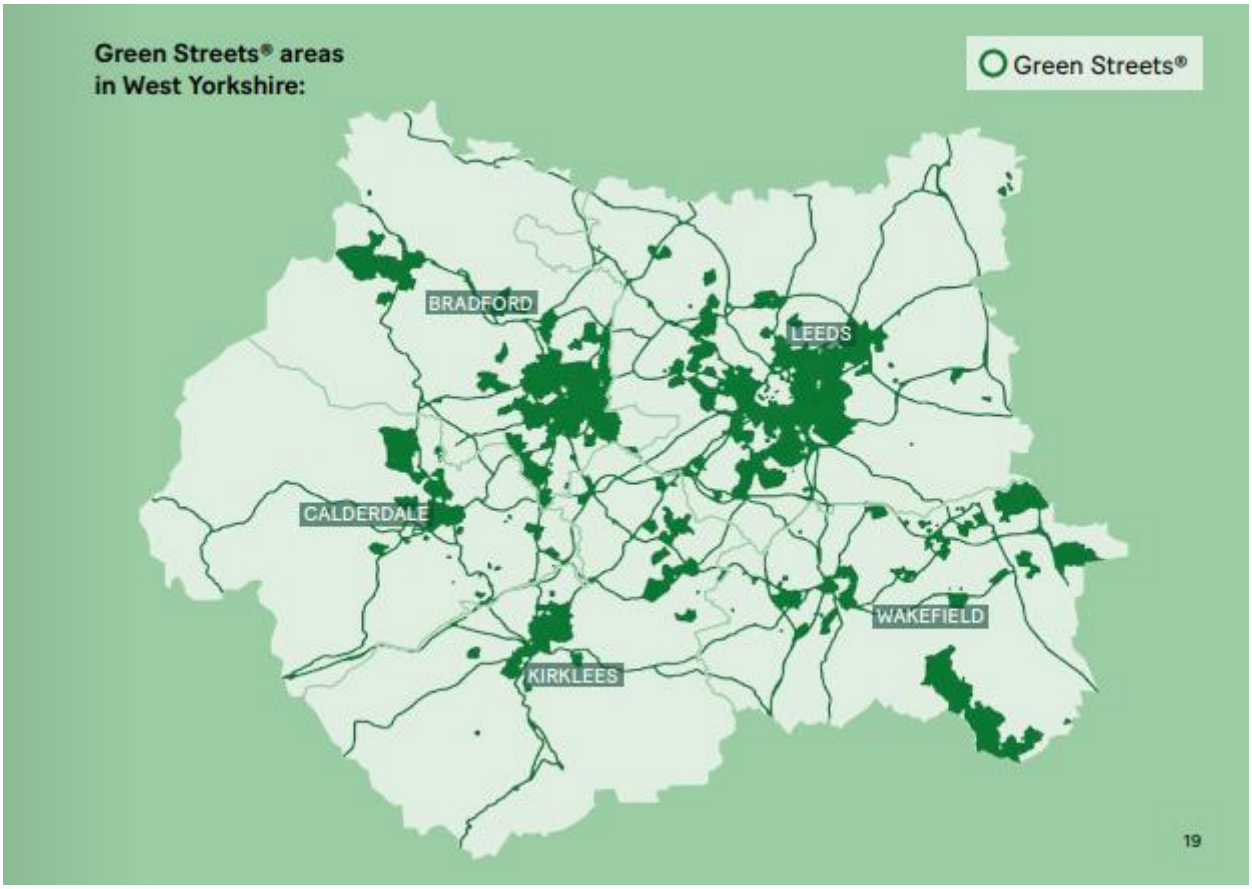


Figure 17: Green Streets areas in West Yorkshire

Source: White Rose Forest (2021)

Green Flag Awards for parks

The natural environment plays a critical role in underpinning a healthy, resilient population and forming strong ecosystem services. A high-quality and accessible natural environment is vital for humans, biodiversity and sustainable places. The Green Flag Award scheme is the benchmark national standard for publicly accessible parks and green spaces in England and Wales. It was first launched in 1996 to recognise and reward the best green spaces in the country. The number of awards for each individual district is presented in Table 18 below.

Table 18 Number of Green Flag Awards for West Yorkshire Districts

District	Bradford	Calderdale	Kirklees	Leeds	Wakefield
No. of awards	6	3	6	7	3

Source: City of Bradford MDC (2023); Calderdale Council (2023); Kirklees Council (2023); Leeds Council (2023); Wakefield Council (2022)

While some of the regions natural environment is in a good condition, this is by no means true for all West Yorkshire. Our biodiversity and ecosystem services are coming under increasing threat.

5.2.13 Contaminated land

Due to past industrial and other human activities, including former factories, mines, storage depots, steelworks, refineries and landfills, many areas of land in the UK have been contaminated. Transport infrastructure is also a frequent source of land contamination. Sites can be contaminated with a number of harmful substances, such as oils and tars, heavy metals, asbestos and chemicals; land contamination may also be caused by accidental release of substances to the environment, including from current day operations.

It Is difficult to knowIch land has beeI or is currently suffering from ongoing contamination. Therefore, the known sites of contamination may represent only a small percentage of the overall contaminated sites in England. Certain types of contaminated land are required to be designated as 'special sites', which include the following types of land as described in Regulation 2 of the Contaminated Land (England) Regulations 2006:

- Seriously affects drinking waters, surface waters or important groundwater sources;
- has been, or is being, used for certain industrial activities, such as oil refining or making explosives;
- is being or has been regulated using a permit issued under the integrated pollution control or pollution prevention and control regimes;
- has been used to get rid of waste acid tars;
- is owned or occupied by the Ministry of Defence;
- is contaminated by radioactivity; and,
- is a nuclear site.

Once a Local Council has decided that an area is a special site, it is then regulated by the Environment Agency. Table 19 below outlines the special sites within West Yorkshire:

Table 19 Special Sites of Contamination within West Yorkshire

Site ID	Site Name	County	Type
265	Mitchell Cotts Site	Yorkshire	Special site
481	Grosvenor Chemicals	Yorkshire	Special site

Source: Environment Agency (2024)

Within West Yorkshire, there are only 2 sites that have been identified as 'special sites', which are both within the Kirklees council area. The locations of the two sites are marked on the map below using their associated national grid reference:

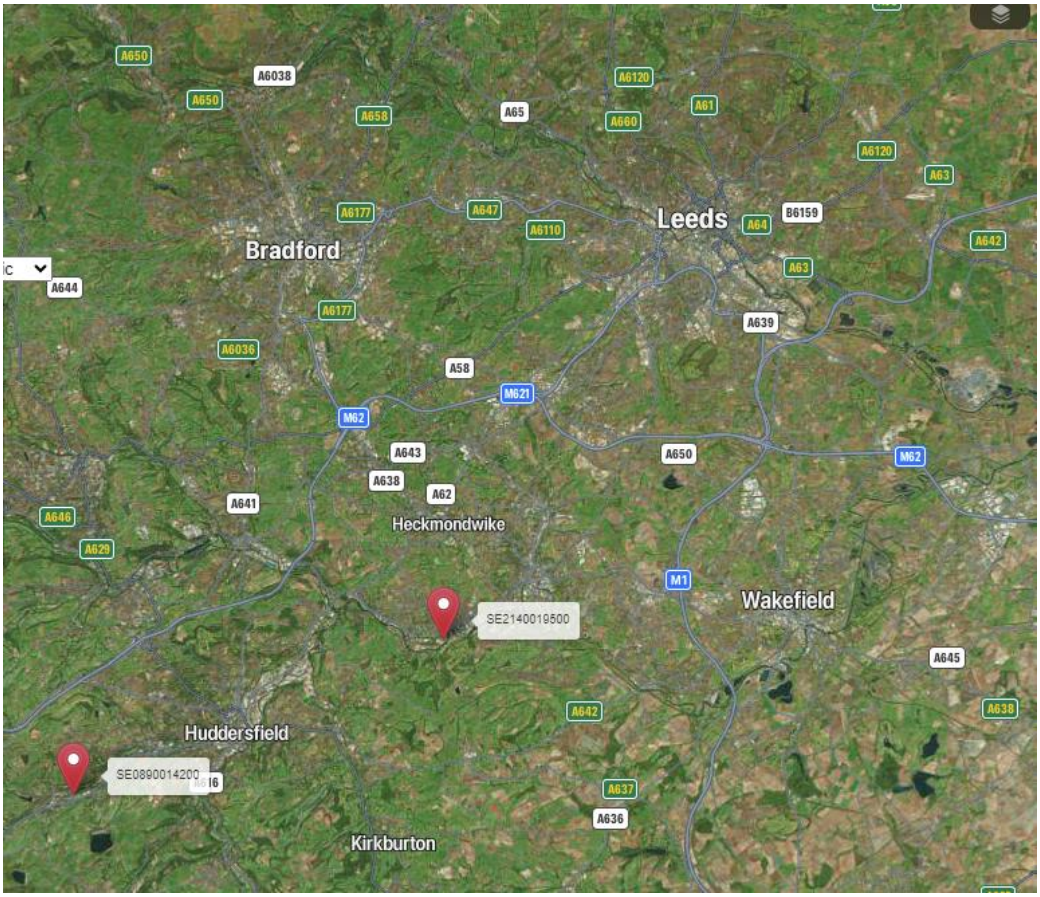


Figure 18: Locations of Special Sites within West Yorkshire

Source: Environment Agency (2024)

5.2.14 Soil

Little data is available on the quality and protection of soils within the Plan's area, particularly with regard to transport impacts. However, a proxy indicator of soil quality is the Agricultural Land Classification (ALC) which assesses the quality of farmland based on the assessment of climate, site and soil characteristics. Figure 19: illustrates the ALC across the West Yorkshire area, which indicates that there is little high-quality soil in West Yorkshire (Natural England, 2011).

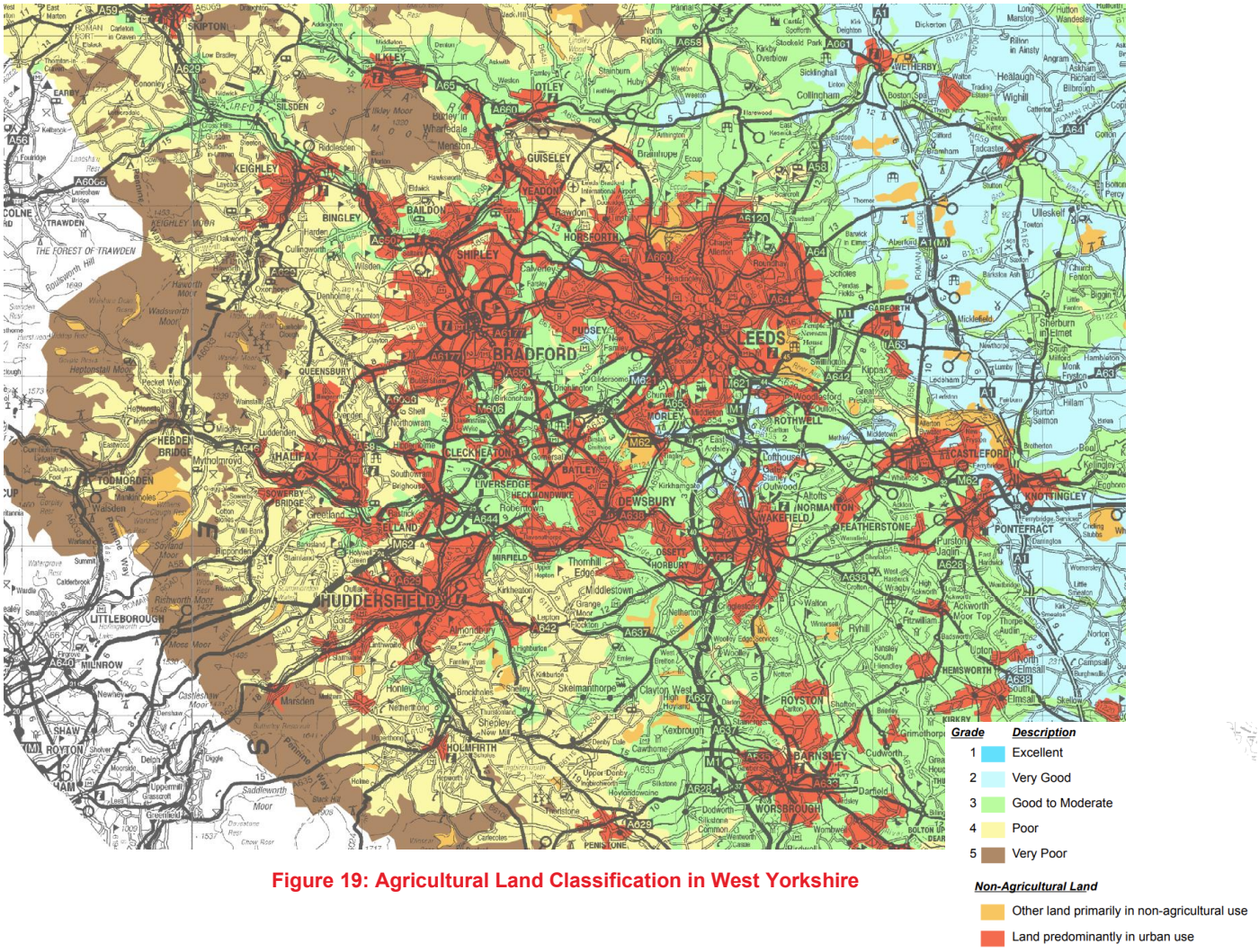


Figure 19: Agricultural Land Classification in West Yorkshire

Source: Natural England (2011)

2.53% of land in Yorkshire and the Humber is designated as previously developed land that has been vacant or derelict for more than 5 years (National Indicator 170). This is higher than the national average of 1.56% overall, and the third highest of the regions in England (MHCLG, 2014) The percentage for each district is set out in Table 20 below:

Table 20 Percentage of NI 170 Sites in Each District

District	Bradford	Calderdale	Kirklees	Leeds	Wakefield
% of NI 170 sites	0.15	1.27	2.17	4.77	4.22

Source: MHCLG (2014)

Peat

Peatland is an important natural asset that functions as carbon store, wildlife habitat, and flood controller (National Trust). In 2021, the UK Government published the England Peat Action Plan, which sets out the government's long-term vision for the management of peatlands. The Plan acknowledges peatland restoration as a key step for meeting the Net Zero and wider environmental goals. 35,000 hectares of peatland restoration will be funded by 2025 through the Nature of Climate Fund and other source (UK Government, 2021).

The locations of peaty soils across West Yorkshire are illustrated in Figure 20: . The presence of peat in West Yorkshire is not extensive, with most peaty soils clustered in the northern and the western part of Bradford, the western part of Calderdale, and near the south-western boundary of Kirklees. Leeds and Wakefield area only consists of few locations of small-sized peatland (Natural England, 2022).

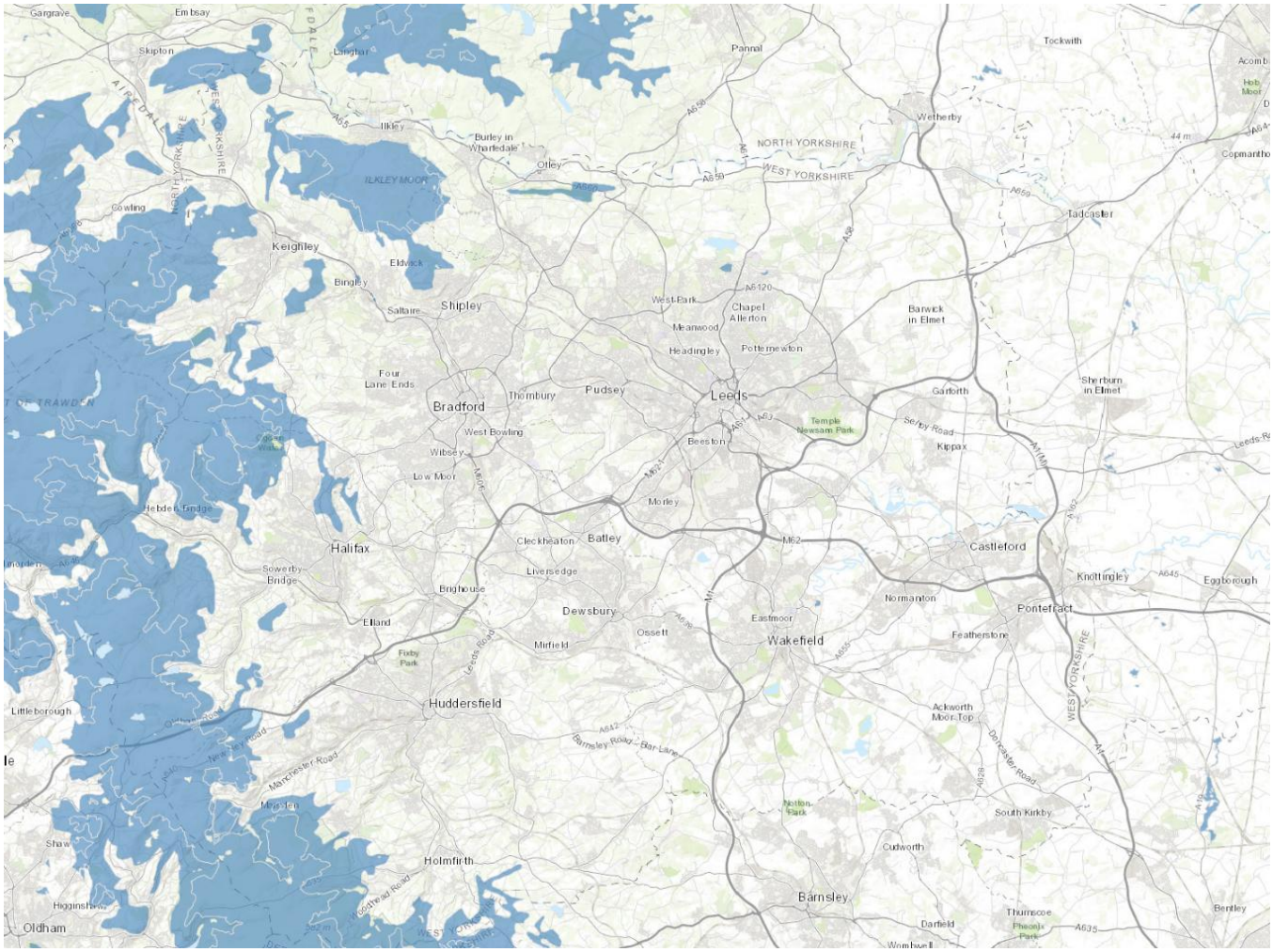


Figure 20: Peaty Soils Location in West Yorkshire

Source: Natural England (2022)

5.2.15 Water

West Yorkshire falls within the Humber River Basin Management Plan (Environment Agency, 2022), within which water has played an important role in the growth of the cities and manufacturing industries. According to Canal & River Trust's latest update (2024), West Yorkshire comprises of the following rivers:

- Aire & Calder Navigation Main Line, which flows through the Bradford and Leeds districts;
- Calder & Hebble Navigation, which flows through Calderdale district;
- Huddersfield Broad Canal, which flows through Kirklees district;

- Huddersfield Narrow Canal, which flows through Kirklees district;
- Leeds & Liverpool Canal, which flows through the Bradford and Leeds districts;
- Rochdale Canal, which flows through Calderdale district;
- Wakefield Branch (Aire & Calder Navigation), which flows through Wakefield.

There are 18 management catchments within the Humber River Basin District, including 2 management catchments that comprises operational catchments across the entire river basin district, namely Humber AWB catchment and Humber GW catchment. Apart from the two district-wide catchments, those which West Yorkshire falls within are the Aire and Calder Catchment and the Wharfe and Lower Ouse Catchment.

The Aire and Calder catchment covers an area from the Pennines and Yorkshire Dales to low-lying floodplains. It includes most of Bradford, Leeds, Calderdale, Kirklees, and Wakefield, as shown in **Error! Reference source not found.**. There is an extensive canal network in the catchment, i ncluding the Leeds Liverpool Canal which is the longest in Britain. This catchment area is managed by the Aire Catchment Network Partnership and the Partnership have set vision for The River Aire and its catchment to be recognised as a gold standard example of the recovery of a post-industrial river. The main challenges that the catchment is currently facing is pollution from wastewater, physical modifications, and pollution from agriculture and rural areas (Environment Agency, 2023).

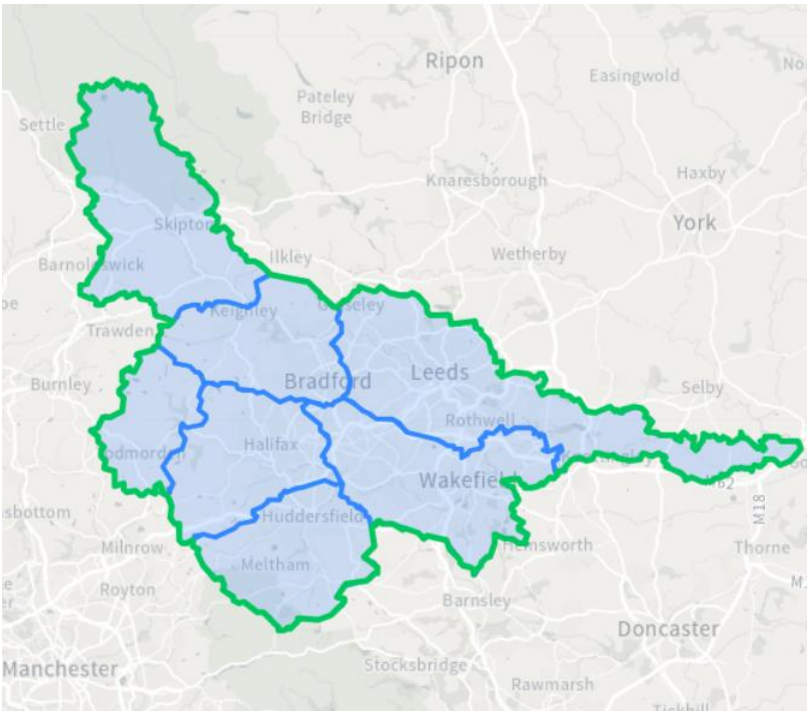


Figure 21: Aire and Calder Management Catchment Area

Source: Environment Agency (2022)

The 2022 update of the Humber River Basin District Management Plan (Environment Agency, 2022) provides details about the current condition of rivers and water bodies within the Aire and Calder catchment. Table 21 below sets out the ecological status and potential of surface waters within the catchment, indicating only 8% of all water bodies within the catchment are at good or better ecological status/potential, whereas the majority of the rivers, canals, SWTs and Lakes have set relevant objectives to achieve good or better status.

Table 21 Current Condition of Water Bodies in the Aire and Calder Catchment

Summary Statistic	Rivers, Canals and SWTs	Lakes	Surface Waters Combined
% of water bodies at good or better ecological status/potential	9%	6%	8%
% of biological elements, phys-chem elements and specific pollutants at good or better status	80%	100%	81%
% of water bodies with an objective of good ecological status/potential or better	68%	84%	74%
% of biological elements, phys-chem elements and specific pollutants with an objective of good status or better	91%	100%	92%

Source: Environment Agency (2022)

The Wharfe and Lower Ouse catchment covers an area from the North and South Pennine Moors and Yorkshire Dales National Park to the towns of Selby, Tadcaster and Selby. The greatest uses of water in the catchment are fish farming, public water supply, and industrial and commercial activities. The rivers are also used for recreation and leisure activities, including canoeing and angling. This catchment is currently managed by Dales to Vale Rivers Network Partnership, that aim to support the needs and well-being of the biodiversity and communities within the river environments of the Swale, Ure, Nidd, Ouse and Wharfe. Currently, the biggest challenges of managing the Warfe and Lower Ouse catchment are physical modifications, pollution from wastewater, and pollution from agriculture and rural areas (Environment Agency, 2023).

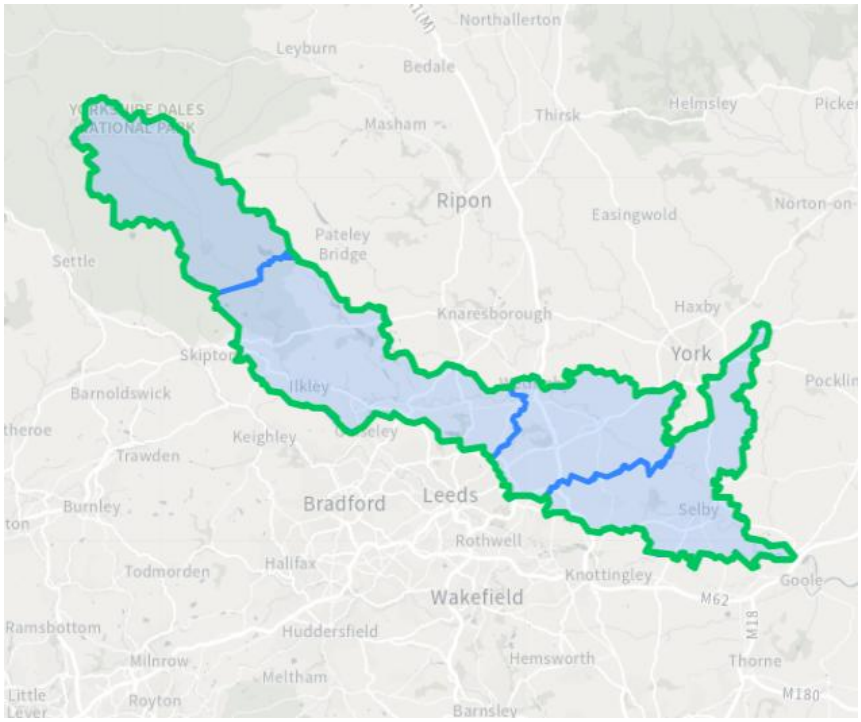


Figure 22: Wharfe and Lower Ouse Management Catchment Area

Source: Environment Agency (2022)

Details of the current condition of rivers and water bodies within the Wharfe and Lower Ouse catchment are set out in Table 22 below, indicating that 95% of the rivers, canals and SWTs have set an objective of good status of better in biological elements, phys-chem elements and specific pollutants, but only 23% of water bodies are at good or better ecological status/potential:

Table 22 Current Condition of Water Bodies in the Wharfe and Lower Ouse Catchment Area

Summary Statistic	Rivers, Canals and SWTs	Lakes	Surface Waters Combined
% of water bodies at good or better ecological status/potential	23%	0%	19%
% of biological elements, phys-chem elements and specific pollutants at good or better status	85%	63%	84%
% of water bodies with an objective of good ecological status/potential or better	73%	33%	66%
% of biological elements, phys-chem elements and specific pollutants with an objective of good status or better	95%	83%	94%

Source Environment Agency (2022)

The State of the Region Review 2022 (WYCA, 2022) indicates that around 3% of residential properties and 13% of commercial properties in West Yorkshire fall within a flood risk zone. Whilst this may seem like a low proportion, flooding incidents have had severe regional impacts in recent years, such as the Boxing Day floods of 2015, when the River Calder burst its banks. This caused damage to over 6,000 homes and businesses, costing the regional economy an estimated half a billion pounds (WYCA, 2023). Further serious flooding has occurred in Calderdale, including Storm Ciara in February 2020, and since then Calderdale have faced 16 additional flood alerts (Calderdale Council, 2021).

Flooding is likely to become a more frequent occurrence as a result of climate change and the intensity of its effects. In order to address the emerging concern, all five districts within West Yorkshire have published a Strategic Flood Risk Assessments (SFRAs) as follows, to address flood risks across their management area:

- The Bradford Level 1 Strategic Flood Risk Assessment (2023) indicates that flood risk across Bradford is varied, including main fluvial risk from the River Aire, River Wharfe and their tributaries through the north and centre of the district, surface water risks across the district, groundwater risks concentrated to the west of city centre, Keighley, Burley-in-Wharfedale and Addingham, and reservoir flood risk confined to areas downstream near reservoir. The SFRA provides recommendation to Bradford's planning policies, including development restriction within the functional floodplain, consideration of surface water flood risk at an equal weight as fluvial risk, consideration for climate change modelled extents, utilisation of the sequential approach in site allocation and site layout, development requirements for appropriate investigation and the use of SuDS, consideration for natural flood management techniques, phasing of developments, and granting of planning permission subject to appropriate site-specific FRA has been provided.
- Leeds City Council's SFRA (2007) suggests that there are over 2,000 properties at 'significant' risk of river flooding within the District of Leeds, susceptible to a 1.33% chance of flooding. The River Aire via Leeds, and the River Wharfe were highlighted by DEFRA as susceptible to flooding, and this occasionally leads to flooding in the Kirkstall area and the A65 / A659. Parts of the rail network are also affected by flooding, including at Kirkstall.
- In 2022, Leeds City Council produced a Local Plan Update including the Flood Risk Background Paper (2022) as a Development Plan Document. The update aims to address the changing climate, pointing out an increase in local rainfall and its potential impacts on flood risks. With an updated assessment approach, the 2022 SFRA seeks to recognise the high level of flood risk but not necessarily restrict existing developments. It highlights that developers should take into account of both flood alleviation schemes and residual risks during early stage

of planning and encourages more sustainable drainage systems to be used for managing surface water.

- The Calderdale MBC Local Flood Risk Management Strategy (2016) sets out 4 principle objectives 5 different measures to tackle the complex and interconnected sources of flooding created by main rivers, canals and reservoirs within Calderdale. This include the utilisation of flood risk asset data register, surface water management plans, development control, natural flood management, and the prioritisation of schemes to build better understanding of flood risk issues and better prepare Calderdale for flood events. In total, the approved and potential capital and revenue funding available for flood risk management reached £92.945m.
- The Calder Catchment Strategic Flood Risk Assessment (Calderdale Council, Kirklees Council, and Wakefield Council, 2016) is a joint study of Calderdale, Kirklees, and Wakefield councils, and is used by both Kirklees and Wakefield councils as their main SFRA document. The study area covers the majority of the River Calder catchment, taking in the metropolitan boroughs of all three districts. Volume 1 of the SFRA sets 11 aims and objectives to inform local plans and explains the general sources and risks of flood, as well as definitions within national policies, where Kirklees and Wakefield produced separated area focused strategies as Volume 2 of the SFRA.
- The Kirklees Local Flood Risk Management Strategy (2024) identified 35,000 properties in Kirklees that are currently at risk or will be affected from surface water flooding in a 1 in 1,000-year rainfall event, and 9,000 at risk from main rivers in a 1 in 1,000-year fluvial event, where the numbers are expected to increase in the future due to climate change. The strategy sets out its vision to develop resilience in their communities to flooding both now and in the future, and to enhance the environment for future generations.
- The Calder Catchment SFRA – Volume II (Wakefield Council) (2016) suggests that catchments A5 (covers Castleford), C8 (Covers Wakefield), and E2 (covers South Kirkby and Hemsworth) are the highest risk catchments, whilst areas of Knottingley, Pontefract and Featherstone have medium to high numbers of properties at risk.

Leeds City Region have also published guidance on Sustainable Drainage Systems (SUDs) (Leeds City Region, 2020) to promote the use of SUDs in new developments to protect people and property from flood risk.

The local authorities are expected to continually place these documents under review and given the likely interaction between transport infrastructure and flood risk, it may be prudent to regularly check any mapping revisions throughout the lifetime of the West Yorkshire Mass Transit scheme.

The flood zone designations are illustrated in **Error! Reference source not found.**. Flood zones a re commonly found alongside main river areas, where the Aire Valley and River Wharfe are

associated with the most Flood zone 3 areas, where there is a 1% or higher chance of flooding from rivers.

Figure 23: Flood Zones in West Yorkshire

Source: Environment Agency (2023)

The Humber River Basin District Management Plan has also collected challenges data for the District, providing the reasons for not achieving good status by business sector. The data is displayed in Table 23, which indicates that physical modifications and pollution from waste water are the main causes for significant water management issues within the area.

Table 23 Challenges Data for Humber River Basin District

Significant water management issue	Changes to the natural flow and level of water	Invasive non-native species	Physical modifications	Pollution from abandoned mines	Pollution from rural areas	Pollution from towns, cities, and transport	Pollution from waste water
Agriculture and rural land management	21	0	223	0	721	0	2
Domestic general public	0	0	4	0	0	107	6
Industry	5	0	39	0	0	61	3
Local & central government	0	0	212	0	0	0	1
Mining and quarrying	0	0	2	71	0	3	0
Navigation	4	0	15	0	0	1	0
No sector responsible	0	9	0	0	0	0	0
Other	3	0	24	0	0	3	0
Recreation	0	0	14	0	0	5	0
Sector under investigation	1	0	45	0	0	0	0
Urban and transport	0	0	211	0	0	294	0
Waste treatment and disposal	0	0	0	0	0	13	0
Water Industry	49	0	143	0	0	0	789
Total	83	9	932	71	721	487	801

Source: Environment Agency (2022)

Nationally, pollution from towns, cities and transport constitutes 18% of the damage to water bodies, as of 2019. Urban and transport pollution could enter the water environment through rain water that runs off roads, car parks, industrial areas, contaminated land, pavements, and roofs that contained pollutants. Specifically, road network pollutants come from tyre and brake wear, exhaust emissions, oil and fuel deposits (Environment Agency, 2021).

The Environment Agency (2024) has defined source protection zones for 2000 groundwater sources that are used for public drinking water supply. The SPZs show the risk of contamination

from pollution causing activities and the closer the activity, the greater the risk. Pollution prevention measures are introduced in areas which are at a higher risk.

Error! Reference source not found. below shows the source protection zones within West Y orkshire and demonstrates that there is a sensitive area in North East Leeds and no significant SPZs in any other part of the region.

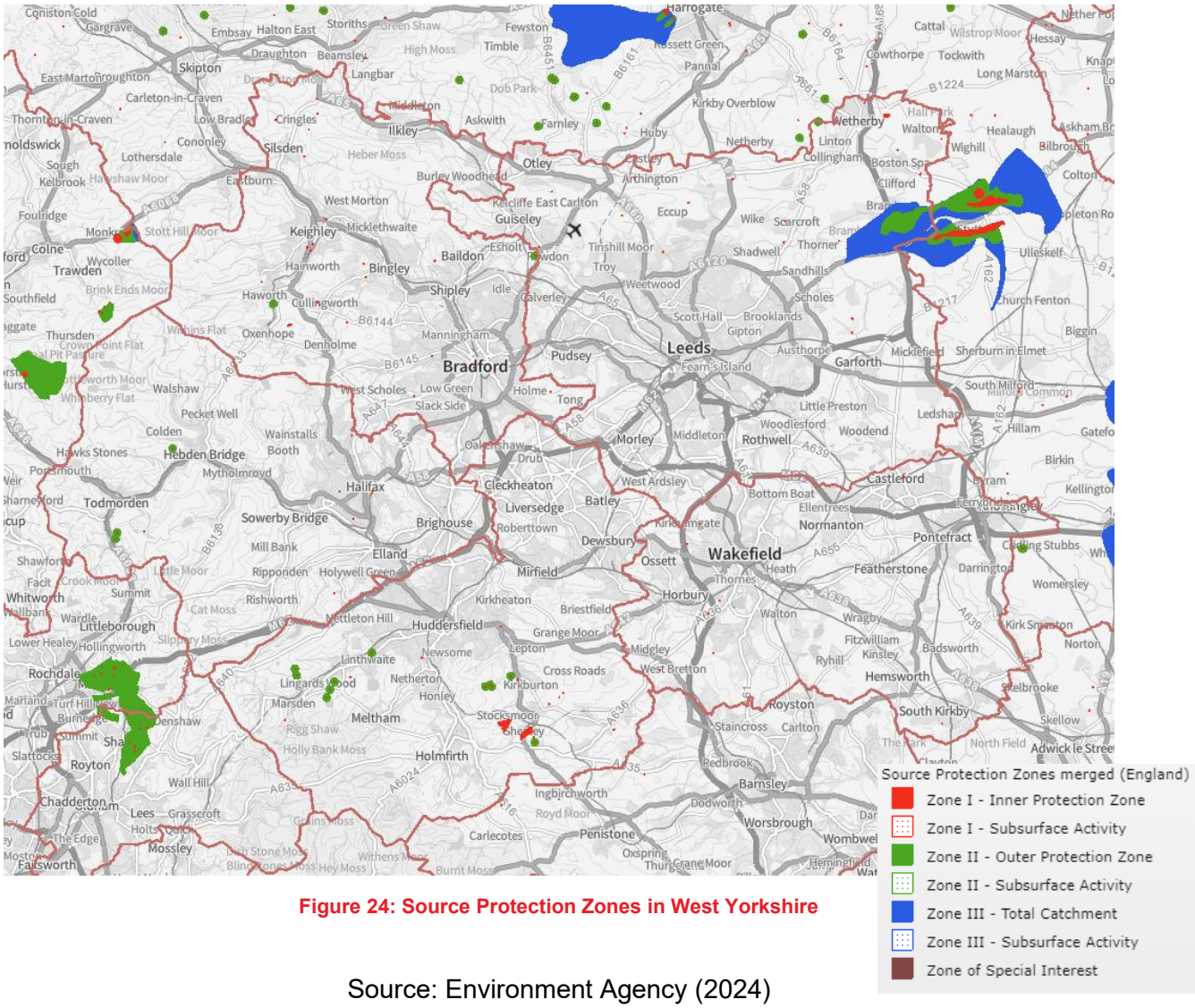


Figure 24: Source Protection Zones in West Yorkshire

Source: Environment Agency (2024)

5.2.16 Waste and material assets

Waste management

The five districts within West Yorkshire are managed by each of their local waste planning authorities (WPA) at the district council level. In West Yorkshire, the WPA of each district is the same as their local planning authority. Table 24 outlines the regional picture of waste in West Yorkshire and England. The West Yorkshire data was calculated by adding up available data of each district, where the most up-to-date evidence base at each council level are produced at different times, therefore the provided data is only indicative. The year of publication for dataset at each council level is also provided in Table 24.

Table 24 Waste Overview Across West Yorkshire and England

District	Total Waste Arisings	Landfill	Reused/Recycled/Composted
Bradford (2011/12)	1,115,908	43,382	55,531
Calderdale (2013/14)	555,168	13,431	52,418
Kirklees (2014/15)	872,300	104,714	193,030
Leeds (2009/10)	2,816,063	850,000	880,020
Wakefield (2005)	2,306,190	731,517	670,768
West Yorkshire	7,665,629	1,743,044	1,851,767
England (2018)	187,305,523	44,078,888	114,887,405

Source: City of Bradford MDC (2014), Calderdale Council (2016), Kirklees Council (2016b), Leeds Council (2010), Wakefield Council (2009), DEFRA (2023)

According to the available data, Leeds contributes the most to total waste arisings across West Yorkshire, followed by Wakefield and Bradford. The amount of waste going to landfill is still significant, but at similar level of waste being reused or recycled.

All five district councils have produced waste management strategies to address local waste management needs, despite most of the strategies were not up to date. A brief description of each waste management strategy is provided below:

- The Bradford Waste Management DPD (2017) outlines a vision for Bradford to take responsibility for the waste it generates through more sustainable waste management. Re-use and recycling of waste will be largely encouraged, while disposal will only be a last resort.
- Waste policies form part of the Calderdale Local Plan (2023), where waste management facilities must support the waste hierarchy in the order of priority as prevention, preparing for reuse, recycling, other recovery, including energy recovery, and disposal.
- The Kirklees Resource & Waste Strategy 2021 – 2030 (2021) sets out an overall vision for Kirklees to be a district that combines a strong, sustainable economy with a great quality of life, where the council aims to minimise waste production and increase recycling and reuse of items.

- The Waste Strategy for Leeds 2019 to 2021 (2019) aims for Leeds to become a world leader in eliminating unnecessary waste and its environmental impact, which should be achieved by supporting recycling, reducing excess waste, and getting the most out of existing management resources.
- Wakefield's Waste Development Plan Document (2009) has been revoked by the council on 24 January 2024. The council has signed a 25-year contract with Shanks Waste Management (now Renewi UK Services Ltd) in 2013 to manage waste across the district.

Coal

The Coal Mining Reporting Area in Coal Authority's coal mining data (2023) covers all of Wakefield and Kirklees council area, and most of Leeds, Bradford, and Calderdale council area. The reported land in all five councils in West Yorkshire are mostly recorded as Surface Coal Resource Areas, which define areas where coal resources can be extracted by surface mining methods. Leeds, Wakefield and Kirklees also largely comprise Development High Risk Area, where a potential for instability or a degree of risk to the surface from the legacy of coal mining operations is present.

Mine entry, abandoned mines catalogue, past and current surface mining, past shallow coal mine workings, were found within all council areas in West Yorkshire, associated with some mine entry potential zone of influence. Probable shallow coal mine workings and coal outcrops were also identified, although this does not imply that mineral extraction would be viable or acceptable in these areas. The distribution of such features in each council area are illustrated in Figure 25: , Figure 26: , **Error! Reference source not found.**, Figure 28: , and Figure 29: .

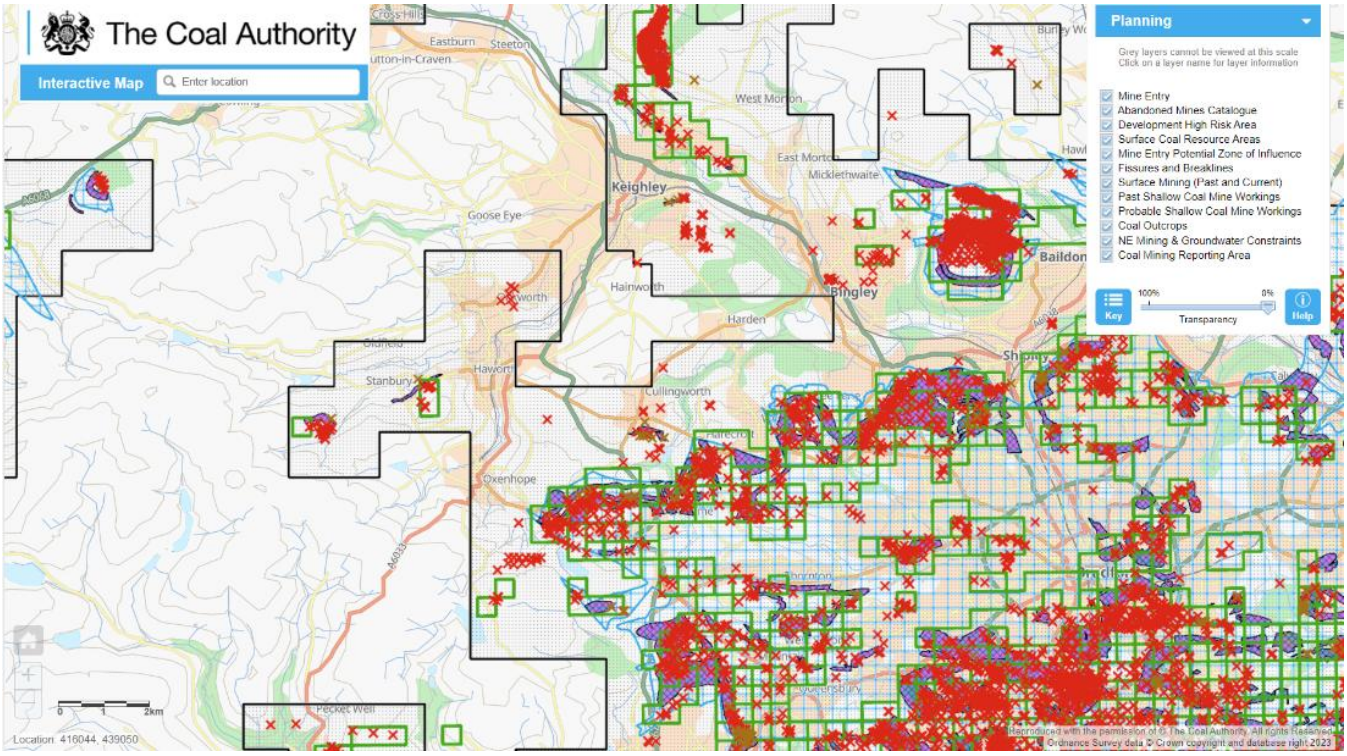


Figure 25: Coal Features in Bradford

Map Key

Mine Entry

- Adit
- Gutter Pit
- Shaft

Abandoned Mines Catalogue

Development High Risk Area

Surface Coal Resource Areas

Mine Entry Potential Zone of Influence

Fissures and Breaklines

Surface Mining (Past and Current)

Past Shallow Coal Mine Workings

Probable Shallow Coal Mine Workings

Coal Outcrops

NE Mining & Groundwater Constraints

Category

- B
- C1
- C2
- D

Coal Mining Reporting Area

Source: The Coal Authority (2023)

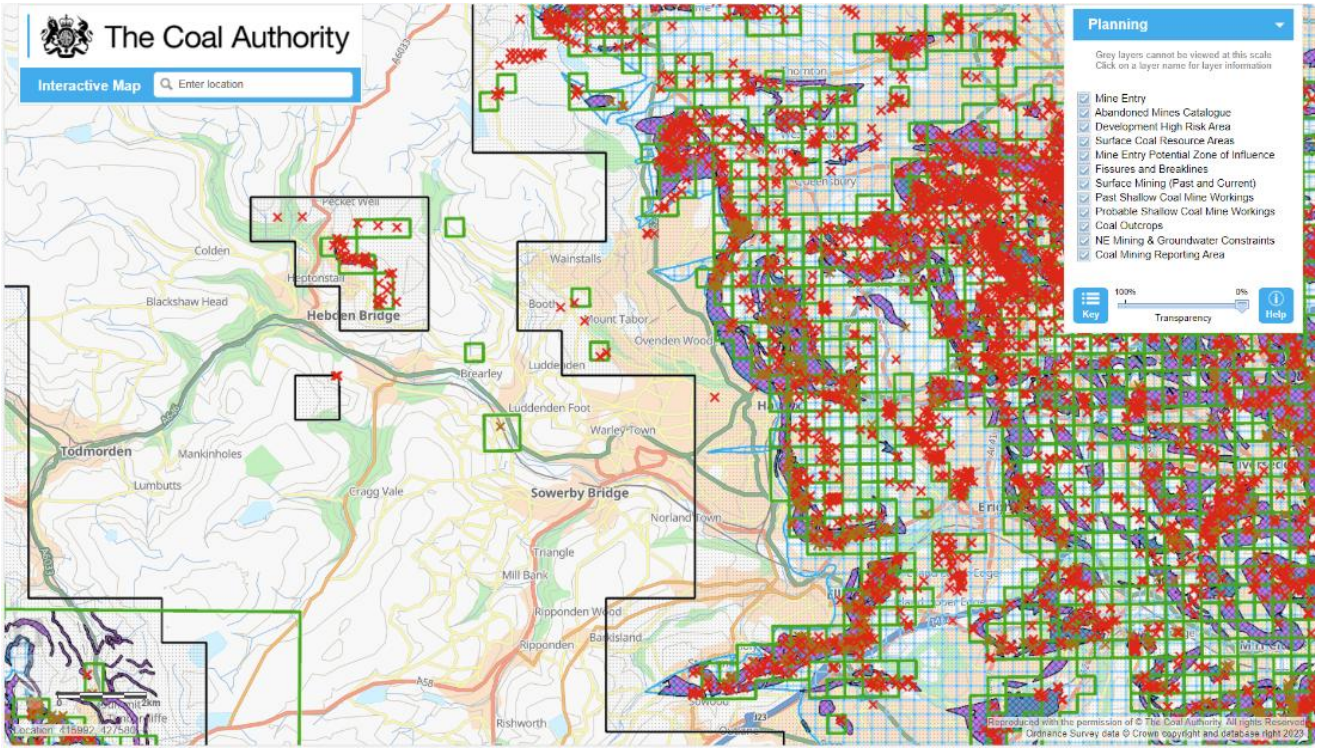


Figure 26: Coal Features in Calderdale

Map Key

Mine Entry

- Adit
- Gutter Pit
- Shaft

Abandoned Mines Catalogue

Development High Risk Area

Surface Coal Resource Areas

Mine Entry Potential Zone of Influence

Fissures and Breaklines

Surface Mining (Past and Current)

Past Shallow Coal Mine Workings

Probable Shallow Coal Mine Workings

Coal Outcrops

NE Mining & Groundwater Constraints

Category

- B
- C1
- C2
- D

Coal Mining Reporting Area

Source: The Coal Authority (2023)

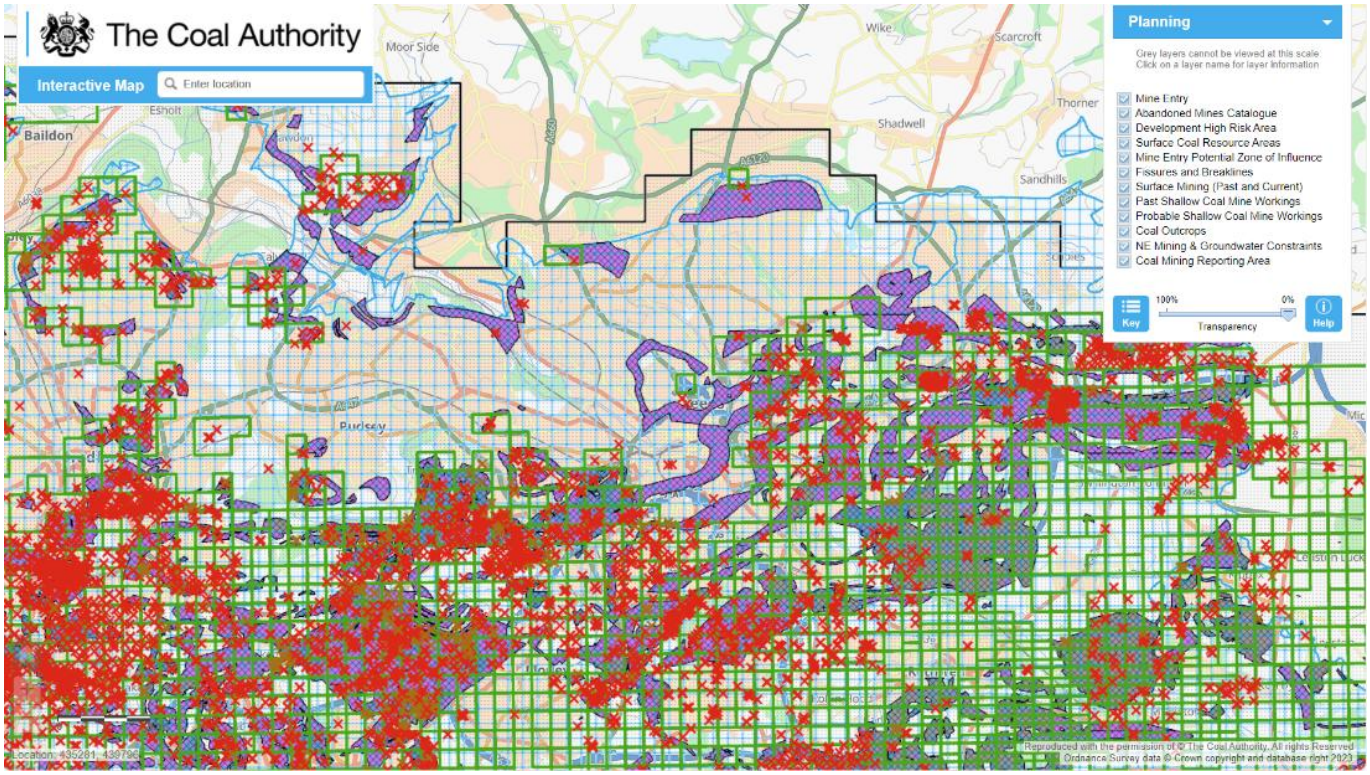


Figure 27: Coal Features in Leeds

Map Key

Mine Entry

- Adit
- Gutter Pit
- Shaft

Abandoned Mines Catalogue

Development High Risk Area

Surface Coal Resource Areas

Mine Entry Potential Zone of Influence

Fissures and Breaklines

Surface Mining (Past and Current)

Past Shallow Coal Mine Workings

Probable Shallow Coal Mine Workings

Coal Outcrops

NE Mining & Groundwater Constraints

Category

- B
- C1
- C2
- D

Coal Mining Reporting Area

Source: The Coal Authority (2023)

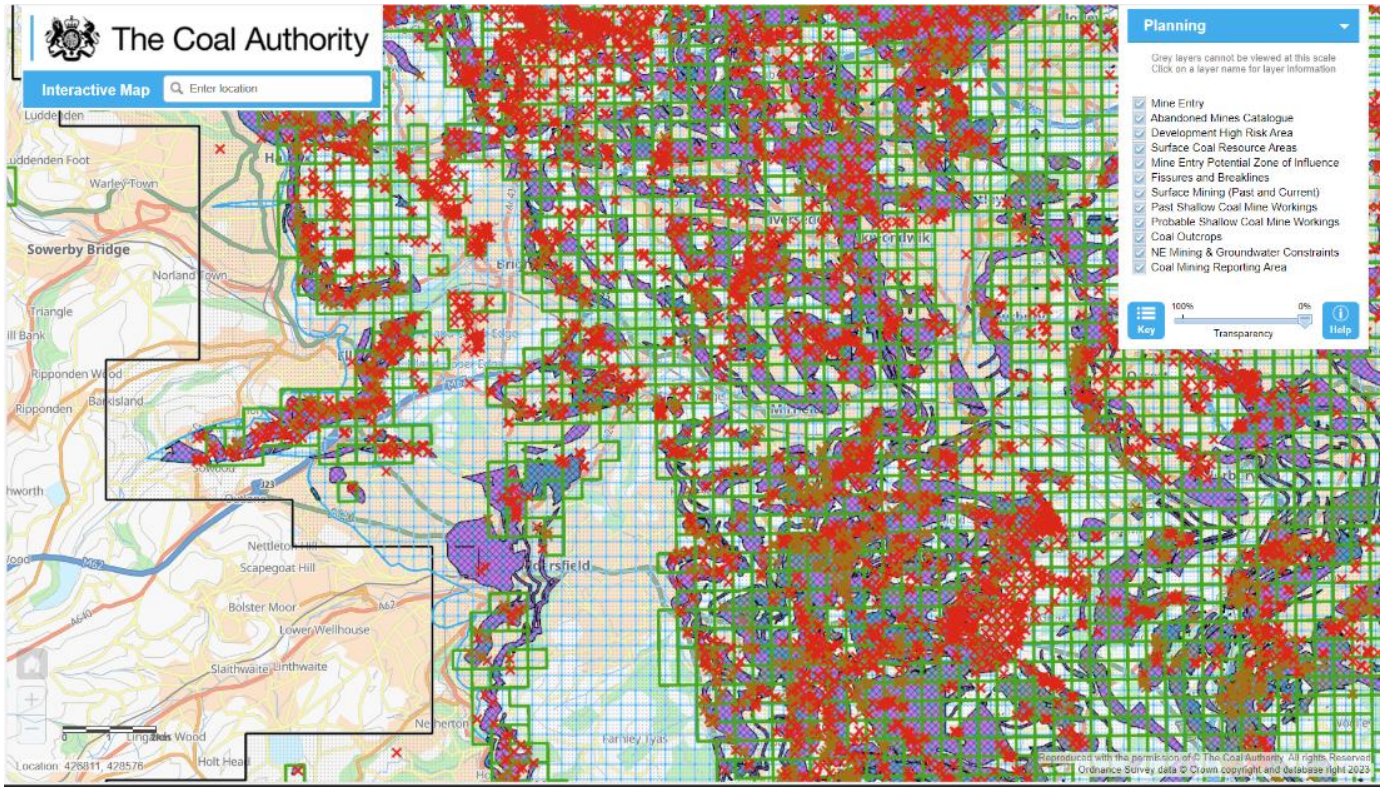


Figure 28: Coal Features in Kirklees

Map Key

Mine Entry

- Adit
- Gutter Pit
- Shaft

Abandoned Mines Catalogue

Development High Risk Area

Surface Coal Resource Areas

Mine Entry Potential Zone of Influence

Fissures and Breaklines

Surface Mining (Past and Current)

Past Shallow Coal Mine Workings

Probable Shallow Coal Mine Workings

Coal Outcrops

NE Mining & Groundwater Constraints

Category

- B
- C1
- C2
- D

Coal Mining Reporting Area

Source: The Coal Authority (2023)

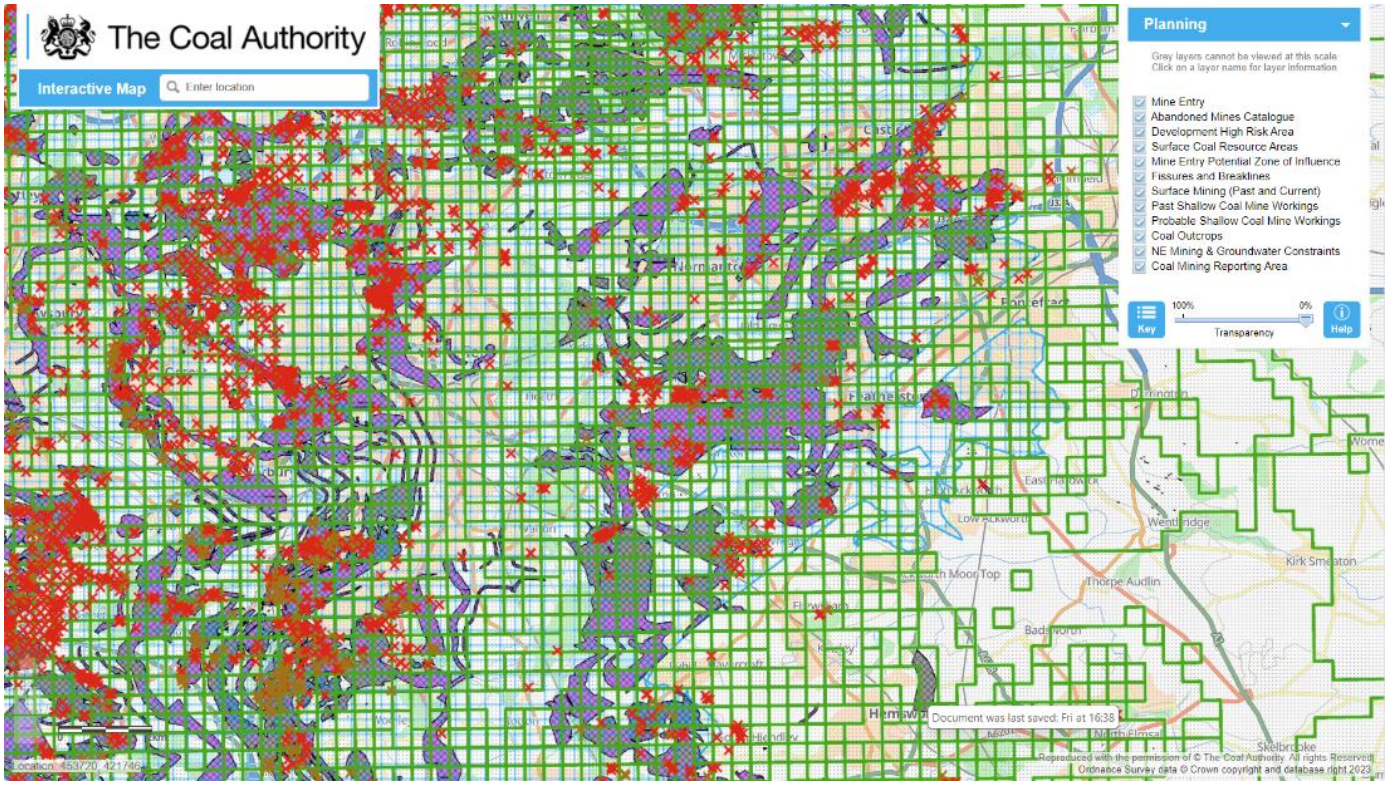
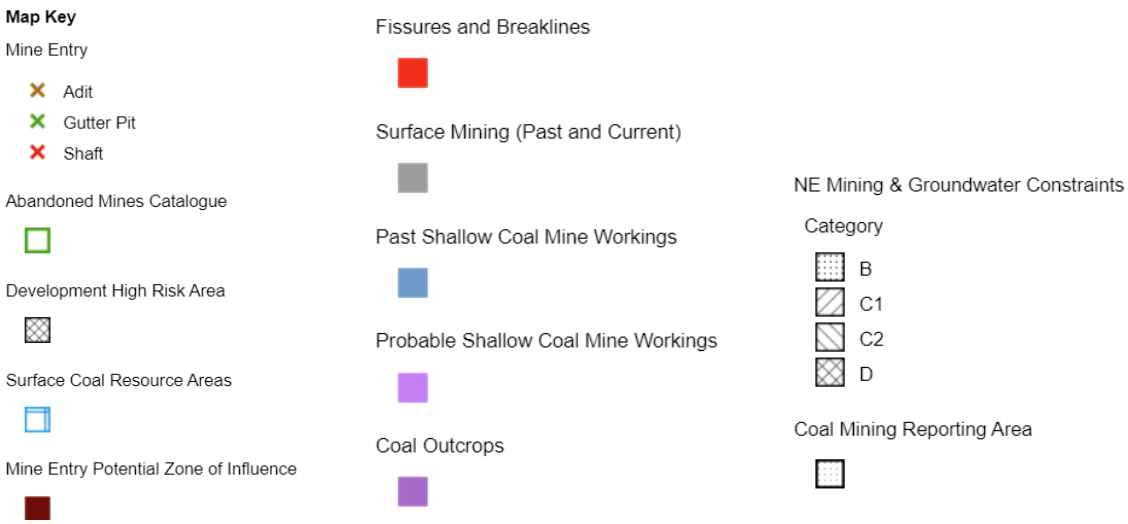


Figure 29: Coal Features in Wakefield



Source: The Coal Authority (2023)

Other Mineral Assets

Government policy promotes the conservation and management of minerals to ensure that an adequate supply is available to meet needs across the country.

The West Yorkshire Combined Authority has produced a West Yorkshire Local Aggregate Assessment (2022), which provides 2021 data for mineral resources in West Yorkshire. The Assessment indicates there are currently two sand and gravel extraction sites active in West Yorkshire, providing a 10-year sales average of 70,000 tonnes, and another 930,100 tonnes for crushed rock annually.

Plans and information regarding mineral safeguarding at district level were produced in various formats across each district. The key policies and findings for each council area are summarised below.

The City of Bradford MDC has produced a detailed minerals plan (Section 5.5) as part of their Core Strategy (2017). Policy EN9 states that proposals to open up new minerals extraction sites on previously undeveloped land will be supported, subject to no adverse impact will be induced. Policy EN10, EN11 suggest that the council will seek to contribute to the maintenance of a landbank of at least 7 years supply of sand and gravel reserves, and Policy EN12 suggests that allocation of Minerals Safeguarding Areas including for sandstone, coal and sand and gravel resources will be protected. The minerals safeguarding plan of Bradford is provided in Figure 30: below.

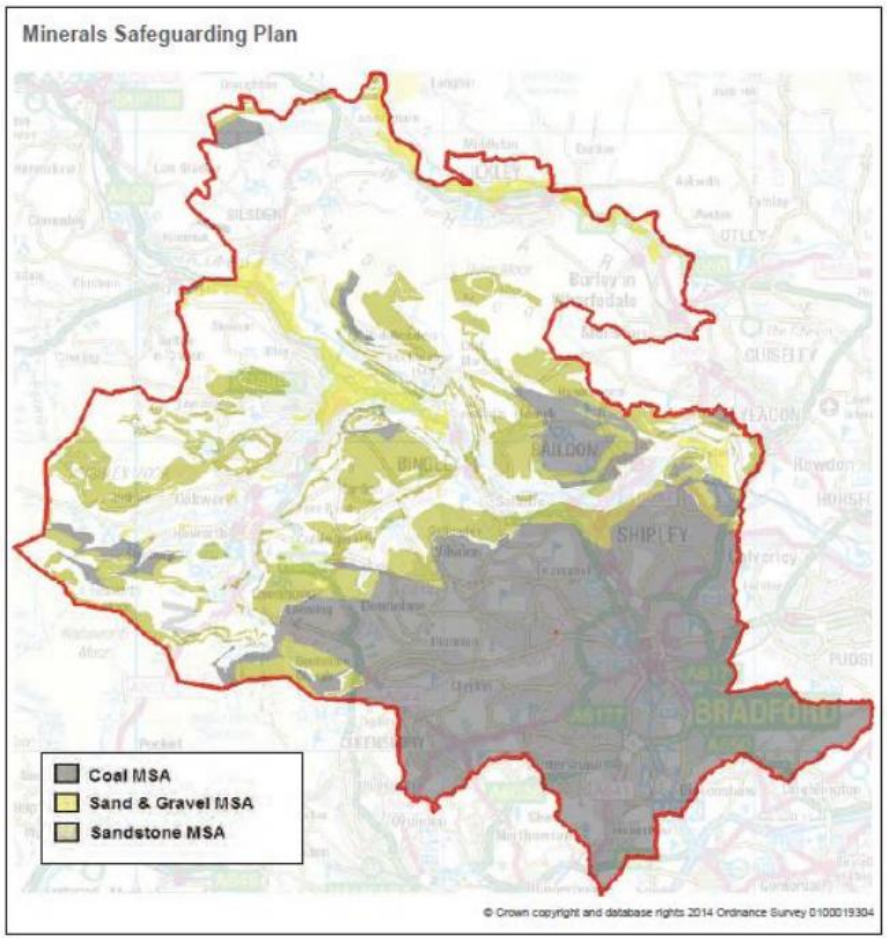


Figure 30: Bradford minerals safeguarding plan

(Source: City of Bradford MDC, 2014)

Calderdale Council produced a Minerals Evidence Report (2017) as part of their Local Plan. The Report concludes that the district does not appear to have any identified any viable sand and gravel resources. Across Calderdale, there is a single quarry operation in Todmorden that extracts Gritstone. The Report considers crushed rock too weak to make good quality aggregate for roadstone and concrete but may be suitable for construction fill and the production of manufactured sand. There are a small number of Brick Clay extraction sites and the Brick Clay resources within Calderdale are coterminous with the surface coal resources, and currently there is

no peat extraction activities in Calderdale. The latest estimate (in 2016) concerning recycled and secondary aggregates within Calderdale was approximately 85,000 tonnes.

Policy MS1 to MS6 of the Calderdale Local Plan (2023) provides detailed requirements for mineral workings across the district. The council designates Mineral Safeguarding Areas (MSA) for sandstone, coal, brick clay and fireclay, which will be protected from inappropriate developments. A comprehensive list of mineral allocations is provided and the locations of the existing and new mineral sites, proposed sandstone MSA, and proposed surface coal MSA are illustrated in the Mineral allocations map (2023), as show below in Figure 31: .

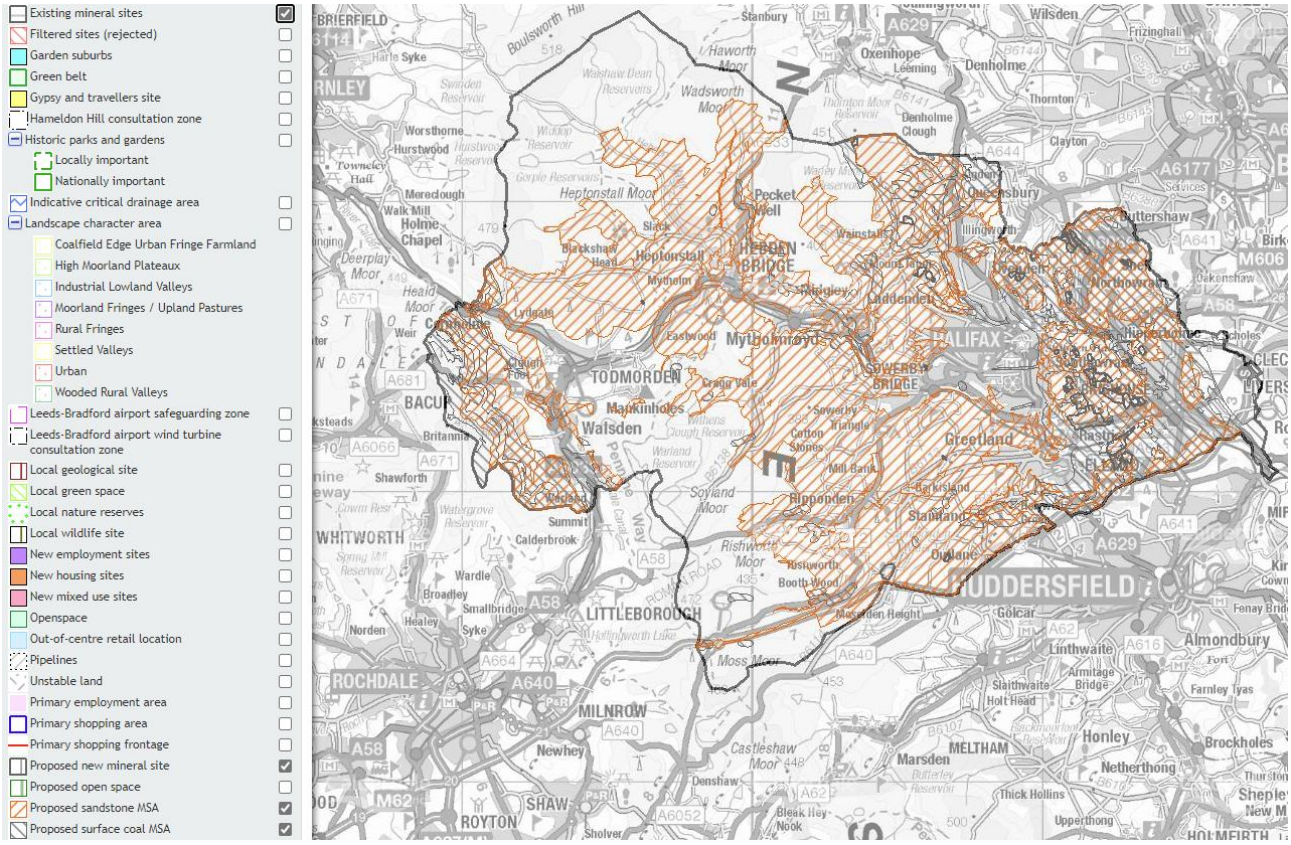


Figure 31: Calderdale mineral allocations map

(Source: Calderdale Council, 2023)

The consultation for Leeds Local Plan 2040 (2023) identified current issues in the local policies related to planning for minerals and waste. The adopted Natural Resources and Waste Local Plan (NRWLP) has no minerals safeguarding area (MSA) or relevant policies for unconventional hydrocarbons. The NRWLP is also lacking buffer zones for mineral processing activities. The landbank for sand and gravel has fallen below the level recommended in the NPPF, and some safeguarded sites have gone, therefore capacity gap need to be identified. The new Leeds Local Plan will aim to address these issues by reviewing the current supply for minerals and waste sites and forecast future needs, including the allocation and safeguarding of new sites.

Kirklees Council's Minerals Safeguarding Areas Policy Options Report (2015) suggests that there has not been an operational opencast coal mine in Kirklees since 1984. There are currently 8

quarries within Kirklees that produces sandstone, which serves a local and national market for building stone and flagstone and a local market for aggregate. There is also one quarry that produces sand and gravel, and 4 sites that extracts brick clay and fireclay. Policy LP36 to LP40 of the Kirklees Local Plan (2019) restricts mineral extraction across the district and protects Mineral Safeguarded Areas from surface developments.

Wakefield Council's latest Authority Monitoring Reports (2019) indicates that mineral resources within the district are relatively scarce, which has led to difficulty of maintaining commercial confidentiality in reporting. Volume 1 of the Wakefield Local Plan 2036 (2024) sets out Policy SP19 to maintain at least seven years supply for sand and gravel reserves and 10 years supply for crushed rock. Where there are known limestone, brick clay, fireclay, building stone, sand and gravel and coal resources of economic value, the identified areas will be protected from inappropriate developments as Mineral Safeguarding Areas. Additionally, Policy LP38 requires all proposals for non-mineral development within Mineral Safeguarding Areas on site over 2 hectares must be accompanied by supporting information demonstrating that mineral resources will not needlessly be sterilised.

5.2.17 Summary of Environmental Data

West Yorkshire exhibits a stable rise in population with an increase in the older demographic, where population growth is most significant in Wakefield.

In June 2019, the Combined Authority declared a climate emergency for West Yorkshire, and since then, the Combined Authority has been prioritising their commitment to reach their net zero target of 2038, with significant progress by 2030. The transport sector emits the most carbon emissions of any sector within West Yorkshire, and this is dominated by road-transport and in particular the private car, of which ownership has been increasing.

Despite an overall reduction in transport emissions in recent years, attributed partly to COVID-19, emissions are gradually rising again, with Wakefield generating the highest greenhouse gas emissions per capita. Travelling with low emission vehicles or by public transport produces much less direct and indirect emissions compared to traditional modes of transport, where petrol cars account for the largest proportion of fuel consumption, indicating both high usage and energy inefficiency. Transitioning to low emission or electric vehicles and increasing connectivity and quality of sustainable transport modes is identified as a significant opportunity for emission reduction.

Climate change projections suggest a continued increase in mean annual temperature, altered precipitation patterns, and varying air quality across the region. All five councils in West Yorkshire have declared a climate emergency in 2019. While heavy air pollution is prevalent along major road networks, rural areas demonstrate exceptionally good air quality. Despite compliance with PM10 standards, levels across West Yorkshire have been gradually increasing. Whilst this result

does not differ significantly from the 2016 baseline, West Yorkshire might benefit from relevant air quality mitigation measures for major road networks.

Noise pollution is a concern, primarily from motorway and trunk road networks, with higher exposure compared to railway noise. Light pollution is notably high in Leeds, Bradford, and Wakefield. Environmental designations include various protected areas such as South Pennine moors and Rochdale canal, offering opportunities for preservation and enhancement of natural landscape features.

West Yorkshire is rich in heritage assets, particularly in Bradford, although there has been a slight decrease in the number of Heritage at Risk Sites. The Green Belt and green infrastructure designations remain unchanged from the previous baseline, with no Areas of Outstanding Natural Beauty (AONB) present. However, utilisation of outdoor spaces has increased since the COVID-19 lockdown, indicating that protection and enhancement of green space can be crucial for maintaining the living quality of residents.

The region's Agricultural Land Classification indicates limited high-quality soil, mostly used for urban purposes. Contaminated land and peat presence are minimal, with only Kirklees having registered contaminated land and peaty soils clustered near Bradford, Calderdale, and Kirklees boundaries.

While most areas are not within flood risk zones, the region has still experienced severe impacts from flooding events and climate change may increase the frequency of flooding, particularly along main river areas like the Aire Valley and River Wharfe. All five councils have published strategic flood risk assessments. Water management issues stem primarily from physical modifications to the landscape and wastewater pollution. National data shows that road network can also contribute largely to water pollution with tyre and brake wear, as well as emissions and fuel deposits, which demonstrates that relevant mitigation over the transport network can also contribute to enhancing the water environment.

All five councils within West Yorkshire have published their waste management strategies, aiming to increase waste reuse or recycling and reduce landfill. However, waste monitoring data in all five districts are relatively out-of-date. Leeds, Wakefield, and Kirklees have identified large areas of Development High Risk Areas due to potential instability from coal mining operations.

Overall, the new West Yorkshire Local Transport Plan may benefit from measures that promote the use of sustainable public transport and low emission or electric cars, whilst incorporating mitigation for greenhouse gas emissions, traffic noise, and air quality issues, which can help to protect and enhance the local green and blue infrastructure.

5.3 Economic data

5.3.1 Overview

West Yorkshire is recognised as one of the most dynamic and significant economic areas in the UK outside of London. It is a key driver of the Yorkshire & Humber regional economy. As the main city in the region, Leeds has experienced fast growth over recent years and it is firmly established as a leading UK financial services and commercial centre outside of London. More generally, the head offices of many financial institutions and customer service centres are based in West Yorkshire.

Historically, manufacturing and textiles have been the primary sectors of the local economy. The area has supply chains and centres of excellence for training, technology and design supported by further and higher education expertise specifically in these sectors. Recent development has been more diverse, including expansion in e-business, digital, print, bio-sciences and chemical clusters.

Labour market skills in manufacturing are supplemented by graduates emerging from the four universities in the sub-region, which specialise in engineering, textiles and advanced manufacturing, digital media, healthcare and business/management.

Key economic statistics relating to West Yorkshire are indicated in the tables on the following page. The implications of these for each local authority area are discussed in the following sections.

Table 25. Key Economic Statistics relating to West Yorkshire

Authority	Employment 2022-2023	% of working age population. Employed 2023	GVA per head (£) 2020	Total GVA (£ billion) 2021	% annual growth GVA 2015-2020
Bradford	230,200	67.6%	£18,000	£10.3	1.9%
Leeds	406,400	77.5%	£33,500	£27.9	2.2%
Wakefield	155,300	73.3%	£23,000	£8.6	3.8%
Calderdale	101,400	73.6%	£24,500	£5	2.2%
Kirklees	207,700	72.7%	£16,900	£8.4	2.1%
West Yorkshire	1,101,000	73.4%	£24,500	£60.1	2.4%

Sources: Office for National Statistics (2021, 2023, 2023, WYCA, 2022)

The Covid-19 pandemic had a significant impact on productivity across West Yorkshire. GVA per head of population fell both locally across West Yorkshire and nationally in 2020, whilst productivity increased sharply, with low productivity sectors being hit the hardest by Covid-19 restrictions (WYCA, 2022).

Table 26 outlines population figures for West Yorkshire Local Authorities and economic activity.

Table 26. Population and Economic Activity

	Leeds	Wakefield	Calderdale	Bradford	Kirklees
Population	809,500	353,800	206,800	546,800	433,500
Population aged 16-64	65.3%	62.4%	61.7%	62%	62.2%
% of population that are economically active	79.6%	76.8%	76.4%	72.3%	76.4%
% of economically active who are unemployed	3.8%	3.5%	3.6%	5.5%	4%
Job density	0.97	0.78	0.82	0.69	0.70

Source: Office for National Statistics (2021)

5.3.2 Bradford

Bradford is a large economy worth £11.6 billion, making it the third largest economy in Yorkshire and The Humber. Bradford's economy grew by 16% over the five years to 2019 (City of Bradford MDC, 2020).

The district has seen some positive trends with a growth of 19,000 in the number of residents in employment since 2015. The number of businesses in the district sits at 35,855 as of 2023 (Office for National Statistics, 2023), and the city has been identified as the best place to start a business in the UK (City of Bradford MDC, 2020). Bradford's employment rate has improved to 71.8% as of 2022 compared to 67.5% in 2014 (Centre for Cities, 2022). Long term unemployment continues to be a concern with 6.6% of Bradford residents claiming Jobseeker's Allowance, compared to 4.1% for Yorkshire and The Humber, and 3.7% in Great Britain (Office for National Statistics, 2023).

5.3.3 Leeds

Leeds has retained its manufacturing strength as well as consolidating its position a major centre for finance and business services, which account for 38% of total output (Leeds City Council, 2020). Total employment in Leeds in 2013 was estimated at around 360,000; ten years on, it's now 406,400. Over the next ten years, the economy is forecast to grow by 21% with financial and business services set to generate over half of GVA growth over that period (Leeds City Council, 2020). In terms of productivity, Leeds MD's GVA has increased by £7.5 billion since 2013, sitting at £27.9 billion.

5.3.4 Wakefield

Wakefield's economic taskforce supported both individuals and businesses through a difficult period and recognises that a strong and sustainable local economy is central to a better future for

all communities and people. In particular, building skills in young people will be key to a stronger more sustained economy. Facts include: 73.3% of the working age population are in employment, 12.3% of jobs are in manufacturing, 11.1% are in transport and storage, and 16.7% of employment is in wholesale and retail trade (Office for National Statistics, 2022).

5.3.5 Calderdale

Calderdale has the smallest population in West Yorkshire and has the smallest economy too. The economically active population has decreased from 107,500 at the end of 2014 to 105,000 in 2023. Calderdale also has the lowest rate of economically active unemployed persons in West Yorkshire, despite rising from 7,000 in 2014 to 30,600 in 2023. 4.1% of Calderdale's population claim Jobseekers Allowance. Calderdale performs above the West Yorkshire average at a number of economic indicators including employees in senior, management and professional jobs and gross hourly pay (Office for National Statistics, 2023).

5.3.6 Kirklees

Kirklees has a population of 433,500 people, around 76.4% of whom are economically active. Its economy focuses on engineering, manufacturing and design, driven by globally leading businesses in fields such as gears, valves, pumps, turbos, chemical and textiles (with a strong 'Made in Huddersfield' reputation). In terms of productivity, Kirklees is the third largest economy in the Leeds City Region, with £8.4 billion per annum in Gross Value Added. The low but improving employment rate is below than that of Yorkshire and The Humber, at 72.7% (Office for National Statistics, 2023).

5.3.7 Levelling Up

The UK government has so far allocated around £1.5 billion to projects in Yorkshire and the Humber through investment programmes, including the Levelling Up Fund and Community Ownership Fund.

Approximately £84.2 million in Levelling Up funding has been allocated to projects across the West Yorkshire districts, including:

Table 27. Levelling Up Projects across West Yorkshire

District	Project	Levelling Up Funds
Leeds	Leeds Outer Ring Road between Horsforth and Pudsey	£20m
Calderdale	Halifax Leisure Centre	£12m
Bradford	Jubilee Centre	£225,000
Bradford	Squire Lane Swimming Pool and Health Centre	£20m

Wakefield	Renovation of British Home Stores site into museum and library Delivery of the second phase of the 'Tileyard North' creative industries hub at Rutland Mills	£20m
Kirklees	Batley Town Centre regeneration	£12m

Source: DLUHC (2023, 2024)

Round Two of the Levelling Up fund saw West Yorkshire receive £41.3 million to build on the Combined Authority's City Regional Sustainable Transport Settlement which includes the provision of fifteen new bus and cycle priority corridor improvements, three new cycling corridors, new zero emission buses, new electric vehicle charging points, and improvements to rail stations across West Yorkshire (WYCA, 2024).

West Yorkshire has also been allocated £83,054,057 from the UK Shared Prosperity Fund, a central pillar of the UK Government's Levelling Up agenda (WYCA, 2023). This is split into:

- 'Core' funding of £68,002,877
- Multiply funding of £12,483,679.
- Rural England Prosperity Fund £2,567,501.

Investments from the Levelling Up fund into West Yorkshire are set to boost productivity, pay, jobs, and living standards, as well as to improve connectivity and access to opportunities, particularly in locations where this is currently lacking.

Whilst the current situation appears positive, some West Yorkshire districts did not receive the Levelling Up funding allocations they desired, such as Leeds. In January 2023, Leeds City Council lost six bids for over £100 million in funding, some of which was set to improve sustainable transport options in North East Leeds (Leeds City Council Newsroom, 2023). A lack of appropriate funding in this fast-growing city will continue to limit opportunities for deprived areas and will impact on economic growth moving forward.

5.3.8 Summary of Economic Data

West Yorkshire has a fast-growing economy, with Leeds being the best performing district, having a GVA of £27.9 million as of 2021; this is £17.6 million more than Bradford who has the second highest GVA. Bradford, however, has the lowest percentage of the population who are economically active out of all the West Yorkshire Districts, standing at 72.3% whilst the others have at least 76%. Long term unemployment continues to be a concern in Bradford, despite being identified as the best place to start a business in the UK, with Calderdale experiencing similar challenges.

Leeds, Wakefield, and Kirklees have sustainable economies fuelled through their service offerings. Leeds has retained its strength in manufacturing, Wakefield is building skills across their younger population, and Kirklees focuses on engineering and design. Leeds and Wakefield, in particular, saw the best percentage annual growth in GVA between 2015 and 2020 out of the West Yorkshire Districts.

Approximately £84.2 million in Levelling Up funding has been allocated to projects across the West Yorkshire districts, with a further £41.3 million being allocated to support the Combined Authority's City Regional Sustainable Transport Settlement. West Yorkshire has also been allocated £83,054,057 from the UK Shared Prosperity Fund.

The above data on the West Yorkshire economy highlights that economic inactivity and unemployment are key challenges facing the region. This presents an opportunity for the LTP to aim towards improving connectivity across the districts, especially in underserved areas to areas of high productivity. This could improve access to education, employment, and skills, increasing levels of activity across West Yorkshire.

5.4 Health data

5.4.1 General health statistics

Key health statistics for West Yorkshire are set out in Table 28 below.

Table 28. Key Health Statistics for West Yorkshire

District	Bradford	Calderdale	Kirklees	Leeds	Wakefield	West Yorkshire	England
% of Live births with low birth weight <2500 grams (2021) (ONS, 2023)	6.9	5.8	6.7	6.0	6.7	6.4	6.4
Infant Mortality (2019-2021, per 1,000) (OHID, 2021, 2021, ONS, 2021)	6.4	4.1	4.8	5	3.8	4.8	3.9
Life Expectancy (Males, 2021) (OHID, 2021, 2021, WYCA, 2022)	76.6	77.1	77.9	77.7	77.4	77.3	78.7
Life Expectancy (Females) (OHID, 2021,	81.2	81.9	81.2	82.2	81.4	81.6	82.8

2021, WYCA, 2022)							
People on Incapacity Benefits (Nov 2018) (Office for National Statistics, 2023)	390	140	250	530	70	1,380	42,880
People on Disability Living Allowance benefits (Nov 2018) (Office for National Statistics, 2023)	14,650	5,300	11,160	17,150	13,320	61,580	1,425,330
Coronary Heart Disease (Age-standardised death rates/100,000). (BHF, 2023, NHS, 2022)	144.6	108.6	106.7	108.3	116.9	117.02	97
Cardiovascular Disease (Age-standardised death rates/100,000, 2018/2020). (BHF, 2023, UK Parliament, 2024)	285.9	249.2	250.8	236.6	240.5	252.6	77.8
Overweight or obese adults (OHID, 2021, 2022)	66.4	65.4	60.5	65	76.4	66.5	63.5
Mortality by cancer (per 100,000 persons) (Cancer Research UK, n.d.)	180.7	186.4	179.4	181.3	192.8	184.1	172.0

As can be seen from this, West Yorkshire is typically worse than the national average across a range of indicators, although with some variation within districts. Infant mortality is a poor indicator

for West Yorkshire, with Bradford showing particularly high rates. In fact, Bradford has the 2nd highest infant mortality rate in Yorkshire and The Humber and the 8th highest rate in England. In 2017 to 2019, the infant mortality rate in Bradford was 6.1 deaths per 1,000 live births, an increase from 5.7 deaths in 2016 to 2018. We've now seen an increase of 0.8 deaths from 2019 to 2021 (Bradford City Council, 2020).

Mortality by coronary heart disease, cardiovascular disease, and cancer is also high across West Yorkshire in comparison to nationally, particularly in Bradford and Wakefield. These areas rank the worst in terms of deprivation out of the West Yorkshire districts. Poor air quality, of which transport is a major source, can lead to higher rates of respiratory and cardiovascular diseases, with the impacts being felt the most by residents living in low-income areas, and those with protected characteristics, such as disabled people.

Much of the variation from national norms and between the various local authority areas in West Yorkshire is linked to such differences in socio-economic variations, including deprivation, leading to poor health outcomes. This is indicated in the next section on Equality.

5.4.2 Open space

The provision of open space, sports and recreational facilities can play a significant role in the promotion of healthy lifestyles. Open space provision and access varies across West Yorkshire, with only two-fifths of West Yorkshire's population having easy access to local natural greenspace (WYCA, 2022).

The Monitor of Engagement with the Natural Environment Survey 2018 to 2019 (DEFRA, 2019) sought the percentage of the population engaging with the natural environment at least once a week in the West Yorkshire districts. The data for each of the districts can be found in the table below.

Table 29. Percentage of population engaging with nature at least once a week

District	% of population engaging with nature at least once a week
Bradford	20.76%
Calderdale	24.44%
Leeds	23.77%
Kirklees	19.89%
Wakefield	21.53%
West Yorkshire	22.08%

Source: DEFRA (2019)

In cities, green and open spaces are often infrequent, of poor quality, and poorly maintained, which could be a reason for the low engagement across the districts. This can lead to pressure to

develop on the sites for other uses, such as housing, which further reduces the provision of green and open spaces and in turn, reduces engagement, creating a negative cycle.

Safety, especially for women and girls, can also be a deterrent for engaging with the natural environment, particularly urban parks. Despite Leeds having the second highest percentage of the population visiting nature once a week, a study conducted in the district found that 45% of women had been harassed in parks and other open spaces (Women Friendly Leeds, 2021). In 2023, the Combined Authority released 'Safer Park: Improving access for women and girls', in partnership with the University of Leeds. The report found that women and girls are less likely to use parks than men and boys, which impact on both their mental and physical health (The Safer Parks Consortium, 2023). The report provides guidance to improve the safety of parks and open spaces for women and girls,

The Natural Environment also found poor health to be a barrier to accessing the natural environment in West Yorkshire, as seen in Table 30. Other barriers include bad weather, old age, disability, being busy at home or work, and no reason.

Table 30. Percentage of population stating poor health as an obstacle to engaging with nature

District	% of population stating poor health as an obstacle to engaging with nature
Bradford	18.9%
Calderdale	4.6%
Leeds	24.3%
Kirklees	17.7%
Wakefield	13.6%

Source: DEFRA (2019)

Leeds has the highest percentage of the population, at 24.3%, who found poor health to be a barrier to engaging with nature; this came second to being 'busy at work' (34.7%). This aligns with the general health data above, in which Leeds performs poorly compared to other districts. Calderdale had the lowest result, with 4.6%, and this came fourth after being 'busy at work', 'no reason', and 'bad weather'. This also aligns with the above health data, as Calderdale performs better than most other West Yorkshire districts in terms of health. It must be acknowledged, however, that Calderdale has the lowest population and therefore this will impact the results of the data.

Variations in the data can also be linked to differences in socio-economic circumstances and inequality. According to Friends of the Earth (2020), access to green space has a particularly a strong correlation with deprivation and ethnicity, with almost 40% of people from ethnic minority

backgrounds living in England's most green-space deprived neighbourhoods (Friends of the Earth, 2020). Socioeconomic indicators are discussed in the following section on Equality.

To improve engagement with open spaces, challenges to health and socioeconomic inequalities must first be addressed; this will creative a positive cycle, generating both improved use of the natural environment and improved health outcomes.

5.4.3 Active travel and physical activity

Active travel and physical activity are becoming widely encouraged across West Yorkshire and nationally, in order to improve health and wellbeing and the environment.

The National Travel Survey 2022 (Department for Transport, 2023) records annual 'travel to school' data, highlighting how many pupils, walk, cycle, or travel to school by car or van. The results for 1995, 2009, and 2022 are represented Table 31.

Table 31. Travel to School Data for 1995, 2009, and 2022

School Pupils	**1995**	**2009**	**2022**
Aged 5-10			
Walk to school	53%	50%	53%
Cycle to school	0%	1%	1%
Travel to school by car/van	38%	42%	40%
Aged 11-16			
Walk to school	42%	38%	41%
Cycle to school	2%	3%	6%
Travel to school by car/van	20%	22%	26%
Aged 5-16			
Walk to school	47%	43%	47%
Cycle to school	1%	2%	3%
Travel to school by car/van	29%	31%	33%

Source: Department for Transport (2023)

The Survey reports similar levels of walking to school across all three years. However there has been a slight increase in cycling, which has a very small mode share overall. **Error! Reference s ource not found.**Travel by car/van has increased amongst all ages, attributed to the increase in popularity and accessibility to motor vehicles.

In 2019, residents of West Yorkshire made 619 million walking trips, which is 25% more trips than in 2016. This means that West Yorkshire has already met the Transport Strategy 2040's interim

target of increasing walking trips by 10% by 2027. Nevertheless, the share of walking trips across West Yorkshire was 26%, 6% lower than the England average of 32%.

As can be seen in Figure 32: , walking frequency has increased across West Yorkshire in recent years. In 2018/19 79% of residents walked for at least 10 minutes once per week, whilst in 2021/22, this figure reached 84%.

Active travel and physical activity can contribute to preventing and managing cardiovascular diseases, cancer and diabetes, and can improve overall wellbeing (WHO, 2020). The World Health Organisation recommends adults should complete a brisk 30-minute walk three times a week, however, only 1 in 6 adults in West Yorkshire do less than 10 minutes of walking a week, and 7% of residents state that they never walk.

Walking has experienced the highest growth out of all transport modes in recent years, with an increase of 23% between 2016 and 2019. Despite this progress, West Yorkshire residents still make fewer walking trips than the England average (267 and 341, respectively).

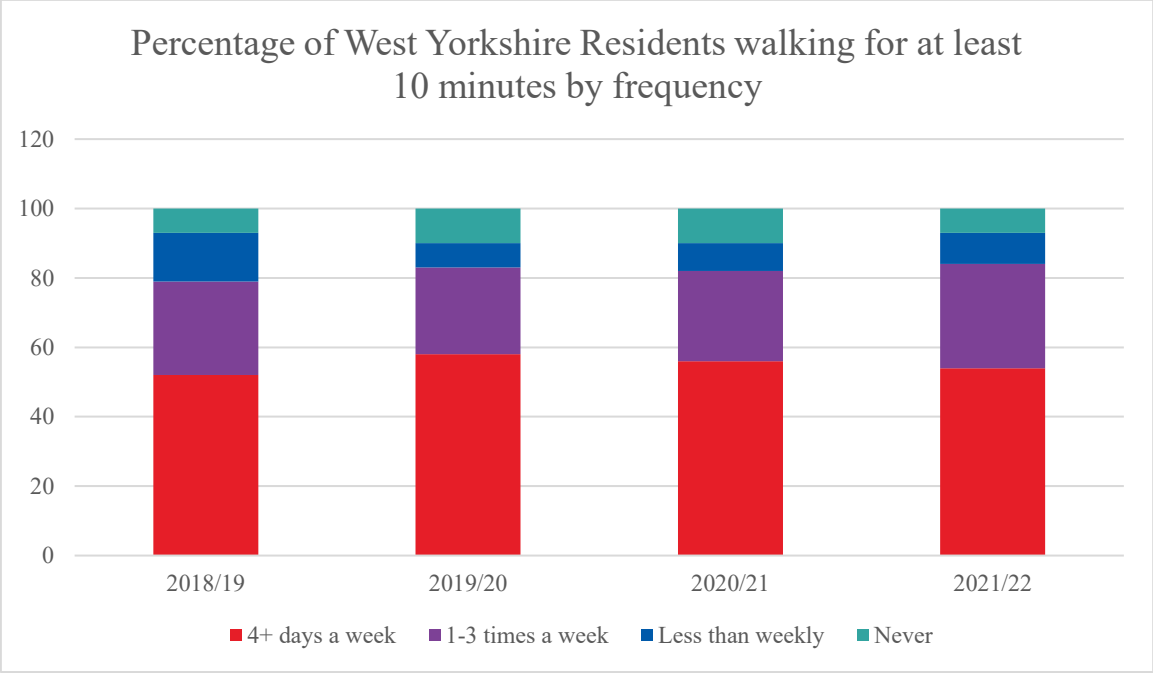


Figure 32: Percentage of West Yorkshire Residents walking for at least 10 minutes by frequency

Source: WYCA (2023)

Cycling rates across West Yorkshire have been decreasing. In 2021/22, 7% of adults in West Yorkshire cycled at least weekly, which is a decrease of more than 20% from 2019/2020. This decline can be attributed to the Covid-19 pandemic, which saw peaks in cycling levels due to more time and encouragement to exercise outside (WYCA, 2023). This is consistent with figures for England.

Gender barriers can be a challenge to cycling, including access to a bicycle and confidence in cycling. 40% of people living in West Yorkshire have access to a bike; this is mostly male residents (45%, compared to 30% for women) (WYCA, 2022). Additionally, half of women in West Yorkshire

do not feel confident cycling, compared to a third of men. This can be due to poor cycle infrastructure, including poorly segregated cycle lanes, lack of practice, and street harassment. These factors need to be targeted to reduce gender disparities in cycling rates, and in turn, improve health and wellbeing and environmental conditions.

5.4.4 Accessibility

A report produced by Foresight, Government Office for Science in 2019 (Government Office for Science, 2019) completed research into the correlation between mobility and inequality. The report's findings include:

- Access to work: Over half of the working-age population (57%) live in areas with low public transport access to jobs. The distribution of employment centres also affects access to jobs. In England, for example around 99% of the population live within 45 minutes by public transport of an employment centre with 100-499 jobs, this falls to 82% for employment centres of 5000+ jobs.
- Access to learning: 5.5% of children cannot reach a secondary school within 30 minutes by public transport.
- Access to healthcare: 66% (7.8 million) of elderly people cannot reach a hospital within 30 minutes by public transport, with serious implications for a rapidly ageing society such as the UK.
- Access to food shops: Approximately 70% of the population can access up to three or more food stores within 15 minutes by public transport. Over 6% of the population (roughly 3.34 million) cannot reach any food stores within 15 minutes, and 10% can reach only one food store within this journey time.
- Access to social activities: In rural southwest England and Wales, it is estimated that 5-10% of the older population (60+) experience some degree of exclusion from social activities due to lack of access to a private car and limited ability to access public transport.
- Impact of traffic on deprived communities: People living in disadvantaged areas tend to live in more hazardous environments, with greater proximity to high volumes of fast-moving traffic and high levels of on-street parking. As such, they have higher levels of exposure to road traffic risk, which is exacerbated by their reliance on walking, and the lack of safe spaces for children and young people.

In February 2010, the Marmot Review Team published Fair Society, Healthy Lives. This was the culmination of a year-long independent review into health inequalities in England which Professor Sir Michael Marmot was asked to chair by the Secretary of State for Health. The review proposes the most effective evidence-based strategies for reducing health inequalities in England from 2010.

The review highlights links between transport inequalities and health inequalities. Relevant findings include:

- ‘The survival of older people increases where there is more space for walking near their home, with nearby parks and tree-lined streets.’
- ‘Investing public funds in measures such as active travel, promoting green spaces and healthy eating will impact positively on health as well as on carbon emissions’.
- ‘Poorer people are more likely to live in more deprived neighbourhoods. The more deprived the neighbourhood, the more likely it is to have social and environmental characteristics presenting risks to health.’ These include a lack of green spaces and places for children to play and more risks to safety from traffic.
- ‘Children in the 10 per cent most deprived wards in England are four times more likely to be hit by a car than children in the 10 per cent least deprived wards.’
- ‘Road deaths, especially among pedestrians and cyclists, are particularly high among children of parents classified as never having worked or as long-term unemployed.’
- ‘Particular groups face further inequalities. Black ethnic minority groups in London were 1.3 times more likely to be injured as pedestrians and car occupants on the city’s roads than those in white ethnic groups.’

The report also states that improved transport infrastructure can have positive impacts on safety:

- ‘The provision of cycling infrastructure can lead to a long-term increase in cycling and a reduction in cycle casualties.’
- ‘Substantial increases in the number of cyclists also leads to reductions in the numbers of cyclists killed or seriously injured.’
- ‘Lowering speed limits improves quality and access for active travel and improves safety for pedestrians and cyclists. Lower speed limits reduce risk of death and serious injuries.’

In 2020, Michael Marmot and the Institute of Health Equity published an update, ‘Health Equity in England: The Marmot Review 10 Years On’ (Marmot et al, 2020). This update provides an analysis of health inequalities in England between 2010 and 2020 and sets out an agenda for the Government and local authorities to reduce health inequalities. Relevant findings include:

- ‘Rates of fatal and serious injuries for 5–9-year-olds are nine times higher than average in the 20 percent most deprived areas than in the least deprived areas.’
- ‘Cycling fatalities are higher in the 20 percent most deprived wards than in others.’

- ‘Between 2010 and 2018 the percentage of children in England aged 5–16 years who walked to school did not change, staying at 44 percent.’
- ‘Adult active travel rates have increased, however: between 2010 and 2018 there was a 12 percent increase overall in the number of walking trips made each year, a 5 percent increase for those on the lowest incomes and a 14 percent increase for those on the highest incomes.’
- ‘Budgets for cycling and walking have declined, from £95 million in 2016/17 to £33 million in 2020/21. In the same five-year period, the budget for the roads investment strategy increased from £1.83 billion in 2016/17 to £3.86 billion in 2020/21.’

Ten years on, those living in more deprived neighbourhoods continue to be at risk from traffic incidents, particularly children who are walking or cycling, compared to those in less deprived neighbourhoods; this could still be due to a lack of green and play spaces, which results in children spending time on pavements and the road. It could also be attributed to deprived neighbourhoods often being located near high traffic links. Additionally, in most ethnic minority households, a higher proportion of adults live in households without access to a car or a van than is the case for white households. In West Yorkshire, 39% of Black, African, Caribbean, and or Black British live in a household without access to a car, compared to 17% of white households, meaning children in these families are more likely to be walking and cycling, and therefore, may face more road safety issues (UK Government, 2020).

The rate of children walking to school in the UK did not change between 2010 and 2018, suggesting high car dependency, poor accessibility to alternative options, and a lack of active travel provision. This is evidenced in the last point which states that UK budgets for walking and cycling have declined by £62 million in only five years, whilst road investment has increased by £2.03 billion. Without sufficient sustainable and active travel infrastructure, car dependency will remain high and accessibility for those without a car will remain low.

Access to the rail network is also a challenge for residents of West Yorkshire, particularly for disabled passengers. 71% of stations in West Yorkshire do not have compliant step-free access, and many additionally facilities, such as toilets, drop-off/pick-up points, and induction loops, all of which can exclude people from the rail network, reducing access to employment, education, and leisure opportunities.

5.4.5 Road safety and accidents

The Department for Transport releases an annual report on road casualties. The 2022 ‘Reported Road Collisions, Vehicles, and Casualties for Great Britain’ (Department for Transport, 2023) provides figures on reported casualties by road user type, severity, and local authority, as detailed in Table 32 below. Casualties which were killed or seriously injured (KSI) are drawn out.

Table 32. Reported Casualties in West Yorkshire by road user type, severity, and local authority (2022)

Districts	Pedestrians		Pedal Cyclists		Motorcyclists		Car Users		All Road Users	
	KSI	All	KSI	All	KSI	All	KSI	All	KSI	All
Bradford	95	301	21	74	34	72	134	896	291	1,395
Calderdale	31	105	11	27	13	30	65	306	129	501
Kirklees	64	208	18	40	29	76	114	592	235	950
Leeds	142	365	78	220	62	133	224	1,190	554	2,045
Wakefield	42	125	13	57	33	88	97	483	202	826
West Yorkshire	350	1,104	132	418	163	399	612	3,467	1345	5,717

Source: Department for Transport (2023)

Road safety remains a significant challenge for West Yorkshire. KSI casualties fell by 21% between 2019 and 2020, a decrease largely attributable to the travel restrictions implemented in response to the Covid-19 pandemic. Wakefield, however, saw a 6% increase in KSI casualties. This reduction in KSI casualties varied by user type, with motorcyclists and pedestrians having the highest reduction (37% and 31%), whilst pedal cyclists and car occupants had the lowest (11% and 8%). Despite this, pedestrians, motorcyclists, and cyclists were the most vulnerable groups in 2020, accounting for 60% of total KSI casualties, compared to 32% of car occupants (WYCA, 2022).

In 2022, however, the percentage of KSI casualties for pedestrians, motorcyclists, and cyclists decreased to 48% of total KSI casualties. Despite the overall percentage decrease, the number of KSI casualties for pedestrians, motorcyclists, and cyclists increased; pedestrian casualties increased by 175, motorcyclists by 63, and cyclists by 17. Car occupant KSI casualties increased by 369, accounting for 46% of all casualties in 2022 (WYCA, 2022). This could be attributed to lifting of Covid-19 associated restrictions in February 2022.

5.4.6 Obesity

A poor diet and a lack of exercise has become common practice across the UK and is prevalent in both children and adults. Childhood obesity levels in West Yorkshire for 2022/23 are set out in Table 33 below.

Table 33. Childhood Obesity Levels: Year 6 children - % obese

District	Obesity Levels
Bradford	26.1%
Calderdale	23.5%
Kirklees	23.2%
Leeds	23.3%
Wakefield	24.8%
England	22.7%

Source: OHID (2021)

In 2019, the West Yorkshire and Harrogate Health and Care Partnership released the 'Better health and wellbeing for everyone: Our five year plan' (West Yorkshire and Harrogate Health and Care Partnership, 2019) which set the goal to halt the trend in childhood obesity. Despite this aim, obesity levels in children in West Yorkshire are increasing and getting worse when compared to the England average. Bradford is significantly worse than the England average, being 3.4% higher; this has been a steady trend since 2007. Kirklees, whilst still being higher than the England average, is the best performing district. All districts have either increased over the last few years, or remained the same; no West Yorkshire districts have experienced a declining trend in childhood obesity levels. Obese children who maintain obesity into adulthood have a higher risk of morbidity, disability, and early death.

27% of adults in West Yorkshire also have obesity (British Heart Foundation, 2023), which is just 1% higher than the England average of 26% (UK Parliament, 2023). Obesity can result in poor health outcomes, such as heart disease, diabetes, and some types of cancer. In fact, there are 110,000 people at high risk of developing Type 2 diabetes in West Yorkshire and Harrogate, and five million people in England at high risk of developing Type 2 diabetes. If these trends continue, one in three people will be obese by 2034 and one in 10 will develop Type 2 diabetes (West Yorkshire and Harrogate Health and Care Partnership, 2019).

5.4.7 Crime

Crime data is available from the ONS which is outputted by Police Force Area (PFA). This does not directly translate into West Yorkshire districts, so the relevant police forces have been selected. The most recent data available is from the year ending September 2023, as shown in Table 34 (ONS, 2024).

Table 34. Police recorded crime by offence group and police force area, England and Wales, number of offences, year ending September 2023

Police Force Area	Total Recorded Crime (excl. Fraud)	Violence	Sexual Offences	Robbery	Theft	Criminal Damage and Arson	Drug Offences	Possession of Weapons	Public Order Offences	Miscellaneous Crimes
West Yorkshire	307,049	129,955	9,576	3,171	81,280	27,054	8,820	2,461	37,223	7,509
Yorkshire and the Humber	618,986	248,363	19,852	6,360	173,903	60,602	16,314	5,727	71,580	16,285
England	5,183,024	1,941,525	179,399	76,372	1,676,335	477,729	170,877	56,034	493,101	111,652

Source: ONS (2024)

Total recorded crimes (excl. fraud) in West Yorkshire make up 6% of England's total recorded crimes, whereas the total population of West Yorkshire only account for 4% of England's population. Similar when compared with Yorkshire and the Humber region, West Yorkshire make up 50% of the crime regionally, but only constitute 42% of the regional population. Violent crime has the highest rates across all three areas, followed by theft and public order offences. Sexual offences are seemingly low across the board; however, these types of offences are under reported.

Neighbourhood crime fell during the Covid-19 pandemic and remains below the level recorded in 2019. 'Theft from Vehicle' decreased from just above 12,000 in 2019 to 7,000 in 2021/22; 'Theft of Vehicle' remained the same at 5,000, and 'Vehicle Interference' also decreased from 3,000 to around 2,500 (WYCA, 2022).

Crime is a prevalent issue for women and girls. The West Yorkshire- Health and Care Partnerships, 'Violence Against Women and Girls' report (West Yorkshire Health and Care Partnership, 2022) and the Mayor of West Yorkshire's Safety of Women and Girls Strategy (The Mayor of West Yorkshire, 2023) found that personal safety has been identified as an important factor in women's travel decisions. At a co-design event held in 2022 for the Women and Girls Strategy, 35.9% of women listed personal safety as a key priority and 26.5% noted safe travel. Harassment is common in public, including on public transport. In terms of transport, this often occurs whilst accessing, waiting for, and travelling on public transport, and walking or cycling in public spaces. Findings reveal that young women feel less safe than men in train stations. The use of private taxis is also a result of fear, as women attempt to avoid public transport as a means of controlling risk; however, recent incidents of assaults in taxis and other ride share services have started to induce fear, especially when travelling alone and/or at night (West Yorkshire Health and Care Partnership, 2022).

West Yorkshire have begun to address the challenges facing women and girls on public transport. In November 2023, 15 new Safer Travel Police Community Support Officers were introduced to West Yorkshire's bus network with the aim to reduce crime and anti-social behaviour, increase the safety of women and girls, and reassure and protect more vulnerable travel users (WYCA, 2023).

5.4.8 Covid-19

The Covid-19 pandemic had a significant impact on transport use and travel patterns, attributed to restrictions, health concerns, fear, and a lack of confidence to reuse public transport. Nationally, public transport, particularly buses, has been the most affected, with usage fluctuating around 75% and 93% of the pre-Covid baseline in the first months of 2023.

The demand for commuting travel is slowly increasing but remains low as more people are opting to work from home. The 2022 and the then expected 2023 travel patterns to work can be seen in Figure 33: .

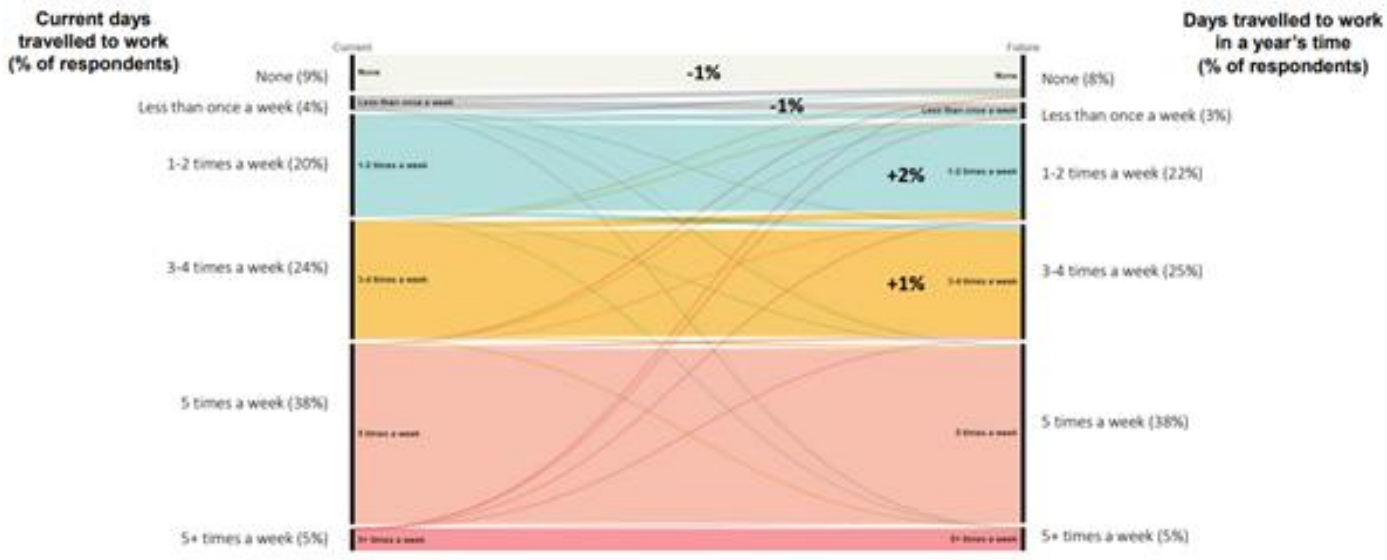


Figure 33: Frequency of commuting in West Yorkshire (2022)

Source: WYCA (2022)

In 2022, 35% of those in employment across West Yorkshire were partaking in hybrid working, and almost 25% were expecting to be doing more in 2023 (WYCA, 2022).

As of 2022, travel by car, taxi and train at least monthly had increased from the previous year, but cycling had reduced from 14% to 11%. The proportion of those using a bus at least monthly remained lower than the two years before the Covid-19 pandemic at 33%, with 18% of West Yorkshire residents catching a bus at least weekly (WYCA, 2022).

5.4.9 Summary of Health Data

General health across West Yorkshire is poor, ranking worse than the national average across a range of health indicators, including infant mortality, mortality by coronary heart disease, and mortality by cancer, although, there is some variation across districts.

Open space provision and engagement varies across West Yorkshire, with 58% of the population engaging with nature at least once per week; this is highest in Calderdale and lowest in Kirklees.

West Yorkshire residents have noted safety, poor health, and being busy at work or home barriers to engaging with the natural environment.

Active travel across West Yorkshire is increasing, with walking having experienced the highest growth out of all transport modes in recent years; however, this still remains lower than England. Cycling rates on the other hand have been decreasing, particularly post Covid-19, and could be attributed to lack of time, access to a bicycle, poor infrastructure, and safety.

Transport accessibility is poor for ethnic minority households across West Yorkshire, with many not having access to a car or a van. Despite this, UK investments in road infrastructure have increased by £2.03 billion. The rail network across West Yorkshire is also inaccessible; 71% of stations do not have step-free access, limiting opportunities for disabled people.

Road safety remains a significant challenge for West Yorkshire, with KSI casualties fluctuating between road user types due to Covid-19 restrictions. In 2020, pedestrians, motorcyclists, and cyclists were the most vulnerable groups, but car occupants become increasingly vulnerable in 2022, following the lifting of Covid-19 restrictions.

Obesity levels in all West Yorkshire districts for Year 6 children and adults are higher than the England average and there is no sign of a declining trend. Obesity can lead to negative health outcomes, such as a higher risk of morbidity, disability, Type 2 diabetes, and early death.

Total recorded crimes (excl. fraud) in West Yorkshire make up 6% of England's total recorded crimes, whilst Yorkshire and the Humber make up 12%. Violent crime has the highest rates across all three areas, followed by theft and public order offences. Neighbourhood crime, including theft from a vehicle and vehicle interference, fell during the Covid-19 pandemic and remains below the levels recorded in 2019. Crime is a particular concern for women and girls and can impact upon their transport decisions.

The Covid-19 pandemic had a significant impact on transport use and travel patterns, with buses being the most affected. Travel by car and train at least monthly has increased, but cycling and bus use has decreased.

Much of the variation from national norms and between the various local authority areas in West Yorkshire is linked to differences in socio-economic and environmental variations leading to poor health outcomes. Poor air quality, access to open and green spaces, safety, and even active travel provision unequally affects those with protected characteristics, such as young people, ethnic minorities, and women and girls. As such, to improve health across West Yorkshire, socioeconomic and environmental inequalities must first be addressed. The LTP could therefore include measures to improve sustainable and active travel connectivity, accessibility, and safety across the West Yorkshire districts.

5.5 Equality data

This section provides data covering equality, diversity and inclusion, or EDI. Equality means providing equal opportunities to all and protecting them from discrimination under the categories set out within the Equality Act 2010 (see Section 3.2.2). Diversity can be described as the inherent differences between people (for example gender, race, age, faith, socio-economic background, sexual orientation, disability and nationality) as well as the differences that people acquire in their working lives (for example inter-generational working, social mobility, cross-cultural experience, technical expertise, and language skills). Lastly, inclusion is used to describe activities which ensure people feel genuinely included, valued and comfortable being themselves at work and proud of their inherent or acquired.

5.5.1 Sex

Table 35 below indicates the sex balance in areas of West Yorkshire:

Table 35. Sex balance in areas of West Yorkshire

District	Total Population	% Males	% Females
Bradford	546,400	48.9%	51.1%
Calderdale	206,600	48.7%	51.3%
Kirklees	433,300	49.0%	51.0%
Leeds	812,000	48.8%	51.2%
Wakefield	353,300	49.2%	50.8%
West Yorkshire	2,350,400	48.9%	51.1%
England	56,490,048	49%	51%

Source: Office for National Statistics (2021)

This indicates that although there are slight variations across the sub-region, there are slightly more women living in West Yorkshire than men. This pattern persists across the sub-region and is in line with the average across England.

Those who identify as male and female experience the transport system differently, and despite there being a higher percentage of females in West Yorkshire, transport infrastructure is not designed to meet their needs. In fact, major cities' public transport systems typically favour the male travel pattern of travelling to work and back again. Women, on the other hand, tend to take multiple journeys using different modes, as they often hold additional responsibilities such as childcare (Arup, 2022). According to the National Travel Survey, women tend to use buses more than men, but are drivers of cars or vans less frequently than men (Department for Transport, 2023). According to the West Yorkshire Residents Perceptions on Transport Survey (WYCA, 2023), female residents travel by train less than men; 29% of women compared to 37% of men as of 2022/23. Despite the rise of public transport use post Covid-19, this figure has decreased by 3%

since 2019/20. In 2023, women in full-time employment in West Yorkshire earned an average of 11.3% less than men (ONS, 2024). Women are also more likely than men to live on low incomes, work part-time, live in poverty, and to undertake unpaid work in the home and the community (WBG, 2019). Therefore, poor quality, unreliable and expensive public transport has a far bigger impact on their lives than it does on the lives of men.

5.5.2 Disability

The results of the 2021 Census, as seen in Figure 34: , reveal that 414,000 people in West Yorkshire were disabled under the Equality Act, which equates to 17.6% of the population; this is higher than the national rate of 17.3%.

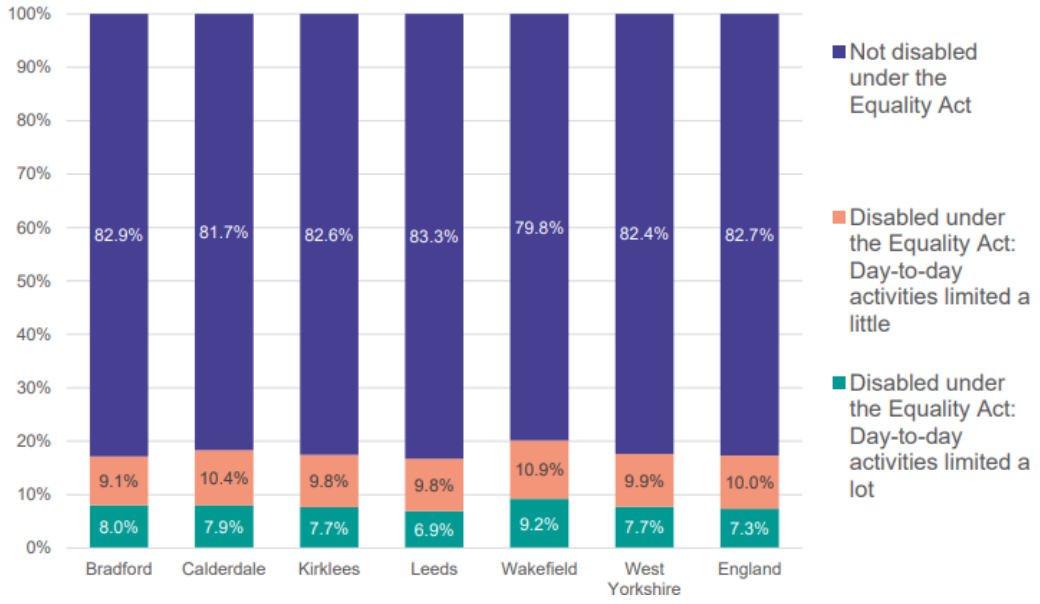


Figure 34: Disability in West Yorkshire and England

Source: WYCA (2023)

232,000 people in West Yorkshire report being disabled with their day-to-day activities limited a lot, accounting for 7.7% of the population. Wakefield has the highest proportion of disabled people in West Yorkshire (20.2%), whilst Leeds has the lowest (16.7%).

The number of disabled people in West Yorkshire increased from 400,000 in 2011 to 414,000 in 2021 (17.6% of the population), a 3.6% increase, which is lower than the national increase of 4.5%. Overall, the proportionate share of the West Yorkshire population who are disabled fell by 0.3 percentage points since 2011.

In 2021, there were 321,000 households (33%) in West Yorkshire which housed at least one disabled person, an increase of 11,000 people since 2011. This compares to 32% in England as a whole, which is a 0.7% reduction. Within West Yorkshire, Wakefield has the highest proportion of households containing at least one disabled person at 35.6%, whilst Leeds has the lowest proportion at 5.9% (WYCA, 2023).

Currently, 6.4% of the Combined Authority's workforce declare themselves disabled. By 2023, this is expected to be at least 20% (in line with the working age population). The 2023 Staff Survey highlighted that disabled employees are less likely to definitely agree the Combined Authority respects individual differences (44%) compared to those without a disability (65%). When asked if they thought the Combined Authority acts fairly with regard to career progression and promotion, 41% of disabled people said 'yes definitely', compared to 50% of those without a disability; this has increased by 16% since 2022. This shows that the Combined Authority's EDI Plan is having a positive impact, however, further systemic change is required across the organisation to meet it's 100% response target by 2025 (WYCA, 2024).

Despite disability levels being higher than the national average, accessibility of rail stations varies considerably across West Yorkshire. Only 29% of rail stations across West Yorkshire have compliant step-free access, meaning the other 71% exclude 17.6% of the population. As a result, disabled people may be excluded from education, employment, health, and leisure opportunities, as they are unable to use public transport to get around. This reduces the autonomy and independence of disabled people as they have to rely on private travel; others may not have access to this or be able to afford it, which excludes them further. In turn, this impacts employment rates and economic activity.

5.5.3 Ethnic groups

The breakdown of the population by ethnic group in West Yorkshire is indicated in Table 36 below:

Table 36. Ethnic Groups in West Yorkshire

District	White	Mixed or Multiple Ethnic	Asian or Asian British	Black or Black British	Other
Bradford	61.1%	2.7%	32.1%	2%	2%
Calderdale	86.1%	1.9%	10.5%	0.7%	0.8%
Kirklees	73.6%	3.1%	19.4%	2.3%	1.5%
Leeds	79%	3.4%	9.7%	5.6%	2.3%
Wakefield	93%	1.4%	3.6%	1.3%	0.7%
West Yorkshire	77%	3%	16%	3%	2%
England	81%	3%	10%	4%	2%

Source: Office for National Statistics (2021b)

The West Yorkshire region is predominantly white, although this is slightly less than the proportion for England as a whole. The next largest ethnic group is Asian (including Asian British), the proportion of which is almost twice as high in the sub-region as for England as a whole. In particular, Bradford has a relatively large population in this group, representing 32.1% of the population. Kirklees also has a high proportion of Asian or Asian British, representing almost twice

the English proportion. The proportion of Black and Black British is lower in the sub-region than England, though in Leeds it is higher than the English proportion. Proportions of other ethnic groups are broadly in line with the average for England.

232,000 out of 550,000 (42%) people who identify as ethnic minority live in the 10% most deprived neighbourhoods in West Yorkshire. This rises to 61% if you consider the 20% most deprived neighbourhoods. 44% of people in the 10% most deprived neighbourhoods in West Yorkshire identify as an ethnic minority (WYCA, 2022). Ethnic minorities are disproportionately affected by poverty, and this can be attributed to high rates of insecure and unpaid work, and social discrimination and exclusion in education and the workplace, and institutional discrimination in social policy, which impedes on people's abilities to obtain jobs, housing, and healthcare.

In most ethnic minority groups, a higher proportion of adults live in households without access to a car or van compared to the white proportion of the population. 22% of Asian/Asian British adults and 39% of Black/African/Caribbean/Black British adults do not have access to a car or van in West Yorkshire, whereas only 17% of white adults live in a household without access to a car or van. As a result, the average number of trips made by car is higher for white groups than all ethnic minority groups apart from the mixed or multiple ethnic group (UK Government, 2020). This can limit their access to opportunities, and in turn, reduce employment rates and economic activity across the region.

It should be noted that the Asian and Black communities in West Yorkshire typically comprise generally larger households with a younger age profile than the white population. This suggests they may become more prominent as a proportion of the overall population in the future.

The West Yorkshire Combined Authority report on its ethnicity pay gap as an organisation. As of March 2023, 11.6% of its 759 employees reported being Black, Asian and minority ethnic, compared to 83.7% who reported being white. The Combined Authority therefore falls short of being representative of the West Yorkshire regional working age population which stands at 23.3%. The median pay gap stood at 4.8% and the mean pay gap stood at 9.8%. These figures show that when looking at the organisation as a whole, their black, Asian and minority ethnic employees earn on average 9.8% less than white employees and that the middle point for the earnings of black, Asian and minority ethnic employees is 4.8% lower than that of white employees (WYCA, 2023). The Combined Authority has set targets, as part of its EDI Action Plan 2022-25, to reduce these gaps to zero percent by 2028.

5.5.4 Migration

Between 2011 and 2021, 134,835 people arrived in the West Yorkshire by international migration. Of them, 45% reside in Leeds, 27% in Bradford, 14% in Kirklees, 10% in Wakefield and 4% in Calderdale.

Out of the five West Yorkshire districts, Bradford has the highest percentage of non-UK-born residents at 18.7%, followed by Leeds (15.8%) and Kirklees (12.6%); this is reflective of Table 36 in which the same three districts have the highest rates of ethnic diversity. Similarly, Leeds and Bradford also have the most non-UK passport holders, with Leeds having the highest percentage (9.2%), followed by Bradford (8.3%), as seen in Table 37.

Table 37. Percentage of Non-UK-Born and Non-UK Passport Holders by District

District	Non-UK-Born	Non-UK Passport Holders
Bradford	18.7%	8.3%
Calderdale	8.5%	4.1%
Kirklees	12.6%	5.4%
Leeds	15.8%	9.2%
Wakefield	8.5%	6%
England	16.8%	9.9%

Source: ONS (2022)

Table 38 highlights the percentage of non-UK passport holders in West Yorkshire and England by global region.

Table 38. Percentage of Non-UK Passport Holders by Global Region

Region	West Yorkshire	England
Europe	64%	69%
Africa	8%	6%
Middle East and Asia	25%	18%
The Americas and the Caribbean	3%	5%
Antarctica and Oceania (including Australasia)	1%	1%

Source: West Yorkshire Combined Authority (2022)

In both West Yorkshire and England, most non-UK passport holders are from Europe (64% and 69%); Middle East and Asia comes second, and Africa comes third. Only 1% of non-UK passport holders in both West Yorkshire and England come from Antarctica and Oceania, including Australasia.

The Combined Authority are now reporting on their ethnicity pay gap as an organisation. As of March 2023, 11.6% of their 759 employees reported being Black, Asian and minority ethnic, compared to 83.7%. The Combined Authority falls short of being representative of the West Yorkshire regional working age population at 23.3%. The median pay gap stood at 4.8% and the mean pay gap stood at 9.8%. These figures show that when looking at the organisation as a whole, their black, Asian and minority ethnic employees earn on average 9.8% less than white employees and that the middle point for the earnings of black, Asian and minority ethnic

employees is 4.8% lower than that of white employees (WYCA, 2023). The Combined Authority has set targets, as part of its EDI Action Plan 2022-25, to reduce these gaps to zero percent by 2028.

5.5.5 Sexual and gender identity

Sexual orientation and gender identity were new questions for the 2021 UK Census. Both questions were voluntary and were only asked of usual residents aged 16 years and over.

Table 39 below indicates gender identity across West Yorkshire:

Table 39. Gender Identity in West Yorkshire

District	Gender identity the same as sex registered at birth	Gender identity different from sex registered at birth
Bradford	91.71%	0.72%
Calderdale	94.15%	0.47%
Kirklees	93.40%	0.47%
Leeds	93.22%	0.72%
Wakefield	94.52%	0.42%
West Yorkshire	93.65%	0.61%
England	93.47	0.25%

Source: Office for National Statistics (2021)

In 2021, 11,383 (0.61%) people in West Yorkshire stated that they have a gender identity different from the sex they were registered at birth, which compares to 0.55% of the population of England as a whole. Leeds has the highest percentage population identifying as having a gender identity different from the sex they were registered at birth, whilst Wakefield has the lowest. 1,976 West Yorkshire residents identified as a Trans woman, and 1,986 identified as a Trans Man, whilst 1,224 identified as non-binary. There is a large and persistent gender pay gap in West Yorkshire, as seen in Table 40.

Table 40 Gender Pay Gap Data for West Yorkshire (%)

District	Gender Pay Gap Median	Gender Pay Gap Mean
Bradford	12.4	17.9
Calderdale	9.2	11.3
Leeds	14.8	8.6
Kirklees	17.3	13.5
Wakefield	14.1	10.7

West Yorkshire	14.7	13.3
England	15.5	14.3

Source: ONS (2023)

Overall, the gender pay gap in West Yorkshire is slightly lower than England. Kirklees, however, has a 1.8% higher median gender pay gap than England and Bradford has a 3.6% higher mean gender pay gap than England. This gap can partly be attributed to less women being in paid employment. As of 2023, in all local authorities across the UK, including in West Yorkshire, a greater proportion of men were in paid employment than women. Across West Yorkshire as a whole, 66.7% of women were in paid employment, compared to 78% of men (ONS, 2023). Women are also more likely to work in part-time roles which attract a lower hourly rate of pay which can affect the results of the gender pay gap (WYCA, 2021). This is often due to childbearing and childcare responsibilities. In some companies with discriminatory policies, this can affect hiring and promotion decisions and ultimately impact on career progression.

Across the UK, women are also much more likely than men to work in low skilled, low-paid sectors like care and leisure, as well as in administrative and secretarial jobs, due to gender bias, social norms, and discriminatory practices in the workplace. For example, in the UK in 2024, over 850,000 men work in finance and insurance, compared to circa 680,000 women, and 1.1 million men work in health and social work, compared to 3.7 million women (ONS, 2024). However, even when women and men hold the same positions, women still earn less than men on average. In the long term, this means that women will earn significantly lower pensions, resulting in high numbers of older women living in poverty.

As per the Equality and Human Rights Performance Report (Equality and Human Rights Commission, 2023), the West Yorkshire Combined Authority report annually on their gender pay gap, and they are looking to reduce it across their organisation. In March 2023, their gender pay gap was at 5.38%, which was lower than the mean national average of 8.3%. The Combined Authority has set targets, as part of its EDI Action Plan 2022-25, to reduce these gaps to zero percent by 2028 to ensure they are representative of the population they are serving (WYCA, 2023).

Table 41 below shows the diversity of sexual orientation across West Yorkshire:

Table 41. Sexual Orientation in West Yorkshire

District	Straight or Heterosexual	Gay or Lesbian	Bisexual	Other
Bradford	88.86%	1.08%	1.01%	0.30%
Calderdale	89.91%	1.69%	1.18%	0.33%
Kirklees	89.96%	1.25%	1.07%	0.29%

Leeds	88.42%	1.86%	1.92%	0.47%
Wakefield	90.98%	1.50%	1.03%	0.24%
West Yorkshire	89.3%	1.50%	1.40%	0.3%
England	89.4%	1.50%	1.30%	0.3%

Source: Office for National Statistics (2021)

89.3% of West Yorkshire residents aged 16 and over identified as being straight or heterosexual, compared to 89.4% in England as a whole. 7.5% in England did not provide a response to this question, and locally that figure was higher in Bradford at 8.8%.

3.2% (60,368 people) of West Yorkshire residents identified as gay or lesbian, bisexual, or other. 28,246 West Yorkshire residents aged 16 and over identified as gay or lesbian, and 25,550 identified as bisexual, slightly higher than the England average. 4,604 West Yorkshire residents identified as pansexual, 1,022 identified as asexual, and just under 600 identified as queer, whilst 351 identified as another sexual orientation. Leeds has the highest LGB+ population, at 4.25%, whilst Bradford has the lowest at 2.39%. Overall, 4.1% of England's residents who identify as being LGB+ live in West Yorkshire (WYCA, 2023).

The Combined Authority's current workforce data on sexual orientation is limited, and will be strengthened including gender identity, which will also improve the accuracy of management information. By 2030, however, it is proposed that at least 2% of colleagues will be people of minority gender identity/expression and sex characteristics and at least 5% of colleagues will be people of minority sexual orientation (WYCA, 2023).

Hate crime is prevalent in public spaces and on public transport in the UK. In the year ending March 2022, 155,841 hate crimes were recorded by police in England and Wales, which is a 26% increase from the previous year. 26,152 of these were sexual orientation hate crime and 4,355 were transgender hate crimes. Sexual orientation hate crimes increased by 41%, and transgender hate crimes increased by 56% over the year to March 2022 (Home Office, 2022). In 2022, West Yorkshire Police recorded 1,572 sexual orientation hate crimes and 319 transgender hate crimes. Sexual orientation hate crimes have risen by 477 since 2019/20, and transgender hate crimes have risen by 103 (WYCA, 2022). Whilst this can be attributed to a rise in hate crime, it can also be attributed to an increase in reporting. There is an evidenced need to improve safety for these groups in public spaces and on public transport.

5.5.6 Marriage and civil partnerships

Table 42 below highlights the percentage of West Yorkshire residents who are married or in a registered civil partnership.

Table 42. Legal Partnership Status in West Yorkshire

Local Authority	% Married or in a registered civil partnership
Bradford	45.8%
Calderdale	44.2%
Kirklees	46%
Leeds	39.6%
Wakefield	44.5%

Source: Office for National Statistics (2021)

Leeds has the lowest percentage population married or in a civil partnership, whilst Kirklees has the highest percentage. Leeds being a university city may result in it having lower marriage and partnership ratings. For example, it has a large student and young professional population, and its environment caters to this, with student accommodation and high rise 1-2 bed apartment blocks, and limited space for families to settle down. Kirklees also has a larger ageing population, which could also attribute to its higher rates of marriages and civil partnerships.

In general, marital status has been shown to have a significant impact on life satisfaction, with those married or in a civil partnership being most likely to report higher life satisfaction than those of any other marital status (WYCA, 2023). Despite this, marriage and civil partnership rates across the UK fell between 1991 and 2021, from 58.4% to 46.9%, whilst divorce rates increased from 6.2% to 9.1% (ONS, 2021).

Same sex marriage was introduced in 2014, and yet as of 2021, adults in same-sex marriages and all civil partnerships make up less than 0.5% of the population aged 16 years and over. Adults in same-sex marriages and civil partnerships are more likely to be younger, have no religion, and have higher-level qualifications than adults in opposite-sex marriages (ONS, 2021).

5.5.7 Pregnancy and maternity

Table 43 shows the total number of conceptions and the percentage of abortions across West Yorkshire and England in 2021.

Table 43. Conceptions and abortions in West Yorkshire and England

District	Total number of conceptions	% of conceptions leading to abortion	Total number of conceptions at ages under 16	% of conceptions leading to abortion at ages under 16
Bradford	8,767	23.1%	28	53.6%
Calderdale	2,769	27.1%	8	87.5%
Kirklees	6,397	25.5%	20	60%
Leeds	12,122	29.8%	47	38.3%
Wakefield	4,962	25.9%	20	65%
West Yorkshire	35,017	26.6%	123	52.8%
England	785,656	26.5%	2,053	60%

Source: Office for National Statistics (2021)

Leeds has the highest total number of conceptions for all ages and those under 16 out of all the West Yorkshire districts, as well as the highest percentage of conceptions leading to abortions. For under 16's, however, Leeds has the lowest percentage of conceptions leading to abortions. Calderdale has the lowest number of conceptions across both age categories, whilst Bradford has the lowest percentage of conceptions leading to abortion.

Pregnancy and maternity can affect how people travel, but the inclusivity and accessibility of transport options can also play a major role. A study conducted by the University College London found that pregnant women would alter their journeys to less busy times, choose a slower service because they were less crowded despite it lengthening their commute time, and opt to drive over using public transport (O'Toole, 2022). Lack of seats and lifts in public transport hubs can also make it difficult for pregnant people and those using prams to get around easily. These adjustments and design flaws indicate the exclusion of women, pregnant people, and parents from public transport.

5.5.8 Age profile

Table 44 below indicates the breakdown by age of the population in West Yorkshire from 2021 census:

Table 44. Age Profile of Residents in West Yorkshire

District	0-14 years	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75+
Bradford	21.4%	13%	13.3%	13.5%	12.5%	11.2%	8.5%	6.7%
Calderdale	18.1%	10.5%	12.1%	12.4%	14.3%	13.6%	10.6%	8.4%
Kirklees	18.8%	12.2%	12.7%	12.8%	13.6%	12.3%	9.8%	7.9%
Leeds	17.8%	15.1%	14.9%	13.3%	12.3%	10.9%	8.4%	7.2%
Wakefield	17.5%	10.1%	13.9%	12.6%	13.9%	13.2%	10.4%	8.4%
West Yorkshire	18.6%	13%	13.6%	13.4%	12.6%	11.9%	8.9%	7.9%
England	17.2%	11.8%	13.5%	13.3%	12.9%	12.6%	9.6%	9%

Source: Office for National Statistics (2021)

This indicates that the sub-region has a marginally younger population than for England as a whole. Within the sub-region, this is particularly the case in Bradford and Leeds. This is due to the more ethnically diverse population and the greater number of students living in these districts.

Between 2011 and 2021, the West Yorkshire population increased by 5.6%, compared with England, which increased by 6.6%. Under 16's also grew by 5.6%, and the population aged 65 and over grew by 18.7%, whilst the population under 5 fell by 6.9% (WYCA, 2022).

The West Yorkshire Residents Perceptions of Transport Survey 2022 (WYCA, 2023) found that residents aged 35 to 64, and aged 65 and over are more likely to be dissatisfied with the condition of roads (30% and 35% respectively) than 16- to 34-year-olds (23%). Residents aged 65 and over are also more likely to be dissatisfied with the speed of repair to roads and pavements than 16- to 34-year-olds (43% and 28% dissatisfied, respectively). Residents aged 65 and over are more likely to be satisfied with local bus services (41%) than other age groups, whilst 16- to 34-year-olds are more likely to be satisfied with local train services (43%) than other age groups. This can be attributed to 16- to 34-year-olds being more likely than those aged 65 and over to use a train at least monthly.

5.5.9 Faith groups

Table 45 below indicates the breakdown of the West Yorkshire population in terms of the faith group to which they belong.

Table 45. Faith Groups in West Yorkshire

District	Christian	Buddhist	Hindu	Jewish	Muslim	Sikh	Other	None
Bradford	33.4%	0.2%	0.9%	0%	30.5%	0.9%	0.4%	28.2%
Calderdale	41.5%	0.3%	0.6%	0.1%	9.5%	0.2%	0.5%	42%
Kirklees	39.4%	0.2%	0.4%	0%	18.5%	0.8%	0.4%	34.8%
Leeds	42.3%	0.4%	1.1%	0.8%	7.8%	1.2%	0.4%	40.2%
Wakefield	49%	0.2%	0.4%	0%	3.2%	0.1%	0.4%	41.3%
West Yorkshire	40.6%	0.3%	0.8%	0.3%	14.5%	0.8%	0%	42.7%
England	46%	1%	2%	1%	7%	1%	0%	58%

Source: Office for National Statistics (2021)

In 2021 40.6% of West Yorkshire residents identified as Christian, a decrease from 54.6% in 2011, with a similar picture for England overall. 36.7% stated they had no religion, an increase from 25% in 2011. In 2021, 14.5% of West Yorkshire residents identified as Muslim, which is double the England average.

Out of the five West Yorkshire districts, Wakefield has the highest proportion of residents identifying as Christian (49%) whilst Bradford has the lowest (33.4%). 30.5% of Bradford residents identify as Muslim, which is 4.5 times the England average. Of the 19,000 West Yorkshire residents who identify as Sikh, more than half live in Leeds, a quarter live in Kirklees, and 18% live in Bradford. The share of people who state they have no religion has increased nationally and locally, most notably in Wakefield which saw a 17% increase since 2011 (WYCA, 2022)

Faith communities in West Yorkshire often face serious violence. Religious hate crime offences in West Yorkshire were at 576 in 2021/22; an increase of 155 since 2019/20 (WYCA, 2022). This may prevent faith communities from partaking in active travel and using public transport in an attempt to avoid harassment and violence.

5.5.10 Deprivation

A key characteristic of West Yorkshire is the significant variation in the levels of deprivation, both between districts and between different neighbourhoods and communities within each district.

The Government's Index of Multiple Deprivation (IMD) provides a means of measuring levels of deprivation in areas of England. The Index assesses deprivation by seven different 'domains' capture the level of deprivation relating to specific issues. It provides an overall deprivation score for small geographical areas, known as 'Lower Super Output Areas'. The summary measures of the ID that are produced at District Level are indicated for West Yorkshire in Table 46 below.

Table 46. Rank of Average Index of Deprivation Score by District in West Yorkshire

Local Authority	Rank in 2019
Bradford	21
Calderdale	76
Kirklees	87
Leeds	92
Wakefield	64

Source: MHCLG (2019)

Within West Yorkshire, 20% of neighbourhoods are categorised in the 10% most deprived in England, with significant pockets of deprivation existing across all five of the districts (MHCLG, 2019). This is equivalent to more than half a million people.

Bradford ranks 21st out of the 317 districts ranked in England. This places it within the most deprived 10% of local authorities nationally and make it the most deprived authority in West Yorkshire (MHCLG, 2019). Within the income and employment domains Bradford ranks 5th and 6th respectively against national scores (City of Bradford MDC, 2019), however, there are pockets of deprivation across the sub-region, particularly in parts of Halifax, Huddersfield, Leeds, Castleford and Hemsworth.

More deprived households travel less overall, with people in the lowest income quintile in West Yorkshire making 10% fewer trips and 36% shorter trips than the average population. 45% of households in the lowest income quintile also do not have access to a car, compared to 14% of those in the highest quintile. Bus trips are three times as high for people in the lowest income quintile in comparison to the highest quintile (WYCA, 2022).

West Yorkshire residents living in the most deprived neighbourhoods have noted the importance of the bus service to their accessibility across the region; 71% of residents in the most deprived neighbourhoods rated it important, compared to 60% in the least deprived (WYCA, 2023). 75% of respondents to the Connectivity Infrastructure Plan engagement survey also agreed that future plans should focus on improving transport connectivity in areas of deprivation, highlighting a potential lack of current provision which could impact access to opportunities in those areas (WYCA, 2021).

5.5.11 NEET levels

NEET stands for not in education, employment or training. It is a term generally applied to describe young people and NEET statistics and trends are closely monitored by a number of organisations/Government departments including the Department for Children, Schools and Families and Connexions.

A Department for Education article on Strategies for 16- to 18-year-olds not in education, employment or training (NEET) states: 'We know that being NEET at this age is associated with negative outcomes later in life, including unemployment, reduced earnings, poor health and depression. These outcomes have a cost for both the individual and the economy.'

The proportion of young people who are NEET in West Yorkshire fell from 6% to 5.5% between 2020/21 and 2021/22 but remains slightly above the national average of 4.7%, as seen in Figure 35: .

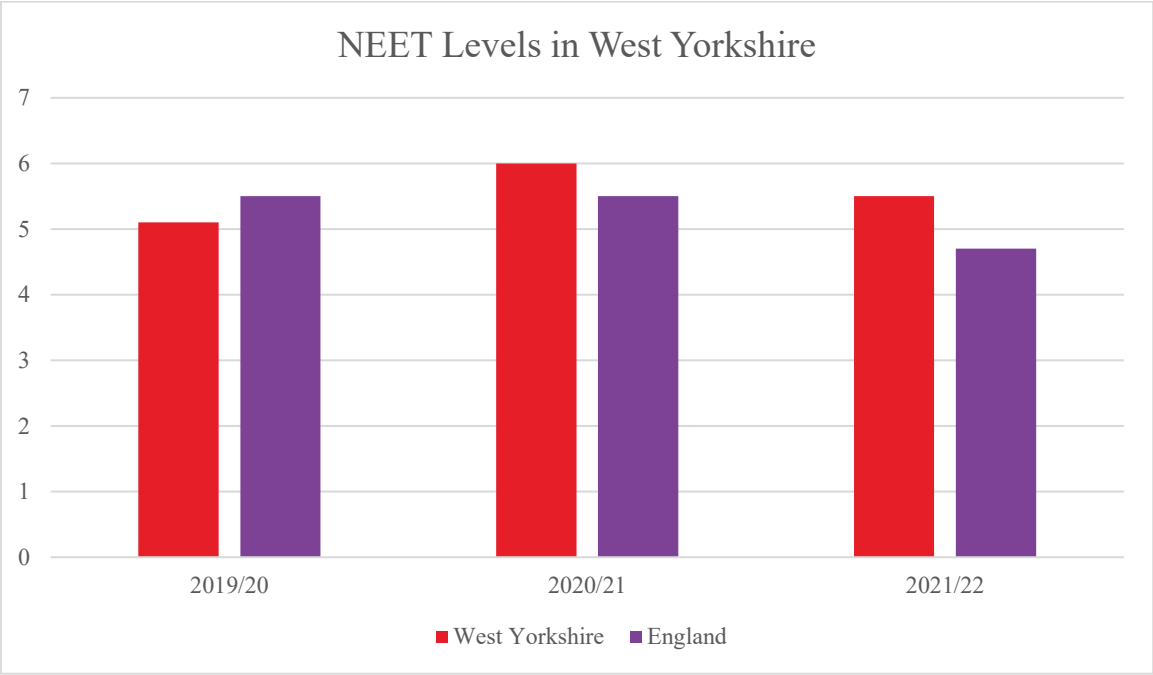


Figure 35: NEET levels in West Yorkshire

Source: WYCA, (2022)

The prevalence of NEETs varies across West Yorkshire districts. Around 3% to 4% of 16- and 17-year-olds in each of Calderdale, Kirklees and Wakefield are NEET or not known, with the proportion increasing to around 6% in Bradford. The proportion is highest in Leeds at nearly 8%.

Young people from an ethnic minority group are, in general, less likely to become NEET in West Yorkshire. Around 5% of young people from an ethnic minority were NEET or not known as of December 2020, compared with 6% of young white people (WYCA, 2022). Women and girls (5%) are also less likely than men (7%) to become NEET at age 16 and 17. Nonetheless, almost 40% of all NEETs are female, which is around 1,200 young women. Historically, more women than men have been NEET, but over time this gender gap has disappeared due to a decrease in the number of young women staying at home to care for their families (WYCA, 2022).

5.5.12 Summary of Equality Data

There are slightly more women living in West Yorkshire than men and this is in line with the England average. Those who identify as male and female use and experience the transport system differently, with women using trains less than men, potentially due to safety concerns.

414,000 people in West Yorkshire are disabled under the Equality Act, which is higher than the national average; this is an increasing trend. Despite this, accessibility of rail stations varies considerably across West Yorkshire.

The West Yorkshire region is predominantly white, although this is slightly less than the proportion for England as a whole. In most ethnic minority groups across West Yorkshire, a higher proportion of adults live in households without access to a car or van compared to the white proportion of the population.

134,835 people migrated to West Yorkshire in the 10 years to 2021, most of whom chose to reside in Leeds and Bradford. In both West Yorkshire and England, most non-UK passport holders are from Europe.

In 2021, 0.61% of the West Yorkshire stated that they have a gender identity different from the sex they were registered at birth and 3.2% described themselves as being LGB+. Sexual orientation and transgender hate crimes have increased between 2021 and 2022 in West Yorkshire.

West Yorkshire has a marginally younger population that England, particularly in Leeds and Bradford who have high student populations. Younger people in West Yorkshire are more likely to use a train, whilst older people are more likely to use the bus.

Most people in West Yorkshire identify as not belonging to a religion, closely followed by Christian, following the same pattern as England. Faith communities in West Yorkshire often face serious violence, and religious hate crimes increased between 2019 and 2022.

Within West Yorkshire, 20% of neighbourhoods are categorised in the 10% most deprived in England. 75% of West Yorkshire residents agree that future plans should focus on improving transport connectivity in areas of deprivation, particularly bus routes as these are important to this group.

The number of NEET individuals in West Yorkshire is decreasing but remains above the national average. Young people from an ethnic minority group are, in general, less likely to become NEET in West Yorkshire, which is the same for women over men.

Overall, failure to address inequities amongst the West Yorkshire population has and will continue to lead to poor access to employment, education, health, and leisure opportunities. The LTP has an opportunity to focus on improving local transport infrastructure, so that it benefits the most underrepresented groups across the region, including ethnic minorities, women and girls, and

disabled people. This will result in a more cohesive and inclusive transport network, which supports productivity and health.

6. Summary and analysis of key environmental, economic, health, and equality issues

The SEA Directive states that the Environmental Report should provide information on:

> *'Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/'3/EEC' (Annex I(d))'*

This section integrates and summarises key issues from the baseline information presented within Sections 5.2-5.5. For consistency, the key sustainability issues identified in the 2016 ISA Report (Atkins) have been reviewed and updated to reflect the current baseline context, as set out in this report.

The review of baseline information indicated that there are a number of sustainability issues in West Yorkshire. These key issues are summarised in Table 47.

The below table also provides a discussion on the implications/opportunities of such issues to the LTP and furthermore, provides a clear link to the proposed ISA objectives. This analysis of sustainability issues has directly influenced the development of the ISA framework (as set out in Section 7), in particular in formulating assessment criteria questions.

Table 47: Key sustainability issues

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
1.	**Increasing greenhouse gases emissions (GHG), in particular CO2** Three-year data across 2019 – 2021 showed an overall reduction of transport emissions in West Yorkshire but the trend is not consistent. The greenhouse gas emissions per capita was calculated according to this dataset and the Office for National Statistics population data, which shows that Wakefield generates the highest greenhouse gas emissions per capita from road transport (2.01 tonnes), followed by Leeds (1.79 tonnes), Calderdale (1.63 tonnes), Kirklees (1.35 tonnes), and Bradford (0.93 tonnes). Absolute emissions continue to fall across West Yorkshire and appear to show an overall reduction of 14% in emissions from 2018 to 2021 (Department of Energy Security & Net Zero, 2023). This may be due to improvements in engine efficiency and abatement technologies.	The LTP should seek to ensure that reducing CO2 is a fundamental principle of the LTP itself (e.g. promotion of sustainable modes of transport – including new opportunities for mass transit, smarter travel management such as workplace, residential and school travel plans, creation of inter-modal interchanges, sustainable freight movements and traffic management interventions). The LTP should seek to ensure that new schemes maximise the opportunity for increasing tree /vegetation cover, where practical, in order to absorb increased amounts CO2, e.g. through the use of street trees. This presents opportunities to align with the West Yorkshire 'Tackling the Climate Emergency: Emission Reduction Pathways Report' (2020), which states a requirement for a 27% reduction in the passenger kilometres travelled by combustion engine cars; this is in parallel with increases in public transport and sustainable modes.	Reduce greenhouse gas emissions from transport
2.	**Increased risk of flooding** West Yorkshire falls within the Humber River Basin Management Plan (Environment Agency, 2022), within which water has played an important role in the growth of the cities and manufacturing industries. West Yorkshire comprises of the following rivers: • Aire & Calder Navigation Main Line, which flows through the Bradford and Leeds districts; • Calder & Hebble Navigation, which flows through Calderdale district;	The LTP should seek to ensure that transport infrastructure minimises any negative effect arising from flooding (e.g. by conducting flood risk assessments and using materials/techniques which reduce surface run-off) and slow the flow of water to main water courses where possible. The LTP should also recognise that climate change is likely to worsen the risk of flooding events and prolonged drought and that necessary mitigation measures are included, e.g. through review of maintenance procedures to take into account climate change factors. Through utilising the Leeds City Region Sustainable Drainage Systems Guidance, the LTP	Increase resilience of the transport network to climate change and associated extreme weather events

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	• Huddersfield Broad Canal, which flows through Kirklees district; • Huddersfield Narrow Canal, which flows through Kirklees district; • Leeds & Liverpool Canal, which flows through the Bradford and Leeds districts; • Rochdale Canal, which flows through Calderdale district; • Wakefield Branch (Aire & Calder Navigation), which flows through Wakefield. The State of the Region Review 2022 (WYCA, 2022) indicates that around 3% of residential properties and 13% of commercial properties in West Yorkshire fall within a flood risk zone, and flooding is likely to become a more frequent occurrence as a result of climate change and the intensity of its effects. Flood zones are commonly found alongside main river areas, where the Aire Valley and River Wharfe are associated with the most Flood zone 3 areas, where there is a 1% or higher chance of flooding from rivers.	should ensure drainage systems are sufficiently resilient to deal with periods of intense rainfall. Ensure that where transport schemes require a land take from the floodplain there is appropriate compensatory measures put in place	
3.	**Deteriorating air quality** In West Yorkshire there are 35 air quality management areas (AQMAs) related to road traffic emissions of NO2. Nitrogen dioxide (NO2) and suspended particles (PM2.5 and PM10) are the key air pollutants being considered in the ISA. These pollutants are identified as being of particular concern with respect to compliance with the objectives in the Air Quality Strategy for England, Scotland, Wales, and Northern Ireland.	The LTP should integrate the emission reduction targets of the West Yorkshire 'Tackling the Climate Emergency: Emission Reduction Pathways Report' (2020), and any other opportunities which may be identified as the plan is developed, in order to improve local air quality. The LTP should consider ecological receptors (such as the air quality sensitive wetland and heath habitats in the South Pennine Moors and North Pennine Moors	Protect and enhance local air quality

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	In West Yorkshire, there is a pattern of heavy pollution along major road networks, but in rural parts, the air quality is exceptionally good. Transport was the largest emitting sector of greenhouse gas emissions, producing 24% of the UK's total emissions in 2020. 33% of Nitrogen Oxides emissions and 14% of PM2.5 emissions came from transport during the same period. Nevertheless, evidence has shown that emissions of particularly harmful pollutants, such as carbon monoxide, particulate matter, and nitrogen oxides, have reduced following increasingly stringent exhaust emission limits. All Districts in West Yorkshire comply with the annual average PM10 standard of 40µg/m3 and are well below. However, the long-term trend in PM10 levels is unclear and there was little change in background levels over the period 2020 – 2022.	European designated sites) alongside human receptors when dealing with air quality.	
4.	**Threatened biodiversity and geodiversity and fragmentation of green and blue infrastructure** 34 sites in West Yorkshire have been designated as SSSIs for their wildlife or geological importance and 4 sites have named European Protected Sites. There are also 4 European Protected Sites close to the boundaries on West Yorkshire. 249,505 hectares in South and West Yorkshire is designated as Green Belt (out of a total area of 1.6 million hectares of Green Belt in England). A portion of this Green Belt forms part of the buffer zone that protects views of the Saltaire World Heritage Site in Bradford. The region does not consist of any Areas of Outstanding Natural Beauty (AONB) and only a small part of	The LTP should integrate the priorities from the West Yorkshire Green and Blue Infrastructure Strategy in order to better protect and enhance biodiversity, geodiversity, and green and blue infrastructure. These include enhancing green and blue corridors and transport networks and improving community access to green and blue infrastructure. The LTP should align with the LNRS'(currently under development, for publication in 2025) to help tackle biodiversity loss, climate change, and wellbeing. The LTP should aim to protect designated areas and other areas of ecological value, e.g. by ensuring that planning/ design of transport interventions avoid sensitive areas and through the adoption of best practice wildlife friendly designs into road interventions. Where this is not possible, there should be mitigation and compensation for losses.	Protect and enhance biodiversity, geodiversity and the green and blue infrastructure network

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	designated National Park falls within the boundary of the Kirklees district. New transport projects have the potential to impact on the sites of ecological or geological value and more generally on the network of linked multi-functional green spaces, comprising the local green infrastructure, through land take for infrastructure and such construction and operational impacts as noise, vibration, dust and drainage. Increased accessibility to designated sites also has the potential to adversely impact on them.	Opportunities for new habitat creation and enhancement associated with transport developments should be explored, e.g. through the use of appropriate locally native species in landscaping plans, through creation of new road verges and enhancement of the existing road verge network . The potential for biodiversity creation in brownfield sites should be also taken into account. The LTP should also seek to explore the possibilities for creating blue infrastructure which can both help to manage localised flood risk and create new habitats. Other opportunities for the LTP include the following: - avoid the fragmentation of green and blue infrastructure, where possible, which contributes to protecting natural habitats and biodiversity. Any impacts should be minimised and mitigated appropriately; - the need for cohesive habitat networks to help habitats and species adapt to the consequences of climate change; - the potential for policies and proposals to encourage recreation in sensitive areas through improving access, in particular in relation to recreational pressures on Ilkley Moor SSSI, SAC and SPA; - enhancement of the green infrastructure through for example foot paths, cycle lanes and other public rights of ways. Increased accessibility to appropriately designed multi-functional green infrastructure can play a significant role in diverting access pressure away from more sensitive sites, such as those	

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
		designated for wildlife and geological conservation. Alongside the LTP is a Habitats Regulation Assessment (HRA) which will identify areas to avoid, or where this is not possible, appropriate mitigation measures very early on in the development of the Plan.	
5.	**Pressure on landscape and townscape character** The western part of the sub-region, including most of Calderdale and Bradford districts, and small parts of Kirklees and Leeds districts, falls within the Southern Pennines area. This area is typified by large scale sweeping landforms with an open character created by exposed gritstone moors at an altitude of 400-450m, deeply trenched by narrow valleys and wooded cloughs. East of here, most of the rest of Calderdale, Kirklees and Bradford districts come within the Yorkshire Southern Pennine Fringe. The eastern slopes of the Pennines drop from upland in the west down to the east, dissected by numerous steep-sided valleys. The area is characterised by a predominance of local sandston‘ and ‘gri’stone’ as a building material, notably in large and dominant industrial buildings. The larger part of the Leeds and Wakefield districts, together with parts of Bradford and Kirklees districts fall within the ‘Nottinghamshire, Derbyshire and Yorkshire Coalfields’ character area. This area is characterised by widespread evidence of industrial activity including mine buildings, former spoil tips, and iron and steel plants. The eastern parts of Leeds and Wakefield Districts come within the Southern Magnesian Limestone area. This is an elevated ridge with smoothly rolling landform,	The LTP should seek to preserve and enhance the character of the county’s landscape and townscape by ensuring that its integrity and valuable natural open space is not lost. It should also aim to ensure that transport interventions avoid sensitive areas where possible and respect particular landscape or townscape settings, in particular on the special qualities and setting of nationally designated landscapes including the Peak District National Park, Yorkshire Dales National Park and Nidderdale Area of Outstanding Natural Beauty (AONB). Opportunities for landscape enhancement should be explored, e.g. through sympathetic design and enhancements to existing landscape improvement areas, new planting opportunities associated with transport development. There may be opportunities to slow the flow of water into river catchments (see Issue 2 above) through interventions at the landscape scale, for example, through upland afforestation schemes and changes to land management which could include measures such as: • Constructing low-level bunds • Planting more trees, especially along streamsides and in the floodplain • Restoring woody debris dams in small streams • Restoring wetlands.	Protect and enhance the character and quality of landscape and townscape

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	dissected by dry valleys with long views over surrounding lowland. New transport projects have potential to impact on the region's landscape and townscape through additional land take, which may necessitate removal of natural features or manmade structures, and visual changes.	These measures can help reduce flood risk in the lower parts of a catchment and help to protect transport infrastructure from flooding.	
6.	**Pressure on the historic environment** The most important heritage feature in West Yorkshire is the World Heritage Site at Saltaire near Bradford, designated in 2001. This is a purpose-built 'model' Victorian industrial village that was built in the nineteenth century. There are many listed buildings, Conservation Areas and Scheduled Ancient Monuments across West Yorkshire, many reflecting its national and global importance through the industrial revolution and Victorian times. Overall, as of 2023, there are 119 heritage sites across West Yorkshire that have been identified as 'at risk' by Historic England. Leeds has the most of these at 30 sites, followed by Bradford at 27, and Kirklees at 25. Historic England's 'Register of Historic Parks and Gardens of special historic interest in E'gland' identifies over 1,600 sites in England that have been assessed to be of national importance; as of 2023, 48 of these are in West Yorkshire. New transport projects have the potential to impact on the region's heritage assets both adversely and positively. This can include works affecting conditions and setting for assets, through physical works in the Conservation areas or the destruction of known or unknown archaeological areas.	The LTP should aim to protect and preserve designated and non-designated heritage assets and their settings and opportunities for improving settings should be explored. The LTP should consider opportunities for the plan to provide better accessibility to the historic environment and ensure that new transport interventions improve the settings of cultural heritage assets. Several elements of the transport infrastructure in the Combined Authority area (bridges, stations etc) are designated heritage assets. The LTP should ensure that these assets are appropriately managed.	Conserve and, where appropriate, enhance those elements which contribute to the significance of the area's heritage assets

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
7.	**Growing waste generation and natural resources consumption** The five districts within West Yorkshire are managed by each of their local waste planning authorities (WPA) at the district council level. In West Yorkshire, the WPA of each district is the same as their local planning authority. Leeds contributes the most to total waste arisings across West Yorkshire, followed by Wakefield and Bradford. The amount of waste going to landfill is still significant, but at similar level of waste being reused or recycled. All five district councils have produced waste management strategies to address local waste management needs, despite most of the strategies were not up to date.	The LTP should seek to promote minimisation of natural resources consumption (e.g. through the use of secondary and recycled materials). The LTP can also promote modal shift to sustainable transport modes, therefore reducing fuel consumption. Opportunity for the LTP to promote waste minimisation and improved waste management, e.g. through use of recycled materials in transport interventions construction, including road construction and maintenance.	Promote prudent use of natural resources, minimise the production of waste and support re-use and recycling
8.	**Pressure on land and contaminated land** Within West Yorkshire, there are only 2 sites that have been identified as 'Special Sites', which are both within the Kirklees council area. 2.53% of land in Yorkshire and the Humber is designated as previously developed land that has been vacant or derelict for more than 5 years (National Indicator 170). This is higher than the national average of 1.56% overall, and the third highest of the regions in England (MHCLG, 2014). Peatland is an important natural asset that functions as carbon store, wildlife habitat, and flood controller (National Trust). In 2021, the UK Government published the England Peat Action Plan, which sets out the government's long-term vision for the management of	The LTP should support appropriate land uses and should aim to protect land resources through avoidance of negative impacts. The LTP must protect soils as they are essential for achieving a range of important ecosystem services and functions, including food production, carbon storage and climate regulation, water filtration, flood management and support for biodiversity and wildlife. In particular, the LTP must ensure that that soil resources are protected during the construction phase of schemes. The LTP should lead to no additional contamination of soils and secure improvements to land quality as part of the implementation of proposals.	Conserve soil resources and quality and seek to remediate contaminated land

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	peatlands. The Plan acknowledges peatland restoration as a key step for meeting the Net Zero and wider environmental goals. 35,000 hectares of peatland restoration will be funded by 2025 through the Nature of Climate Fund and other source (UK Government, 2021). The presence of peat in West Yorkshire is not extensive, with most peaty soils clustered in the northern and the western part of Bradford, the western part of Calderdale, and near the south-western boundary of Kirklees. Leeds and Wakefield area only consists of few locations of small-sized peatland. New transport projects have potential to impact on the existing greenfield/ agricultural land. Some of the most significant impacts on soils occur as a result of activities associated with construction. Contaminated land can be encountered during construction of transport interventions.	The LTP should prioritise the restoration of peat as a key step for meeting Net Zero targets in line with the England Peat Action Plan.	
9.	**Pressure on water environment and pollution of watercourses** West Yorkshire falls within the Humber River Basin Management Plan (Environment Agency, 2022), within which water has played an important role in the growth of the cities and manufacturing industries. According to Canal & River Trust's latest update (2024), West Yorkshire comprises of the following rivers: • Aire & Calder Navigation Main Line, which flows through the Bradford and Leeds districts;	The LTP should seek to prevent pollution of watercourses and groundwater (e.g. by incorporating SuDS in road drainage design/transport interventions where possible, to enhance water quality and reduce pollution and flood risk and by promoting porous surfacing for transport infrastructure). The Leeds City Region Sustainable Drainage Systems Guidance should be used to enable this.	Protect and enhance the water environment

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	• Calder & Hebble Navigation, which flows through Calderdale district; • Huddersfield Broad Canal, which flows through Kirklees district; • Huddersfield Narrow Canal, which flows through Kirklees district; • Leeds & Liverpool Canal, which flows through the Bradford and Leeds districts; • Rochdale Canal, which flows through Calderdale district; • Wakefield Branch (Aire & Calder Navigation), which flows through Wakefield. There are 18 management catchments within the Humber River Basin District, including 2 management catchments that comprises operational catchments across the entire river basin district, namely Humber AWB catchment and Humber GW catchment. Apart from the two district-wide catchments, those which West Yorkshire falls within are the Aire and Calder Catchment and the Wharfe and Lower Ouse Catchment. The Aire and Calder catchment covers an area from the Pennines and Yorkshire Dales to low-lying floodplains. It includes most of Bradford, Leeds, Calderdale, Kirklees, and Wakefield. Only 8% of all water bodies within the catchment are at good or better ecological status/potential, whereas the majority of the rivers, canals, SWTs and Lakes have set relevant objectives to achieve good or better status. The Wharfe and Lower Ouse catchment covers an area from the North and South Pennine Moors and Yorkshire		

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	Dales National Park to the towns of Selby, Tadcaster and Selby. The greatest uses of water in the catchment are fish farming, public water supply, and industrial and commercial activities. The rivers are also used for recreation and leisure activities. 95% of the rivers, canals and SWTs have set an objective of good status of better in biological elements, phys-chem elements and specific pollutants, but only 23% of water bodies are at good or better ecological status/potential. New transportation projects generally impact the status of the catchment's rivers and lakes. Adverse effects of covering the land with impervious materials, such as building a new road, prevents soils absorbing water and therefore increasing the risk of flooding, surface runoff and pollution of groundwater. More frequent occurrence of flash flooding also augments erosion along riverbanks and riparian habitats, and ultimately diminishes groundwater quality and supply as there is less opportunity for water to percolate through the soil.		
10.	**Dependence on private car leading to traffic growth** The transport sector emits the most carbon emissions of any sector within West Yorkshire, and this is dominated by road-transport and the private car (WYCA, 2021). In fact, almost 80% of the total passenger miles travelled by West Yorkshire residents are made by car. To meet West Yorkshire's net zero target of 2038, there is a requirement for a 27% reduction in the passenger kilometres travelled by combustion engine cars; this is in parallel with increases in public transport and sustainable modes. Car ownership continues to increase across West Yorkshire, and in the third quarter of 2022, there were 1.3	The LTP should aim to align with the West Yorkshire Mass Transit Vision 2040 (2022), as well as the West Yorkshire 'Tackling the Climate Emergency: Emission Reduction Pathways Report' (2020) to increase trips made by public and active transport. The LTP should aim to minimise dependence on the private car, thus reducing traffic growth and congestion, e.g. through increasing accessibility and sustainable modes of transport to/from rural areas, encouraging modal shift by facilitating a widening travel choice through quality integrated facilities and services, walking and cycling improvements, demand management, network management, travel planning and intelligent transport systems.	Promote sustainable modes of transport, including public transport and active travel

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	million vehicles licensed across the region. This is 2.6% more than the previous year and 13% more than in 2016. In the same period, ultra-low emission vehicles represented just 3.7% of the vehicle stock in West Yorkshire. The rate of children walking to sIhool in the UK did not change between 2010 and 2018, suggesting high car dependency, poor accessibility to alternative options, and a lack of active travel provision. This is evidenced in the last point which states that UK budgets for walking and cycling have declined by £62 million in only five years, whilst road investment has increased by £2.03 billion.	The LTP should also promote an integrated transport infrastructure with patterns of land use which reduce the need to travel, particularly by car. The LTP should create the infrastructure to encourage people to switch to low emission vehicles with the delivery of charging points and preferential parking. The LTP should create disincentives for car use including congestion charging, car park charging and limiting car park spaces.	
11.	**Employment** West Yorkshire has a workforce of over 1.1 million. West Yorkshire is one of the most dynamic and significant local economies in the UK outside of London. Leeds has experienced fast growth over recently years, and is firmly established as a leading UK financial services and commercial centre outside London. The head offices of many financial institutions and customer service centres are based in West Yorkshire. Historically, manufacturing and textiles have been the primary sectors of the local economy. The area has supply chains and centres of excellence for training, technology and design supported by further and higher education expertise specifically in these sectors. Recent development has been more diverse, including expansion in e-business, digital, print, bio-sciences and chemical clusters. Skills in manufacturing are supplemented by graduates emerging from the four universities in the sub-region, specialising in engineering,	The LTP should support existing and new businesses through delivering sustainable transport infrastructure necessary for the future economic growth of the region. This should include improving accessibility by sustainable modes of transport to employment opportunities and aiming to create high quality green environments alongside transport interventions making the region more attractive for prospective employers and employees. The LTP should seek to encourage local employment where appropriate (to discourage people from travelling a long way to work) by supporting training for local people and recruitment among the locally unemployed and disadvantaged population.	Enhance economic prosperity through increasing connectivity and access to opportunities

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	textiles and advanced manufacturing; digital media, healthcare and business/management.		
12.	**Levels of productivity and competitiveness** The total annual GVA in West Yorkshire was £60.1 billion in 2021. The Covid-19 pandemic had a significant impact on productivity across West Yorkshire. GVA per head of population fell both locally across West Yorkshire and nationally in 2020, whilst productivity increased sharply, with low productivity sectors being hit the hardest by Covid-19 restrictions (WYCA, 2022). Bradford is a large economy worth £11.6 billion, making it the third largest economy in Yorkshire and The Humber. Bradford's economy grew by 16% over the five years to 2019 (City of Bradford MDC, 2020). The district has seen some positive trends with a growth of 19,000 in the number of residents in employment since 2015. The number of businesses in the district sits at 35,855 as of 2023 (Office for National Statistics, 2023), and the city has been identified as the best place to start a business in the UK (City of Bradford MDC, 2020). Bradford's employment rate has improved to 71.8% as of 2022 compared to 67.5% in 2014 (Centre for Cities, 2022). Long term unemployment continues to be a concern with 6.6% of Bradford residents claiming Jobseeker's Allowance, compared to 4.1% for Yorkshire and The Humber, and 3.7% in Great Britain (Office for National Statistics, 2023). Leeds has retained its manufacturing strength as well as consolidating its position a major centre for finance and business services, which account for 38% of total output (Leeds City Council, 2020). Total employment in Leeds in 2013 was estimated at around 360,000; ten years on, it's	The LTP should seek to support and enhance productivity and competitiveness across West Yorkshire. The LTP should seek to reduce road congestion (therefore reducing the time to commute) and improve road and public transport journey reliability. The LTP should seek to limit the rising costs associated with travel to assist in enhancing accessibility to employment opportunities within the area. The LTP should consider that high quality green and blue infrastructure can play an important role in enhancing the visual appeal of transport infrastructure and help to encourage new inward investment, and help to retain high skilled labour. The LTP should seek opportunities for further funding from the UK Government, following the success of the Levelling Up funding.	Enhance economic prosperity through increasing connectivity and access to opportunities

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	now 406,400. Over the next ten years, the economy is forecast to grow by 21% with financial and business services set to generate over half of GVA growth over that period (Leeds City Council, 2020). In terms of productivity, Leeds MD's GVA has increased by £7.5 billion since 2013, sitting at £27.9 billion. Wakefield's economic taskforce supported both individuals and businesses through a difficult period and recognises that a strong and sustainable local economy is central to a better future for all communities and people. In particular, building skills in young people will be key to a stronger more sustained economy. Facts include: 73.3% of the working age population are in employment, 12.3% of jobs are in manufacturing, 11.1% are in transport and storage, and 16.7% of employment is in wholesale and retail trade (Office for National Statistics, 2022). Calderdale has the smallest population in West Yorkshire and has the smallest economy too. The economically active population has decreased from 107,500 at the end of 2014 to 105,000 in 2023. Calderdale also has the lowest rate of economically active unemployed persons in West Yorkshire, despite rising from 7,000 in 2014 to 30,600 in 2023. 4.1% of Calderdale's population claim Jobseekers Allowance. Calderdale performs above the West Yorkshire average at a number of economic indicators including employees in senior, management and professional jobs and gross hourly pay (Office for National Statistics, 2023). Kirklees has a population of 433,500 people, around 76.4% of whom are economically active. Its economy focuses on engineering, manufacturing and design, driven by globally leading businesses in fields such as gears, valves, pumps, turbos, chemical and textiles (with		

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	a strong 'Made in Huddersfield' reputation). In terms of productivity, Kirklees is the third largest economy in the Leeds City Region, with £8.4 billion per annum in Gross Value Added. The low but improving employment rate is below than that of Yorkshire and The Humber, at 72.7% (Office for National Statistics, 2023). The UK government has so far allocated around £1.5 billion to projects in Yorkshire and the Humber through investment programmes, including the Levelling Up Fund and Community Ownership Fund. Approximately £84.2 million in Levelling Up funding has been allocated to projects across the West Yorkshire districts. Round two of the Levelling Up fund saw West Yorkshire receive £41.3 million to build on the Combined Authority's City Regional Sustainable Transport Settlement		
13.	**Different needs arising from the growth and complex composition of the local population** Demographic forecasts for West Yorkshire indicate headline growth of some 6% over the period up to 2043, from 2.37 million (projected for 2023) to 2.51 million. This will be principally as a result of stronger growth of the over 70s age group (which will increase by 37%) than that of the 19 and under age group (which will decrease by 0.03%) (ONS, 2020). The population of Wakefield s projected to grow by 21% over the Local Transport Plan period, which is much more rapidly than the other districts in West Yorkshire that are all projected to grow at a similar rate between 5-8%.	The LTP should consider the transport needs of the growing population and of different neighbourhoods and communities. It should take into account all age groups, sexuality and gender identities, ethnicities and those with special needs to ensure that people from different groups and backgrounds have the same opportunities with regards to access to transport. There is also an opportunity to address the challenges raised in the Mayor of West Yorkshire's Safety of Women and Girls Strategy' to improve the safety of public transport and transit stops for this demographic. There is also an opportunity to improve the reliability and affordability of public transport to ensure greater equity between all transport users.	Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	Deprivation Within West Yorkshire, 20% of neighbourhoods are categorised in the 10% most deprived in England, with significant pockets of deprivation existing across all five of the districts (MHCLG, 2019). This is equivalent to more than half a million people. Bradford ranks 21st out of the 317 districts ranked in England. This places it within the most deprived 10% of local authorities nationally and make it the most deprived authority in West Yorkshire. 75% of respondents to the Connectivity Infrastructure Plan engagement survey agreed that future plans should focus on improving transport connectivity in areas of deprivation, highlighting a potential lack of current provision which could impact access to opportunities in those areas. More deprived households travel less overall, with people in the lowest income quintile in West Yorkshire making 10% fewer trips and 36% shorter trips than the average population. 45% of households in the lowest income quintile also do not have access to a car, compared to 14% of those in the highest quintile. Bus trips are three times as high for people in the lowest income quintile in comparison to the highest quintile. **Equality Groups** **Sex** The sex balance in West Yorkshire is 48.9% males and 51.1% female, which mirrors the national balance in England (2021).		

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	Major cities' public transport systems typically favour the male travel pattern of travelling to work and back again. Women, on the other hand, tend to take multiple journeys using different modes, as they often hold additional responsibilities such as childcare (Arup, 2022). According to the National Travel Survey, women tend to use buses more than men, but are drivers of cars or vans less frequently than men (Department for Transport, 2023). According to the West Yorkshire Residents Perceptions on Transport Survey (WYCA, 2023), female residents travel by train less than men; 29% of women compared to 37% of men as of 2022/23. Despite the rise of public transport use post Covid-19, this figure has decreased by 3% since 2019/20. In 2023, women in full-time employment in West Yorkshire earned an average of 11.3% less than men (ONS, 2024). **Disabled people** In 2021, 414,000 people in West Yorkshire were disabled under the Equality Act, which equates to 17.6% of the population; this is higher than the national rate of 17.3%. 232,000 people in West Yorkshire report being disabled with their day-to-day activities limited a lot, accounting for 7.7% of the population. Wakefield has the highest proportion of disabled people in West Yorkshire (20.2%), whilst Leeds has the lowest (16.7%). Despite disability levels being higher than the national average, accessibility of rail stations varies considerably across West Yorkshire. Only 29% of rail stations across West Yorkshire have compliant step-free access, meaning the other 71% exclude 17.6% of the population. As a result, disabled people may be excluded from education, employment, health, and leisure opportunities.		

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	Black and Minority Ethnic Groups The West Yorkshire region is predominantly white, although this is slightly less than the proportion for England as a whole. The next largest ethnic group is Asian (including Asian British), the proportion of which is almost twice as high in the sub-region as for England as a whole. In most ethnic minority groups, a higher proportion of adults live in households without access to a car or van compared to the white proportion of the population. 22% of Asian/Asian British adults and 39% of Black/African/Caribbean/Black British adults do not have access to a car or van in West Yorkshire, whereas only 17% of white adults live in a household without access to a car or van. As a result, the average number of trips made by car is higher for white groups than all ethnic minority groups apart from the mixed or multiple ethnic group. **Sexuality and Gender Identity** In 2021, 11,383 (0.61%) people in West Yorkshire stated that they have a gender identity different from the sex they were registered at birth, which compares to 0.55% of the population of England as a whole. Leeds has the highest percentage population identifying as having a gender identity different from the sex they were registered at birth, whilst Wakefield has the lowest. 1,976 West Yorkshire residents identified as a Trans woman, and 1,986 identified as a Trans Man, whilst 1,224 identified as non-binary. 89.3% of West Yorkshire residents aged 16 and over identified as being Straight or Heterosexual, compared to		

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	89.4% in England as a whole. 7.5% in England didn't provide a response to this question, and locally that figure was higher in Bradford at 8.8%. 3.2% (60,368 people) of West Yorkshire residents identified as gay or lesbian, bisexual, or other. 28,246 West Yorkshire residents aged 16 and over identified as gay or lesbian, and 25,550 identified as bisexual, slightly higher than the England average. 4,604 West Yorkshire residents identified as Pansexual, 1,022 identified as Asexual, and just under 600 identified as Queer, whilst 351 identified as another sexual orientation. In 2022, West Yorkshire Police recorded 1,572 sexual orientation hate crimes and 319 transgender hate crimes. Sexual orientation hate crimes have risen by 477 since 2019/20, and transgender hate crimes have risen by 103. **Marriage and Civil Partnerships** Leeds has the lowest percentage population married or in a civil partnership, whilst Kirklees has the highest percentage. Leeds being a university city may result in it having lower marriage and partnership ratings. For example, it has a large student and young professional population, and its environment caters to this, with student accommodation and high rise 1-2 bed apartment blocks, and limited space for families to settle down. Kirklees also has a larger ageing population, which could also attribute to its higher rates of marriages and civil partnerships. In general, marital status has been shown to have a significant impact on life satisfaction, with those married or in a civil partnership being most likely to report higher life satisfaction than those of any other marital status (WYCA, 2023). Despite this, marriage and civil		

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	partnership rates across the UK fell between 1991 and 2021, from 58.4% to 46.9%, whilst divorce rates increased from 6.2% to 9.1% (ONS, 2021). Same sex marriage was introduced in 2014, and yet as of 2021, adults in same-sex marriages and all civil partnerships make up less than 0.5% of the population aged 16 years and over. Adults in same-sex marriages and civil partnerships are more likely to be younger, have no religion, and have higher-level qualifications than adults in opposite-sex marriages (ONS, 2021)' **Pregnancy and Maternity** Leeds has the highest total number of conceptions for all ages and those under 16 out of all the West Yorkshire districts, as well as the highest percentage of conceptions leading to abortions. For under 16's, however, Leeds has the lowest percentage of conceptions leading to abortions. Calderdale has the lowest number of conceptions across both age categories, whilst Bradford has the lowest percentage of conceptions leading to abortion. Pregnancy and maternity can affect how people travel, but the inclusivity and accessibility of transport options can also play a major role. A study conducted by the University College London found that pregnant women would alter their journeys to less busy times, choose a slower service because they were less crowded despite it lengthening their commute time, and opt to drive over using public transport (O'Toole, 2022). Lack of seats and lifts in public transport hubs can also make it difficult for pregnant people and those using prams to get around easily. These adjustments and design flaws indicate the		

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	exclusion of women, pregnant people, and parents from public transport. **Age Profile** As of 2021, the sub-region has a marginally younger population than for England as a whole. Within the sub-region, this is particularly the case in Bradford and Leeds. Between 2011 and 2021, the under 16's population grew by 5.6%, and the population aged 65 and over grew by 18.7%, whilst the population under 5 fell by 6.9% The West Yorkshire Residents Perceptions of Transport Survey (2022) (WYCA, 2023) found that residents aged 35 to 64, and aged 65 and over are more likely to be dissatisfied with the condition of roads (30% and 35% respectively) than 16- to 34-year-olds (23%). Residents aged 65 and over are also more likely to be dissatisfied with the speed of repair to roads and pavements than 16- to 34-year-olds (43% and 28% dissatisfied, respectively). Residents aged 65 and over are more likely to be satisfied with local bus services (41%) than other age groups, whilst 16- to 34-year-olds are more likely to be satisfied with local train services (43%) than other age groups. This can be attributed to 16- to 34-year-olds being more likely than those aged 65 and over to use a train at least monthly. **Faith Groups** Most people in West Yorkshire identify as not belonging to a religion, closely followed by Christian, following the same pattern as England. Faith communities in West		

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	Yorkshire often face serious violence, and religious hate crimes increased between 2019 and 2022. **Migration** Between 2011 and 2021, 134,835 people arrived in the West Yorkshire by international migration. Of the 134,835 that arrived in West Yorkshire in the 10 years to 2021, 45% reside in Leeds, 27% in Bradford, 14% in Kirklees, 10% in Wakefield and 4% in Calderdale. In both West Yorkshire and England, most non-UK passport holders are from Europe (64% and 69%); Middle East and Asia comes second, and Africa comes third. Only 1% of non-UK passport holders in both West Yorkshire and England come from Antarctica and Oceania, including Australasia.		
14.	**General health & health inequalities** Around 18.6% of residents have a limiting long-term health problem or disability, which is higher than the England average (17.3%) (2021). West Yorkshire is typically worse than the national average across a range of health indicators, although with some variation within the area. Key points include: - Deaths due to cancer in West Yorkshire are higher than England, with the Combined Authority area having 184.1 deaths per 100,000 persons, compared with 172 deaths in England. Wakefield and Calderdale show the highest levels with 193 and 186 per 100,000 members of the population compared with 172 nationally. - Infant mortality is a poor indicator for West Yorkshire, with Bradford showing particularly high rates. In fact,	The LTP should encourage healthier lifestyles for all by providing environments that promote good physical and mental health (e.g. through promotion of active modes of travel, improvement of local air quality) and by providing affordable, integrated and efficient transport systems. The LTP should ensure that green and blue infrastructure is used to help increase the attractiveness of sustainable transport options between communities, to make active modes of travel more popular. See additional implications and opportunities set out in Air and Noise pollution below.	Improve health and wellbeing for all citizens and reduce inequalities in health

No.	Key issue	Implications/opportunities for LTP	ISA objective(s)
	Bradford has the 2nd highest infant mortality rate in Yorkshire and The Humber and the 8th highest rate in England. In 2017 to 2019, the infant mortality rate in Bradford was 6.1 deaths per 1,000 live births, an increase from 5.7 deaths in 2016 to 2018. We've now seen an increase of 0.8 deaths from 2019 to 2021. Much of the variation from national norms and between the various local authority areas in West Yorkshire is linked to such differences in socio-economic variations, including deprivation, leading to poor health outcomes.		
15.	**Physical activity and open space** In 2019, residents of West Yorkshire made 619 million walking trips, which is 25% more trips than in 2016. This means that West Yorkshire has already met the Transport Strategy 2040's interim target of increasing walking trips by 10% by 2027. Nevertheless, the share of walking trips across West Yorkshire was 26%, 6% lower than the England average of 32%. Active travel and physical activity can contribute to preventing and managing cardiovascular diseases, cancer and diabetes, and can improve overall wellbeing (WHO, 2020). The World Health Organisation recommends adults should complete a brisk 30-minute walk three times a week, however, only 1 in 6 adults in West Yorkshire do less than 10 minutes of walking a week, and 7% of residents state that they never walk. Cycling rates across West Yorkshire have been decreasing. In 2021/22, 7% of adults in West Yorkshire cycled at least weekly, which is a decrease of more than 20% from 2019/2020. This decline can be attributed to the Covid-19 pandemic, which saw peaks in cycling levels due to more time and encouragement to exercise	The LTP should help encourage public accessibility to open space and the movement of people within open areas via an integrated network of green space across the county. The LTP should also aim to promote countryside access and enjoyment and encourage regular physical activity including active travel for children and adults as part of a healthy lifestyle, to aim to reduce obesity levels and associated health problems. The LTP should seek to support all forms of transportation across public transport, private vehicle, walking and wheeling across West Yorkshire.	Improve health and wellbeing for all citizens and reduce inequalities in health

	outside (WYCA, 2023). This is consistent with figures for England. In cities, green and open spaces are often infrequent, of poor quality, and poorly maintained, which could be a reason for the low engagement across the districts. Safety, especially for vulnerable groups including women and girls, can also be a deterrent for engaging with the natural environment, particularly urban parks. Despite Leeds having the second highest percentage of the population visiting nature once a week, a study conducted in the district found that 45% of women had been harassed in parks and other open spaces (Women Friendly Leeds, 2021). The Natural Environment also found poor health to be a barrier to accessing the natural environment in West Yorkshire. Other barriers include bad weather, old age, disability, being busy at home or work, and no reason. Variations in the data can also be linked to differences in socio-economic circumstances and inequality. According to Friends of the Earth (2020), access to green space has a particularly a strong correlation with deprivation and ethnicity, with almost 40% of people from ethnic minority backgrounds living in England's most green-space deprived neighbourhoods (Friends of the Earth, 2020). Socioeconomic indicators are discussed in the following section on Equality.		
16.	**Deprivation** Within West Yorkshire, 20% of neighbourhoods are categorised in the 10% most deprived in England, with significant pockets of deprivation existing across all five	The LTP should aim to promote accessibility to key services and facilities and employment areas by public transport and cycling routes, particularly to/from relatively deprived areas. Opportunity to improve and strengthen transport links between market towns and their surrounding rural areas. Differences in deprivation are a major determinant of	Improve health and wellbeing for all citizens and reduce inequalities in health; Promote greater equality of opportunity for all citizens, with the desired outcome of

	of the districts (MHCLG, 2019). This is equivalent to more than half a million people. Bradford ranks 21st out of the 317 districts ranked in England. This places it within the most deprived 10% of local authorities nationally and make it the most deprived authority in West Yorkshire. More deprived households travel less overall, with people in the lowest income quintile in West Yorkshire making 10% fewer trips and 36% shorter trips than the average population. 45% of households in the lowest income quintile also do not have access to a car, compared to 14% of those in the highest quintile. Bus trips are three times as high for people in the lowest income quintile in comparison to the highest quintile (WYCA, 2022). West Yorkshire residents living in the most deprived neighbourhoods have noted the importance of the bus service to their accessibility across the region; 71% of residents in the most deprived neighbourhoods rated it important, compared to 60% in the least deprived (WYCA, 2023). 75% of respondents to the Connectivity Infrastructure Plan engagement survey agreed that future plans should focus on improving transport connectivity in areas of deprivation, highlighting a potential lack of current provision which could impact access to opportunities in those areas (WYCA, 2021).	health inequality in the UK. The LTP should seek to improve access to opportunities in deprived areas to help assist in reducing such inequalities.	achieving a fairer society
17.	**Air Pollution** In West Yorkshire there are 35 air quality management areas (AQMAs) related to road traffic emissions of NO2. Nitrogen dioxide (NO2) and suspended particles (PM2.5 and PM10) are the key air pollutants being considered in the ISA. These pollutants are identified as being of particular concern with respect to compliance with the	The LTP should seek to minimise the impacts of the transport system on air quality. It should adhere to the principles set out in the West Yorkshire Low Emission Strategy and the West Yorkshire 'Tackling the Climate Emergency: Emission Reduction Pathways Report' (2020), to assist in reducing air quality issues across the area and work to improve health inequalities in West Yorkshire.	Reduce environmental impacts of transport including vibration as well as air, noise and light pollution

	objectives in the Air Quality Strategy for England, Scotland, Wales, and Northern Ireland. In West Yorkshire, there is a pattern of heavy pollution along major road networks, but in rural parts, the air quality is exceptionally good. Transport was the largest emitting sector of greenhouse gas emissions, producing 24% of the UK's total emissions in 2020. 33% of Nitrogen Oxides emissions and 14% of PM2.5 emissions came from transport during the same period. Nevertheless, evidence has shown that emissions of particularly harmful pollutants, such as carbon monoxide, particulate matter, and nitrogen oxides, have reduced following increasingly stringent exhaust emission limits. All Districts in West Yorkshire comply with the annual average PM10 standard of 40µg/m3 and are well below. However, the long-term trend in PM10 levels is unclear and there was little change in background levels over the period 2020 – 2022.	The LTP should promote the use of active travel, public transport, discourage car use, and implementation of other schemes to reduce emissions (e.g., 20mph zones, low emission vehicles). The LTP should aim to align with the West Yorkshire Mass Transit Vision 2040 (2022) design principle, 'Environmental Responsibility', which aims to make mass transit zero-emission at point of use and climate resilient.	
18.	**Noise Pollution** In common with most urban areas in the UK, road traffic is the primary source of environmental noise experienced in West Yorkshire. There has been approximately 761 km of 'low noise' asphalt laid in West Yorkshire since 2000. Leeds is the district with most km of low noise asphalt laid since 2004, followed by Bradford and Kirklees. It could be said that as an average 37% of the principal road network within West Yorkshire is surfaced with low noise asphalt. However, 6.7 – 9.2% of the population across West Yorkshire are still exposed to road, rail and air transport noise of more than 55 DB overnight, which	The LTP should seek to minimise as much as practicable noise generation, especially noise generated by traffic, e.g. through use of quiet surfacing and establishment of quiet zones and reduced speed limits.	Reduce air, noise and light pollution from transport

	is the noise levels that are known TO increase blood pressure and the risk of heart attack. Approximately 418 thousand people (18% of the total population) in West Yorkshire experience noise of over 55DB from road traffic monitored during day, evening, and night time. However, this number reduces by 68% during night time. 59 thousand people (2.5% of the total population) in West Yorkshire are exposed to road traffic noise over 70DB, which is the noise level that could damage hearing if experienced for a long period. Approximately 25 thousand (1% of the total population) in West Yorkshire experiences noise of over 55DB from railway, monitored during day, evening, and night time. This number reduced by 76% at night time, but another 16 thousand people are exposed to railway noise of under 50DB overnight. Less than 1500 people experiences railway noise of over 70DB, which accounts for less than 0.1% of the total population in West Yorkshire. Overall, Leeds consists of the most dwellings and associated population to be investigated due to road traffic noise and Calderdale has the least. According to this data, railway noise is relatively insignificant compared to road traffic noise, generating 98% less dwellings and associated population to be investigated.		
19.	**Light pollution** Light pollution is most significant around central areas within West Yorkshire. Largest areas of brightest night lights are present in Leeds, Wakefield and Bradford, covering 13.2%, 8.5% and 8.4% of their district area respectively. Rural areas near the edge of Bradford, Calderdale. Light pollution is caused by poor interior and	The LTP should seek to minimise as much as practicable light pollution (e.g. through promoting light sources of minimum intensity and LED luminaires).	Reduce environmental impacts of transport including vibration as well as air, noise and light pollution

	exterior lighting design (including street and road lights), security lights and floodlights.		
20.	**Road safety for all travellers** Road safety remains a significant challenge for West Yorkshire. KSI casualties fell by 21% between 2019 and 2020, a decrease largely attributable to the travel restrictions implemented in response to the Covid-19 pandemic. Wakefield, however, saw a 6% increase in KSI casualties. This reduction in KSI casualties varied by user type, with motorcyclists and pedestrians having the highest reduction (37% and 31%), whilst pedal cyclists and car occupants had the lowest (11% and 8%). Despite this, pedestrians, motorcyclists, and cyclists were the most vulnerable groups in 2020, accounting for 60% of total KSI casualties, compared to 32% of car occupants. In 2022, however, the percentage of KSI casualties for pedestrians, motorcyclists, and cyclists decreased to 48% overall, with car occupants rising to 46%; an increase of 369 KSI casualties. Despite the overall percentage decrease, the number of KSI casualties for pedestrians, motorcyclists, and cyclists increased; pedestrian casualties increased by 175, motorcyclists by 63, and cyclists by 17 (WYCA, 2022). This could once again be attributed to the Covid-19 pandemic, with all restrictions being lifted in February 2022.	The LTP should align with the West Yorkshire Vision Zero approach, which aims to eliminate all traffic fatalities and sever injuries, whilst increasing safe and health mobility. The LTP, utilising Vision Zero's principles, should set out a clear strategy and programme to continue to enhance safety for all road users including pedestrians, cyclists and motorcyclists, and aim to reduce the rate of transport crashes and other incidents (e.g. through reducing traffic growth and congestion, traffic calming measures, highway maintenance in rural areas, low key accident reduction strategies, 20mph zones).	Improve transport safety, reduce crime and fear of crime, and promote community safety
21.	**Crime and fear of crime** Total recorded crimes (excl. fraud) in West Yorkshire make up 6% of England's total recorded crimes, whilst Yorkshire and the Humber make up 12%. Violent crime has the highest rates across all three areas, followed by theft and public order offences. Sexual offences are	The LTP should seek to reduce the levels of crime and perceived crime within West Yorkshire, aligning with the Mayor of West Yorkshire's Safety of Women and Girls Strategy to ensure the transport network is a safe space for this group.	Improve transport safety, reduce crime and fear of crime, and promote community safety

	seemingly low across the board; however, these types of offences are under reported. Neighbourhood crime fell during the Covid-19 pandemic and remains below the level recorded in 2019. 'Theft from Vehicle' decreased from just above 12,000 in 2019 to 7,000 in 2021/22; 'Theft of Vehicle' remained the same at 5,000, and 'Vehicle Interference' also decreased from 3,000 to around 2,500 (WYCA, 2022). Crime is a prevalent issue for vulnerable groups, especially for women and girls. The West Yorkshire-Health and Care Partnerships, 'Violence Against Women and Girls' report (West Yorkshire Health and Care Partnership, 2022) and the Mayor of West Yorkshire's Safety of Women and Girls Strategy (The Mayor of West Yorkshire, 2023) found that personal safety has been identified as an important factor in women's travel decisions. At a co-design event held in 2022 for the Women and Girls Strategy, 35.95% of women listed personal safety as a key priority and 26.56% noted safe travel.		
22.	**Severance** Severance is often an unintended consequence of a measure intended to address other problems. Certain groups in society are potentially vulnerable to the effects of severance as a result of the transport network, and these include people without access to a car, children, older people, disabled people, parents with pushchairs, and deprived residents. Those groups impacted by severance may experience longer journey times or are often required to use pedestrian routes that are inappropriate or difficult to use. In extreme cases, severance issues (either actual or perceived) may result in users limiting their journeys and hence reducing access to opportunity.	The LTP should seek to reduce any existing severance issues and ensure new initiatives do not create severance for the local population.	Improve health and wellbeing for all citizens and reduce inequalities in health; Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society

	A key characteristic of West Yorkshire is the significant variation in the levels of deprivation, both between districts and between different neighbourhoods and communities within each district. This is illustrated by examining the levels of deprivation between districts – Leeds shows the lowest levels of deprivation, with an IMD rank of 92, and the highest levels are in Bradford with an IMD rank of 21 (2019). Those in deprived areas are less likely to own a car and are therefore more prone to severance issues associated with walking, cycling and the lack of public transport routes. People who live in more deprived areas are at greater risk than those living in affluent areas to be killed or seriously injured on the road, as deprived neighbourhoods are often near major traffic links. Residents without access to a car are reliant on walking, cycling and public transport for their journeys and are therefore particularly prone to any impacts of severance.		
23.	**Affordability of transport** Any intervention that raises the cost of travel for users may give rise to impacts on personal affordability, and may have disproportionate effects where there are few or no travel alternatives, especially where low income households preclude car ownership and use. Changes to transport costs can include public transport fares, parking charges, road user charges or impacts to the road network that impacts on the operating costs of cars. The latest Residents Perceptions of Transport Report from 2023 showed that 33% of West Yorkshire residents are satisfied with the affordability of public transport; 15% were dissatisfied.	The LTP should seek to ensure new transport initiatives are affordable and do not price out certain groups of society. Existing pricing initiatives for vulnerable groups on public transport services should be maintained on new services (i.e. concessionary fares). Promote use of technology to reduce transport costs for users i.e. smart cards.	Promote sustainable modes of transport, including public transport and active travel; Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society

7. ISA framework

The ISA framework presented in this section provides a means to describe, analyse and compare the implications of the LTP. Based on the baseline situation described in Sections 4 and 5 and the key sustainability issues highlighted in Section 6, a series of ISA objectives and assessment criteria have been developed to create a bespoke framework for the LTP. The analysis of key themes and sustainability issues in the previous sections has directly influenced the development of the ISA framework, particularly in formulating the objectives and associated assessment criteria. These objectives reflect environmental, economic, health, and equality aspects that the LTP may have an impact upon or influence over.

Assessing the LTP against this ISA framework allows us to shape the LTP to minimise the potential sustainability effects of the plan and use it to enhance sustainability outcomes wherever possible. The expectation is that even though some objectives may not be within the LTP's remit or the Combined Authority's sphere of influence, the ISA identifies these risks and opportunities.

The implications raised within Sections 4 and 5 across environmental, economic, health, and equality topics explored within the ISA framework have been considered and integrated where appropriate.

7.1 Assessment framework

Each objective within the ISA framework is accompanied by a set of assessment criteria which are key to completing the ISA of the LTP. The ISA framework objectives are used to assess the LTP and provide the benchmark against which the effects and implications of the Plan can be tested. The objectives outlined within the ISA framework as in accordance with the SEA definition:

> *An objective is 'to provide for a high level of protection of the environment and contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development' SEA Directive, Article 1*

Assessment criteria support the objectives, helping guide the assessment team to decide if the LTP policies meet the objectives. The assessment criteria are a series of considerations which are based on the specific matters, as defined under each baseline topic in Sections 4 and 5. Using assessment criteria within the ISA helps the assessment team arrive at a conclusion about impacts in a consistent and transparent manner. These assessment criteria can also be utilised in later ISA stages, for monitoring of the plan.

Following on from the baseline review (as set out within this scoping report) and review of previous 2016 ISA framework, we propose an ISA framework made up of 15 objectives, each with its own

assessment criteria. These objectives cover all matters explored including environmental, economic, health, equality and safety, meeting all scoping requirements of the assessments within the ISA.

The objectives and assessment criteria can be found in the table below. The ISA framework will be utilised within Stage B of the ISA process to assess the LTP policies. ISA objectives have been mapped against the identified key topics to highlight how each topic area has been directly reflected in the ISA framework.

As stated, and for consistency, the ISA framework has been built upon work previously done in the 2016 ISA of the Transport Strategy 2040, completed by Atkins. The 2016 ISA framework included 15 objectives and 6 additional sub-objectives each for HIA and EqIA. In order to make the ISA framework more effective, and to reduce repetition in the previous assessment criteria, the 2016 framework was reviewed against the current baseline and then updated and streamlined. This resulted in integrating the previous sub-objectives into other or their own 'main' objectives, as well as deleting a previous HRA-focused objective as this is being assessed separately. Additionally, the previous two economic objectives were streamlined into a single objective. Therefore, based on new or updated data and policy, the ISA framework presented in the following table has been refreshed to reflect the current baseline context for LTP4.

No.	ISA objective	Assessment criteria *Will the LTP…*	ISA topic(s)
1	Protect and enhance local air quality	Support the minimisation of air pollutant emissions and enhancement of air quality particularly in areas with low air quality (e.g., AQMAs) and where this pollution disproportionately affects vulnerable populations? Support an improvement in air quality through reduced traffic levels and congestion, and enabling modal shift away from private car use? Explore opportunities for green and blue infrastructure and habitat creation and enhancement, which delivers multi-functional benefits?	Air; human health
2	Protect and enhance biodiversity, geodiversity and the green and blue infrastructure network	Avoid direct or indirect significant adverse effects on designated habitats and protected species, and important biological and geological sites? Protect and enhance green and blue infrastructure to maximise ecological connectivity, avoiding severance of habitats and providing wildlife corridors and networks? Explore the suitable connectivity between green and blue infrastructure? Promote good design in relation to transport infrastructure, through best practice wildlife-friendly approaches which seek to secure biodiversity net gain and support nature recovery?	Biodiversity, flora, fauna; human health; population

		Protect existing and/or create new carbon sinks, where practical, in order to absorb increased amounts of CO_2 where possible within transport schemes? Increase accessibility of local communities to appropriately designed multifunctional green and blue infrastructure? Support Local Nature Recovery Strategies and work with local nature recovery groups?'	
3	Reduce greenhouse gas emissions from transport	Promote the use of sustainable forms of transport through enhanced public transport availability, affordability, and accessibility? Encourage a reduction in private car use? Encourage greater carbon efficiency in the movement of goods and people? Encourage use of innovative new low and zero carbon transport technologies to reduce emissions? Promote a wider choice of low-carbon passenger travel through quality integrated facilities and services, active travel improvements (including walking and cycling), demand management, network management, travel planning and intelligent transport systems? Encourage the prioritisation of climate change mitigation and adaptation? Encourage use of the transport estate for low carbon energy generation? Consider the specific transport needs of rural communities? Explore opportunities for low carbon construction materials and techniques? Minimise embedded emissions from the development of new transport infrastructure and the maintenance of existing infrastructure? Support West Yorkshire's target of achieving net zero by 2038?	Climate factors; human health; air
4	Increase resilience of the transport network to climate change and associated extreme weather events	Promote an increase in the resilience and sustainability of the transport network to extreme weather events and a changing climate by integrating climate mitigation and adaptation? Explore opportunities for creating green and blue infrastructure which can both help to manage localised flood risk and create new habitats, taking into account the vulnerability of habitats to climate change? Ensure that floodplains are used for their natural purpose and are protected from inappropriate development? Ensure that appropriate compensatory measures are put in place where transport schemes require a land take from the floodplain?	Climate factors; human health; material assets

		Encourage adaptive management and design to respond to uncertainties in climatic effects and scheme requirements? Ensure that transport schemes and any related elements do not increase flood risk to others?	
5	Promote prudent use of natural resources, minimise the production of waste, and support re-use and recycling	Enable new infrastructure to be resource efficient (materials, energy, water, sustainable procurement, etc.) in construction and operation, to reduce extraction and increase circularity? Promote sustainable waste management practices? Promote the use of recycled or secondary materials in construction? Promote a modal shift to sustainable transport to reduce fuel consumption? Promote the use of local suppliers and locally-produced materials in construction?	Material assets
6	Protect and enhance the water environment	Protect the quality of surface and groundwater resources by incorporating sustainable road drainage (e.g., SuDS)? Minimise the use of impermeable hard surfacing? Protect and enhance green and blue infrastructure contributing to improvements in the quality of surface water run-off? Support the use of nature-based solutions to protect aquatic habitats? Explore opportunities for blue infrastructure enhancement to help manage localised flood risk and create new habitats? Ensure drainage systems are sufficiently resilient to climate change and periods of intense rainfall?	Water; soil; human health
7	Conserve soil resources and quality and seek to remediate contaminated land	Encourage use of previously developed land and minimise use of greenfield land? Encourage the protection of soil resources and peatlands, particularly during the construction phase of schemes? Avoid disturbance, harm, contamination, or permanent (irreversible) loss of the most highly productive agricultural soils? Avoid mineral safeguarding areas? Support the remediation of contaminated land and avoid additional contamination of soils?	Soil; biodiversity, flora, fauna; material assets
8	Conserve and, where appropriate, enhance those elements which contribute to the significance of the area's heritage assets	Conserve, protect and enhance the region's designated and non-designated cultural and heritage assets and their settings (e.g., locally important buildings, archaeological remains, world heritage sites, scheduled monuments, listed buildings and structures, registered parks and gardens, registered battlefields and conservation areas)? Improve access to historic and culturally important sites by sustainable transport modes?	Cultural heritage; landscape; material assets

		Support the appropriate management of transport infrastructure which include or impact upon designated heritage assets?	
9	Protect and enhance the character and quality of landscape and townscape	Encourage the design, construction, repair, and maintenance of transport infrastructure which respects and enhances the landscape and townscape character? Protect the special qualities and setting of nationally designated landscapes? Protect and enhance green and blue infrastructure which contributes to improved landscape and townscape? Protect public rights of way? Protect and enhance locally important buildings and townscapes, maintaining and strengthening local distinctiveness and sense of place? Improve the streetscape by removing unnecessary clutter?	Cultural heritage; landscape; material assets
10	Promote sustainable modes of transport, including public transport and active travel	Reduce road traffic and congestion through introducing disincentives for private car use (e.g., congestion charging, limiting parking spaces)? Promote accessibility (particularly by active travel and public transport) to key services and facilities, employment sites and open space? Improve the quality and availability of active travel infrastructure? Explore synergies with green and blue infrastructure proposals for enhancing active travel routes? Promote modal shift to more sustainable forms of transport and continue making these forms of travel more convenient, accessible, and affordable? Encourage a shift to low emission vehicles through provision of charging points and supporting infrastructure? Coordinate with land use planning to ensure new housing and employment areas are served by adequate sustainable transport options?	Population; material assets; human health
11	Enhance economic prosperity and access to opportunities	Improve sustainable access to employment and skills development opportunities, particularly in areas with high levels of unemployment? Improve accessibility to services, facilities, and amenities for all users? Support the reduction of overall journey times (passengers and freight) and improve travel convenience and reliability? Encourage the optimisation of potential economic outcomes for West Yorkshire from decarbonisation of transport? Contribute to establishing an effective and resilient transport network that increases investment?	Employment; economics

		Ensure accessibility by sustainable forms of transport to expected major employment and residential growth areas?	
12	Improve health and wellbeing for all citizens and reduce inequalities in health (HIA specific objective)	Promote the health and wellbeing of vulnerable groups (children and adolescents; older people; disabled people and people with other health problems; low-income groups and communities with high level of deprivation)? Promote the health and wellbeing and of the wider population (residents, workers, commuters, cyclists, pedestrians, drivers, tourists and visitors)? Ensure that new and existing development is connected to healthcare services and educational facilities by sustainable modes of transport? Promote accessibility to open space, recreational activities, and employment locations? Reduce the physical and perceived impact of the transport network to reduce severance issues?	Human health
13	Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective)	Promote greater equality of opportunity to the varying age groups of residents (the older population and younger travellers), disabled people, different nationalities and ethnic groups, different religious groups, low income and unemployed people, different sex and sexual orientation groups? Promote accessibility and inclusive design to sustainable modes of transport and essential facilities for all users, particularly disabled and low mobility users? Provide affordable transport options to ensure accessibility to key facilities and services for all users? Improve connections between communities? Enhance access to active travel routes and sustainable modes of transport in the most deprived areas? Improve access to information for all users to promote use of sustainable transport modes?	Population
14	Improve transport safety, reduce crime and fear of crime, and promote community safety (HIA and EqIA specific objective)	Contribute to improvements of public realm and levels of natural surveillance to create a more welcoming environment for active travel, physical activity, and accessing key facilities? Improve actual and perceived safety and security issues relating to transport schemes to improve access of opportunity for all? Reduce the risks that cars and other vehicles impose on vulnerable transport users such as pedestrians, motorcyclists, and cyclists? Increase initiatives aiming to calm traffic in residential areas, particularly in deprived areas? Provide initiatives that enhance road safety and reduce the number of accidents, particularly for vulnerable users and those in deprived areas?	Human health; population

15	Reduce environmental impacts of transport including air, noise and light pollution (HIA and EqIA specific objective)	Reduce construction and operation noise, air and light pollution for residents and particularly vulnerable users? Promote practices, equipment, and materials which reduce vibration (e.g., quiet surfacing, reduced speed limits) to assist in improving health levels? Promote practices, equipment, and materials which reduce air pollution (e.g., active travel, low emission vehicles) to assist in improving health levels? Promote practices, equipment, and materials which reduce light pollution (e.g., minimum intensity light sources) to assist in improving health levels? Improve impact of transport on the local environment to create more amenable areas for travel, work, and play (e.g., through provision of green and blue infrastructure)?	Air; human health

7.2 Applying the ISA framework

All relevant elements of the LTP will be assessed against the ISA Framework with consideration given to the existing and future baseline conditions, issues and trends relevant to each objective, in order to understand the extent to which the policies and positions included within the LTP are likely to contribute towards the achievement of the ISA objectives.

To allow for the identification of different levels of effects when assessing the LTP's proposals, a scoring system will be used to differentiate the magnitude and significance of effects. Each effect will be allocated one of the scores from the assessment scale in Table 48Table 48. The assessment scale will be utilised within Stage B of the ISA process, when the proposed LTP policies are assessed (as outlined in Section 3.3).

This scoring system seeks to capture both the nature and the scale of predicted effects arising from the measures set out in the LTP. Alongside the overall summary rating, the ISA will seek to identify the nature of the effects of the LTP on the ISA objectives according to the level of detail required by the SEA Directive. This means determining, where possible, whether each effect will be a primary or secondary effect; whether it will lead to cumulative or synergistic effects when considered alongside other plans, policies and programmes; whether the effect will be short-, medium- or long-term in duration; and whether the effect will be permanent or temporary.

Table 48: ISA assessment scale

Score	Assessment Description
++	Very positive effect
+	Positive effect
?	Uncertain
-	Negative effect
--	Very negative effect
O	Neutral/no effect

8. Next steps

This Scoping Report has defined the scope of work for the ISA of the LTP. The report contains a review of international, national and local plans, programmes and strategies; a description of the current and, where possible, future baseline for the Combined Authority area; an identification of the key issues; and sets out the ISA framework consisting of ISA objectives, assessment criteria and the scoring system.

All consultation response received on the Scoping Report have been addressed and actioned appropriately. Following the consultation, in accordance with the method outlined in Section 3, the ISA process will continue to run in tandem with the development of the LTP, helping to inform its development, ensuring the integration of social, environmental, and economic considerations as the plan is progressed and provide everyone with an understanding of how decisions have been made.

The remaining ISA stages are outlined below, and in Section 3.3, to help shape the LTP as the plan is developed and adopted:

- Stage B – Developing and refining the alternatives and assessing effects;
- Stage C – Preparing the ISA Report;
- Stage D – Consulting on the draft LTP and the ISA Report; and
- Stage E – Monitoring the significant effects of implementing the LTP.

A.1 Relevant plans, programmes, and strategies reviewed for the ISA

International
Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) (1979)
Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) (1979)
Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) (1971)
EC A Sustainable Future for Transport – Towards an Integrated, Technology led and User Friendly System (2009)
EC Keep Europe Moving – Sustainable Mobility for our Continent: Mid-Term Review of White Paper (2006)
EU 8th Environmental Action Programme (2022)
EU Adaptation Strategy (2021)
EU Air Quality Framework Directive (96/62/EC)
EU Biodiversity Action Plan (2020)
EU Biodiversity Strategy for 2030 (2020)
EU Directive for the Promotion of Bio-fuels for Transport (2003/30/EC)
EU Directive on Ambient Air Quality and Management (1996/62/ EC)
EU Directive on Ambient Air Quality and Management (revision under development as of 2022)
EU Directive on Assessment and Management of Environmental Noise Directive (2002/29/EC) and associated Regulations (2006)
EU Directive on Assessment of the Effects of Certain Plans and Programmes on the Environment (2001/42/EC)
EU Directive on Environmental Impact Assessment (2014/52/EU) amending Directive (97/11/EC) amending Directive 85/337/EEC
EU Directive on the Conservation of Wild Birds (2009/147/EC)
EU Directive on the reduction of national emissions of certain atmospheric pollutants (2016/2284), amending Directive 2003/35/EC and repealing Directive 2001/81/EC
EU Employment Equality Framework (2000)
EU Environmental Liability Directive (2004/35/EC)
EU Floods Directive (2007/60/EC)
EU Groundwater Directive (GWD) (2006/118/EC)
EU Habitats Directive (92/43/EC)
EU Proposal for a Targeted Revision of the Waste Framework Directive (2023)
EU Race Equality Framework (2000/43/EU)

EU Rural Development Policy 2007-2013
EU Second European Climate Change Programme (2005)
EU Sustainable Development Strategy (2006) and 2009 Review of EU SDS
EU Sustainable Development Strategy (2009)
EU Thematic Strategy on Air Quality, 2005
EU Waste Framework Directive (2008/98/EC)
EU Water Framework Directive (2000/60/EC)
European Convention on the Protection of the Archaeological Heritage
European Landscape Convention (91/676/EC)
European Spatial Development Perspective (1999)
European Transport Policy for 2010: A Time to Decide (2001)
Strategic Plan for the Bern Convention for the Period to 2030 (2023)
Sustainable and Smart Mobility Strategy – Putting European Transport on Track for the Future (2020)
The New EU Urban Mobility Framework 2022/2023
UN Framework Convention on Climate Change (2008)
UN Johannesburg Declaration on Sustainable Development, 2002
UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) (1998)
UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (1972)
UNFCCC Bali Road Map (2007) and Agreed Outcome Pursuant to the Bali Action Plan (2012)
UNFCCC Copenhagen Accord (2009)
UNFCCC Doha Climate Gateway (2012)
UNFCCC Kyoto Protocol on Climate Change (1997)
WHO Collaboration Between the Health and Transport Sectors in Promoting Physical Activity (2006)
WHO Fair Play: Building a Strong Physical Activity System for More Active People (2021)
WHO Guidance on Environmental Noise (2022)
WHO Guidelines for Community Noise (2000)
WHO Health Effects of Transport-Related Air Pollution (2005)
WHO National Programmes for Age Friendly Cities and Communities Guide (2023)
WHO Transport, Environment and Health (2000)
National
2010 to 2015 government policy: water quality (Updated 8 May 2015)
A Better Place to Play (Environment Agency, 2006)

A Green Future: Our 25 Year Plan to Improve the Environment (2018)
A Safer Way: Consultation on Making Britain's Roads the Safest in the World (2009)
A Sure Start to Later Life: Ending Inequalities for Older People – A Social Exclusion Unit Final Report (2006)
Adapting to Climate Change in England (DEFRA, 2008)
Air Quality Regulations 2000 and The Air Quality (Amendment) Regulations 2002
Air Quality Standards Regulations (2010)
Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007)
Ancient Monuments and Archaeological Areas Act 1979
Be Active Be Healthy: A Plan for Getting the Nation Moving (2009)
Beyond Copenhagen: The UK Government's International Climate Change Action Plan (2010)
Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services (2011)
Building a Greener Future Towards Zero Carbon Development – Consultation (Dec 2006)
Building a Low-Carbon Economy – The UK's Contribution to Tackling Climate Change. The First Report of the Committee on Climate Change (Committee on Climate Change, 2008)
Building a Society for all Ages (2009)
Building Sustainable Transport into New Developments (DfT, 2008)
Carbon Pathways Analysis: Informing Development of a Carbon Reduction Strategy for the Transport Sector, Department for Transport (2008)
Child Road Safety Strategy (DfT, 2007)
Clean Neighbourhoods and Environment Act 2005
Climate Change Act 2008
Conserving Biodiversity – The UK Approach (Defra on behalf of the UK Biodiversity Partnership 2007)
Countryside and Rights of Way Act 2000
Cycling and Walking Investment Strategy, Department for Transport (2017)
Decarbonising Transport: A Better, Greener Britain (2021)
Delivering a Sustainable Transport System (DaSTS), Department for Transport (2008)
Delivering a Sustainable Transport System (DaSTS): Consultation on Planning for 2014 and Beyond, Department for Transport (2008)
DfT Operational Sustainability Strategy 2021 to 2025 (2021)
DfT Sustainable Development Action Plan (2007 and 2008)
Disability Discrimination Act (2005)
Draft Heritage Protection Bill (2008)
Driving the Future Today: A Strategy for Ultra Low Emission Vehicles in the UK (2013)
England Peat Action Plan (2021)

Enterprise and Regulatory Reform Act 2013
Environment Act 2021
Environmental Noise (England) Regulations 2006 SI 2238
Equalities Review (2007)
Equality Act (2010)
Equality Framework for Local Government (2021)
Every Child Matters (2003)
Flood and Water Management Act (2010)
Future Water: Government's Water Strategy for England (2008)
Future Water: The Government's Water Strategy for England (2011)
Gear Change: A Bold Vision for Cycling and Walking (2020)
Health Effects of Climate Change (HECC) in the UK (2023)
Healthy Lives, Brighter Futures – the Strategy for Children and Young People's Health (2009)
Healthy Lives, Healthy People: Our Strategy for Public Health in England (2010)
Heritage Protection for the 21st Century: White Paper (DCMS, 2007)
Implementing the Sustainable Development Goals (2021)
Local Nature Recovery Strategy Statutory Guidance (2023)
Low Carbon Transport: A Greener Future, A Carbon Reduction Strategy for Transport, Department for Transport (2009)
Making the Connections: Final Report on Transport and Social Exclusion (2003)
Managing Water Abstraction (2021)
Meeting the Energy Challenge: A White Paper on Energy (2007)
National Air Quality Strategy, Department for Environment, Food and Rural Affairs (2007)
National Cycling Strategy, DfT Review
National flood and coastal erosion risk management strategy for England (2020)
National Planning Policy Framework (2023)
National Waste Development Framework
Natural Environment and Rural Communities Act 2006
Noise Action Plans (DEFRA)
Older People: Their Transport Needs and Requirements (DfT, 2001)
ONS Coronavirus and Travel to Work (2020)
Our Waste, Our Resources: A Strategy for England (2018)
Physical Activity and the Environment (NICE) (2018)
Planning (Listed Buildings and Conservation Areas) Act 1990

Planning for a Sustainable Future (2007)
Planning for Economic Development (ODPM, 2004)
Powering Future Vehicles Strategy, Department for Transport (2002)
Protection of Badgers Act (1992)
PSA Delivery Agreement 27 Lead the Global Effort to Avoid Dangerous Climate Change (HM Government, 2007)
PSA Delivery Agreement 28 Secure a Healthy Natural Environment for Today and the Future (HM Government, 2007)
Public Sector Equality Duty (Equality Act 2010)
Race Relations (Amendment) Act (2011)
Rail Environment Policy Statement: On Track for a Cleaner, Greener Railway (2021)
Rising Cost of Living in the UK Research Briefing (2023)
Road Safety Act 2006
Road Traffic Reduction (National Targets) Act 1998
Road Traffic Reduction Act 1997
Rural Strategy 2004
Securing the Future: The Government's Sustainable Development Strategy (2005)
Securing the Regions' Future (2006)
Stern Review of the Economics of Climate Change (Stern, 2007)
Sustainable Communities: Building for the Future (2003)
Sustainable Distribution: A Strategy (DfT, 1999)
Tackling Health Inequalities: A Programme for Action (2003)
The Conservation of Habitats and Species Regulations (2010)
The Countryside in and Around Towns: A Vision for Connecting Town and Country in the Pursuit of Sustainable Development (The Countryside Agency/Groundwork 2005)
The Future of Transport White Paper – A Network for 2030 (DfT, 2004)
The Government's Statement on the Historic Environment for England 2010
The Third National Adaptation Programme (NAP3) and the Fourth Strategy for Climate Adaptation Reporting (2023)
The UK Programme on Climate Change, Department for Environment, Food and Rural Affairs (2006)
Transforming the Public Health System: Reforming the Public Health System for the Challenges of our Times (2021)
Transport and Inequality: An Evidence Review for the Department of Transport (2019)
UK Biodiversity Action Plan 1992-2012 (1994)
UK Clean Air Strategy (2019)

UK Environmental Improvement Plan (2023)
UK Post-2010 Biodiversity Framework: Revised Implementation Plan (July 2018)
Unleashing Rural Opportunity (2023)
Wildlife and Countryside Act (as amended) 1981
World class places: the Government's strategy for improving quality of place (2009)
Regional
Air Quality Plan for the achievement of EU air quality limit values for nitrogen dioxide (NO2) in West Yorkshire Urban Area (UK0004) (2011)
Joint Local Authority – Yorkshire Forward Position Paper (2008)
Part 1: Humber River Basin District River Basin Management Plan (2015)
Tackling the Climate Emergency: Emission Reduction Pathways Report (2020)
TfN analysis using its Transport-Related Social Exclusion Tool (2022)
TfN Clean Mobility Policies
TfN Connecting Communities: Socially Inclusive Transport Strategy for the North of England (2023)
TfN Electric Vehicle Charging Infrastructure Framework
TfN Freight and Logistics Strategy (2022)
TfN International Connectivity and Aviation Policy Position Statement (2022)
TfN Strategic Transport Plan – Habitats Regulation Assessment and Appendices (2024)
TfN Strategic Transport Plan – Integrated Sustainability Appraisal Main Report and Appendices (2024)
TfN Strategic Transport Plan: People and Place Framework (2024)
TfN Strategic Transport Plan: Transforming the North (2024)
TfN Strategic Transport Plan: Vision, Strategic Ambitions and SMART Objectives (2024)
TfN: Transport and social exclusion in the North in 2023/24
The Mayor of West Yorkshire's Safety of Women and Girls Strategy
The Northern Powerhouse Independent Economic Review – 2023 Update (TfN and NP11)
The West Yorkshire Plan 2040
The Yorkshire and Humber Plan: Regional Spatial Strategy to 2026 (2008)
The Yorkshire and Humber Regional Economic Strategy 2006-2015 and progress update (2007)
West Yorkshire – Noise Action Plan (March 2010)
West Yorkshire Climate and Environment Plan 2021 to 2024 (2021)
West Yorkshire Connectivity Infrastructure Plan (2021)
West Yorkshire Connectivity Infrastructure Plan: Engagement Outcome Report (2021/22)
West Yorkshire Draft Inclusive Growth Framework

West Yorkshire Economic Recovery Plan – Summary (2020)
West Yorkshire Equity, Diversity, and Inclusion Plan 2022 – 2025 (2022)
West Yorkshire Equity, Diversity, and Inclusion Report 2023/2024 (2024)
West Yorkshire Employment and Skills Framework (2021)
West Yorkshire Energy Delivery Plan (2018)
West Yorkshire Green and Blue Infrastructure Strategy
West Yorkshire Investment Strategy 2021 to 2024
West Yorkshire Low Emissions Strategy 2016 to 2021 (2016)
West Yorkshire Mass Transit Vision 2040 (2022)
West Yorkshire State of the Region (2022)
West Yorkshire State of the Region: Equality, diversity and inclusion report (2022)
West Yorkshire Transport Strategy 2040
West Yorkshire Vision Zero
Yorkshire Dales National Park Local Plan 2015 to 2030 (2016)
Local
2025 Kirklees Transport Vision (2007)
An Economic Strategy for Bradford District 2018 to 2030 (2018)
Bradford Air quality action plan: consultation draft (Jul 2009)
Bradford Children and Young People's Strategy 2023 to 2025
Bradford Equality Objectives and Equality Plan 2021-2025 (2021)
Bradford MDC Low Emission Strategy (Aug 2013)
Bradford Metropolitan District Council Strategic Flood Risk Assessment Level 1 (amended 2019)
Bradford Metropolitan District Council: Sustainability Appraisal and Strategic Environmental Assessment (2021)
Bradford Sustainable Development Action Plan 2020 to 2021 (2020)
Calderdale Climate Action Plan 2023 to 2026
Calderdale Equality Duty Report (2024)
Calderdale Local Air Quality Management Updating and Screening Assessment (2015)
Calderdale Local Plan (2023)
Calderdale Local Plan Sustainability Appraisal (2018)
Inclusive Economy Strategy for Calderdale 2018 to 2024 (2018)
Kirklees Air Quality Strategy (2019)
Kirklees Biodiversity Strategy
Kirklees Climate Change Action Plan (2022)

Kirklees Economic Strategy 2019 to 2025 (2019)
Kirklees Inclusion and Diversity Annual Report 2022/2023 (2023)
Kirklees Health and Wellbeing Strategy 2022 to 2027 (2022)
Kirklees Housing Strategy 2018 to 2023 (2018)
Kirklees Inclusive Communities Framework
Kirklees Local Flood Risk Management Strategy (2013)
Kirklees Local Plan Strategy and Policies (2019)
Kirklees Resources and Waste Strategy 2021 to 2030 (and 2023 update)
Kirklees Social Value Policy (2022)
Leeds City Region Digital Framework (2019)
Leeds City Region Employment and Skills Plan – Skilled People, Better Jobs 2016 to 2020 (2016)
Leeds City Region Green and Blue Infrastructure Strategy
Leeds City Region Green Infrastructure Strategy 2017 to 2036 (2018)
Leeds City Region Housing Vision
Leeds City Region Innovation Framework: Innovation for Everyone (2021)
Leeds City Region Strategic Economic Plan 2016 to 2036 (2016)
Leeds Core Strategy (2019)
Leeds Equality, Diversity and Inclusion Annual Report (2023)
Leeds Site Allocations (2019)
Local Plan for the Bradford District: Core Strategy Development Plan Document (2017)
Tackling Poverty in Kirklees Strategy and Action Plan 2016 to 2018 (2016)
Vision for Leeds 2011 to 2030
Wakefield Core Strategy (adopted Apr 2009)
Wakefield Core Strategy DPD & Development Policies DPD (adopted Apr 2009)
Wakefield Equality, Diversity and Inclusion Policy and Action Plan (2022)
Wakefield Equality, Diversity and Inclusion Annual Report 2022-2023 (2023)
Wakefield Local Plan 2036 (emerging)
Wakefield Sites Specific Policies (adopted 2009)

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A.3 Amendments to the Scoping Report following Consultation

Underlined text – new text added

Strikethrough text – text removed

Consultee	Consultee Comments	Action
WYCA EDI Team	Appendix 1 pp.132 onward: There is no link to the CA's EDI Plan/PSED EDI Reporting on Equality Objectives (regional) and then similar for local, of each local authority's PSED Equality Objectives reporting.	The following documents have been added to Appendix 1: • West Yorkshire Equity, Diversity, and Inclusion Plan 2022 – 2025 (2022) • West Yorkshire Equity, Diversity, and Inclusion Report 2023/2024 (2024) • Bradford Equality Objectives and Equality Plan 2021-2025 (2021) • Calderdale Equality Duty Report (2024) • Kirklees Inclusion and Diversity Annual Report 2022/2023 (2023) • Leeds Equality, Diversity and Inclusion Annual Report (2023) • Wakefield Equality, Diversity and Inclusion Policy and Action Plan (2022) • Wakefield Equality, Diversity and Inclusion Annual Report 2022-2023 (2023)
	Equality Data Section: Gender (and wider including ethnicity) pay gap reporting seems absent. Unless colleagues are satisfied that the State of the Region indicates this data. However, would be useful to signpost to and understand how the evidence is driving EDI	• Reference to Equality and Human Rights Performance Report and gender pay gap data added in Section 5.5.5: 'Overall, the gender pay gap in West Yorkshire is slightly lower than England. Kirklees,

	objective, as well as social value thinking about impacts on wider areas including social value, health. No mention to the Equality and Human Rights performance report in this section.	however, has a 1.8% higher median gender pay gap than England and Bradford has a 3.6% higher mean gender pay gap than England. This gap can partly be attributed to less women being in paid employment. As of 2023, in all local authorities across the UK, including in West Yorkshire, a greater proportion of men were in paid employment than women. Across West Yorkshire as a whole, 66.7% of women were in paid employment, compared to 78% of men (ONS, 2023). Women are also more likely to work in part-time roles which attract a lower hourly rate of pay which can affect the results of the gender pay gap (WYCA, 2021). This is often due to childbearing and childcare responsibilities. In some companies with discriminatory policies, this can affect hiring and promotion decisions and ultimately impact on career progression. • Across the UK, women are also much more likely than men to work in low skilled, low-paid sectors like care and leisure, as well as in administrative and secretarial jobs, due to gender bias, social norms, and discriminatory practices in the workplace. For example, in the UK in 2024, over 850,000 men work in finance and insurance, compared to circa 680,000 women, and 1.1 million men work in health and social work, compared to 3.7 million women (ONS, 2024). However, even when women and men hold the same positions, women still earn less than men on average. In the long term, this means that women will earn

		significantly lower pensions, resulting in high numbers of older women living in poverty. • As per the Equality and Human Rights Performance Report (Equality and Human Rights Commission, 2023), the Combined Authority reports annually on its gender pay gap, and it is looking to reduce it across the organisation. In March 2023, its gender pay gap was at 5.38%, which was lower than the mean national average of 8.3%. The Combined Authority has set targets, as part of its EDI Action Plan 2022-25, to reduce these gaps to zero by 2028 to ensure it is representative of the population it is serving (WYCA, 2023).' • WYCA organisational ethnicity pay gap data added to Section 5.5.3: 'The Combined Authority is now reporting on its ethnicity pay gap as an organisation. As of March 2023, 11.6% its 759 employees reported being Black, Asian and minority ethnic, compared to 83.7% who reported being white. The Combined Authority therefore falls short of being representative of the West Yorkshire working age population, which stands at 23.3%. The median pay gap stood at 4.8% and the mean pay gap stood at 9.8%. These figures show that when looking at the organisation as a whole, its black, Asian and minority ethnic employees earn on average 9.8% less than white employees and that the middle point for the earnings of black, Asian and minority ethnic employees is 4.8% lower than that of white employees (WYCA, 2023). The Combined

		Authority has set targets, as part of its EDI Action Plan 2022-25, to reduce these gaps to zero percent by 2028.'
	Equality Data Section: It would be helpful to define EDI. For example, the current draft seems to define diversity as all the ''inherent'' differences between people (eg gender, race, age, faith, socio-economic background, sexual orientation, disability and nationality) as well as the differences that people acquire in their working lives (eg inter-generational working, social mobility, cross-cultural experience, technical expertise, and language skills). The term inclusion is used to describe activities which ensure people feel genuinely included, valued and comfortable being themselves at work and proud of their inherent or acquired.	• EDI definitions provided under heading 5.5 Equality Data: 'This section provides data covering equality, diversity and inclusion, or EDI. Equality means providing equal opportunities to all and protecting them from discrimination under the categories set out within the Equality Act 2010 (see Section 3.2.2). Diversity can be described as the 'inherent' differences between people (for example gender, race, age, faith, socio-economic background, sexual orientation, disability and nationality) as well as the differences that people acquire in their working lives (for example inter-generational working, social mobility, cross-cultural experience, technical expertise, and language skills). Lastly, inclusion is used to describe activities which ensure people feel genuinely included, valued and comfortable being themselves at work and proud of their inherent or acquired.'
	Equality Data Section: It is also noticed equality is used beyond the technical need of assessments e.g., equality impact assessment, which is not aligned with the EDI Plan and equity. Be good to understand the rationale, which also links the feedback around defining the terms.	The ISA includes an Equality Impact Assessment and needs to be completed on the LTP. The ISA Framework will meet the Equality Impact Assessment requirements with the inclusion of key objectives and assessment criteria. In addition, the ISA main report will be supported by an Equality Screening Assessment which will be within the appendices to the ISA main report. This will ensure that the requirements of the Equality Duty 2010 are met for the plan.

		To ensure consistency with West Yorkshire EDI plans, the following documents have been added to Appendix 1 and considered as part of this scoping exercise: • West Yorkshire Equity, Diversity, and Inclusion Plan 2022 – 2025 (2022) • West Yorkshire Equity, Diversity, and Inclusion Report 2023/2024 (2024) • Bradford Equality Objectives and Equality Plan 2021-2025 (2021) • Calderdale Equality Duty Report (2024) • Kirklees Inclusion and Diversity Annual Report 2022/2023 (2023) • Leeds Equality, Diversity and Inclusion Annual Report (2023) • Wakefield Equality, Diversity and Inclusion Policy and Action Plan (2022) • Wakefield Equality, Diversity and Inclusion Annual Report 2022-2023 (2023) In line with the West Yorkshire EDI plan, we have embedded equality, diversity and inclusion within our scoping exercise and the ISA Framework. In addition, the EDI plan requires an Equality Impact Assessment for all plans is undertaken, therefore we are consistent with the plan. The definitions used for EDI are outlined in section 5.5 and outlined in the row above.
	Equality Data Section: The data listed for population and understanding EDI interventions seems limited. In addition, little about the make up of the transport sector. The Chartered	Information has been added to Section 5, as outlined below, to provide a greater understanding of equality issues for West Yorkshire. However,

	Institution of Highways and Transportation (CIHT) has developed an initiative to track employment trends and gather evidence on key skills issues, which involves a biennial survey of a variety of employers from the UK H&T sector. The report looked at four main areas and has identified a series of key findings including:	research has not been included regarding the Institution of Highways and Transportation as it is not specific to West Yorkshire in understanding the baseline of economic, social or environmental activity in the region. The purpose of the Scoping Report is to provide a baseline situation of the current and likely future social, economic and environmental characteristics of West Yorkshire using publicly available information. Therefore, the ISA Scoping Report does not need to report on the national transport industry as part of this exercise. Text added to 5.5.2. 'Currently, 6.4% of the Combined Authority's workforce declare themselves disabled. By 2023, this is expected to be at least 20% (in line with the working age population). The 2023 Staff Survey highlighted that disabled employees are less likely to definitely agree the Combined Authority respects individual differences (44%) compared to those without a disability (65%). When asked if they thought the Combined Authority acts fairly with regard to career progression and promotion, 41% of disabled people said 'yes definitely', compared to 50% of those without a disability; this has increased by 16% since 2022. This shows that the Combined Authority's EDI Plan is having a positive impact, however, further systemic change is required across the organisation to meet it's 100% response target by 2025 (WYCA, 2024). Despite disability levels being higher than the national average, accessibility of rail stations varies considerably across West Yorkshire. Only 29% of rail stations across West Yorkshire have compliant step-free access, meaning the other 71% exclude 17.6% of the population. As a result, disabled people may be excluded from education,

		employment, health, and leisure opportunities, as they are unable to use public transport to get around. This reduces the autonomy and independence of disabled people as they have to rely on private travel; others may not have access to this or be able to afford it, which excludes them further. In turn, this impacts employment rates and economic activity. Text added to 5.5.3. '232,000 out of 550,000 (42%) people who identify as ethnic minority live in the 10% most deprived neighbourhoods in West Yorkshire. This rises to 61% if you consider the 20% most deprived neighbourhoods. 44% of people in the 10% most deprived neighbourhoods in West Yorkshire identify as an ethnic minority (WYCA, 2022). Ethnic minorities are disproportionately affected by poverty, and this can be attributed to high rates of insecure and unpaid work, and social discrimination and exclusion in education and the workplace, and institutional discrimination in social policy, which impedes on people's abilities to obtain jobs, housing, and healthcare.' In most ethnic minority groups, a higher proportion of adults live in households without access to a car or van compared to the white proportion of the population. 22% of Asian/Asian British adults and 39% of Black/African/Caribbean/Black British adults do not have access to a car or van in West Yorkshire, whereas only 17% of white adults live in a household without access to a car or van. As a result, the average number of trips made by car is higher for white groups than all ethnic minority groups apart from the mixed or multiple ethnic group (UK Government, 2020). This can limit their access to opportunities, and in turn, reduce

		employment rates and economic activity across the region'. Text added to 5.5.5. 'The Combined Authority's current workforce data on sexual orientation is limited, and will be strengthened including gender identity, which will also improve the accuracy of management information. By 2030, however, it is proposed that at least 2% of colleagues will be people of minority gender identity/expression and sex characteristics and at least 5% of colleagues will be people of minority sexual orientation (WYCA, 2023)'.
	UK Highways & Transport workforce size and scale: The research has established that around 5% of the UK's total workforce is employed in the sector, 82% of those workers identify as male and 79% identify as White British. Women represent just 20% of the rail industry as a whole and just 4.4% of railway engineering. These figures reflect the wider issue in engineering, with only 6% of the current engineering workforce made up of women. In aviation, the 2014 Civil Aviation Authority airline personnel costs demonstrate the gender imbalance within the sector. Just 4.7% of pilots and 5.7% of maintenance and overhaul personnel are female, but 72.6% of cabin attendants are women.	This research has not been included as it is not specific to West Yorkshire in understanding the baseline of economic activity in the region. The purpose of the Scoping Report is to provide a baseline situation of the current and likely future social, economic and environmental characteristics of West Yorkshire using publicly available information. Therefore, the ISA Scoping Report does not need to report on the national transport industry as part of this exercise.
	Recruitment: 37% of employers report professional services/design project management roles are hard to fill and academic / public sectors struggle to match the more competitive salaries offered by private organisations, impacting recruitment and retention.	This research has not been included as it is not specific to West Yorkshire in understanding the baseline of economic activity in the region. The purpose of the Scoping Report is to provide a baseline situation of the current and likely future social, economic and environmental characteristics of West Yorkshire using publicly available information. Therefore, the ISA Scoping Report does not need to report on the national transport industry as part of this exercise.
	Skills, training, and qualifications:	This research has not been included as it is not specific to West Yorkshire in understanding the

	Cost is viewed as the main barrier to further staff training and companies have identified the developing of digital skills as one of the priorities for the future.	baseline of economic activity in the region. Additionally, the ISA Scoping Report does not need to report on the national transport industry as part of this exercise.
	Future landscape of the sector: Increased costs due to inflation and government spending cuts are seen as major challenges for the sector but respondent organisations saw opportunities for growth in decarbonisation and digitalisation. The report has identified that to meet sector expansion between 53,000 and 223,000 additional workers may be required over the next five years.	This research has not been included as it is not specific to West Yorkshire in understanding the baseline of economic activity in the region. Additionally, the ISA Scoping Report does not need to report on the national transport industry as part of this exercise.
	Our research | EHRC (equalityhumanrights.com) GSS equalities statistics interactive database (civilservice.gov.uk) Equalities data–audit –- Office for National Statistics (ons.gov.uk) Centre for Equalities and Inc–usion –- Office for National Statistics (ons.gov.uk) Government Equalities –ffice –- GOV.UK (www.gov.uk) InstantAtlas Kirklees – Welcome to the Kirklees Observatory Leeds Observatory – Welcome to the Leeds Observatory Home | Calderdale Data Works Welcome to the Wakefiel– JSNA –- Wakefield District JSNA Bradford Observatory (wordpress.com) Home | Data Mill North Da–asets –- Data North Yorkshire Da–asets –- York Open Data Diversity Data Dashboard (open-innovations.github.io) Data | Centre for Cities	We have reviewed the Scoping Report in light of these sources. The recommended documents have been added to the ISA Scoping Report's review of the plans, programmes and strategies within Appendix 1.
	Yes somewhat, the objective – promote greater equality of opportunities for all with the desired outcomes of achieving a fairer society seems passive and unclear as to the impact on transport sector specifically. From the data in the LTP draft, could this objective be improved to set the pace for tangible EDI interventions that the LTP will drive, linked to the data but also where input will benefit wider objectives (including health/enhancing economic prosperity), but also where the outputs and outcomes can be shared.	The role of the Scoping Report and the ISA framework is to provide a baseline situation of current and likely future social, economic and environmental characteristics with key international, national, regional and local plans, programmes and strategies to define the ISA Framework in which the LTP will be assessed to ensure all the social, environmental and economic issues are fully considered and integrated. This assessment will then provide recommendations for the planners to

		consider. Therefore, it is not the role for the ISA Scoping Report and Framework to set tangible EDI interventions for the LTP. However, objective 13 includes six supporting assessment criteria regarding accessibility, inclusive design, affordability, active and sustainable travel routes, access to information and the promotion of greater equality of opportunity for all to provide a detailed consideration of equality as part of the ISA for the LTP. The ISA Framework includes separate objectives which relate to health and economic prosperity; however these have their own separate objectives (ISA Objectives 11 and 12). All outcomes from the ISA Framework are considered collectively with cumulative and synergistic impacts considered as part of the assessment stage of the ISA. Information regarding the transport sector has not been included as it is not specific to understand the region. This is because purpose of the Scoping Report is to provide a baseline situation of the current and likely future social, economic and environmental characteristics of West Yorkshire. Therefore, the ISA Scoping Report does not need to report on the national transport industry as part of this exercise.
	It is uncertain how the ISA will manage the weight of each effect assessing the LTP and what course of action will be taken if for example, it is identified that the environmental assessment needs a sharper focus on climate action but that the EqIA and health assessment indicates that the interventions will harm people or vice versa. How will this be managed? What are the methods to support the tensions between assessments of the ISA?	Our methodology for the ISA is a pragmatic approach to follow relevant legislations and best practice and to consider environmental, social and economic matters as the LTP is developed. The approach is also in line with national legislation, policy and guidance. To clarify, the assessment places an equal weight on all potential effects when the LTP is assessed. As part of the assessment, synergistic and cumulative effects will be identified and considered to ensure that all potential impacts

		are considered collectively. We are transparent about the assessment criteria and each will be applied consistently when assessing the LTP. As the LTP is assessed, recommendations will then be made to enhance and strengthen the plan against each objective. It is then for decision-makers to draft the policy with these recommendations in mind. Therefore, the ISA approach has remained the same.
WYCA Place & Environment Team	Section 4.3.1. Land: Factor in sustainably produced healthy food in relation to agriculture	• Text added: 'Utilise agricultural land to sustainably produce healthy food'
	Section 4.3.1. 'Protect farmland and soils': What does it mean to 'protect' farmland' Does'"protec" suggest preserving it in its current form when perhaps 'enhancing' (or 'improving', or similar) might be better and what we really want to see?	• 'Protect' changed to 'Enhance'
	Section 5.2.6. Noise pollution: What is the impact of noise pollution on wildlife? Please can this be factored in	• Paragraph added to the end of Section 5.2.6: 'Noise pollution also has an impact on wildlife. Animals use sound to navigate, find food, attract mates, and avoid predators, and therefore, noise pollution can make it difficult for them to accomplish these tasks, which affects their health and ability to survive (National Geographic Society, 2024). Traffic noise can also lead to loss and fragmentation of habitats, changes in the behaviour of wildlife, and injury and death.'
	Section 5.2.7. Light pollution: Can this section explain what the implications are of light pollution? I.e. impact on humans, wildlife etc.	• Paragraph added to the end of Section 5.2.7: 'Light pollution at night can disrupt natural behaviour patterns in both humans and wildlife, having a negative impact on their health and wellbeing (CPRE West Yorkshire, 2024). For example, it can

		prevent and interrupt sleep, which increases fatigue, stress, anxiety, and other health problems in humans. In animals, nocturnal lighting can impact on migration patterns, wake-sleep habits, and habitat formation (National Geographic Society, 2024).'
	Section 5.2.8. With respect to Local Nature Reserves, we hold more recent data for Leeds and Calderdale (our current data for the LNRS features the national data for the other three districts, and the local LNR data from those two). The LNRs on the figure will be accurate for the national LNR dataset held by NE, but won't take into account any recent changes in local Leeds/Calderdale plans.	This ISA Scoping Report uses the most up to date publicly available information to create a robust foundation for the creation of the ISA Framework to assess the LTP. The LNRS is not publicly available and therefore has not been used in the assessment. This Scoping Report can be updated in the future to take account of new information, such as the future LNRS.
	Section 5.2.8. We need to reference the LNRS (Local Nature Recovery Strategy) being in development, its purpose and possibly some timelines.	• Text added explaining the LNRS in Section 5.2.8: 'A locally-led Local Nature Recovery Strategy is in development for West Yorkshire to help tackle biodiversity loss, climate change, and wellbeing. This strategy is one of around 50 spatial mapping and planning tools, which, together, will cover the whole of England and help to create a Nature Recovery Network of wildlife-rich places, as stated in the Environment Act 2021. It will be published by 2025 and must be updated every 3 to 10 years. The following nature recovery projects have already taken place across West Yorkshire: • A former landfill site in Bradford is now a wildflower meadow; • Visitors to the Yorkshire Wildlife Trust's Stirley Farm in Kirklees provides an opportunity for managing farmland in a way

		that is good for landscape, wildlife and people; • St Aidan's in Leeds, a former opencast coal mine, is now an RSPB nature reserve rich in wetland habitats; and • Lofthouse Colliery in Wakefield is now inhabited by chiffchaffs, cuckoos and blackcaps.'
	Section 5.2.12. Figure 17: Struggling to see the corridors on the map – can they be made green?	The ISA Scoping Report utilises a wide range of published data and information to create a robust foundation for the creation of the ISA Framework to assess the LTP. Consequently, the Report utilises figures which cannot be amended due to being published by other organisations. Therefore, the figure has remained the same.
	Section 5.2.12. P.45: Do we need to move on from pandemic stats based on people wanting to spend time outdoors?	Text related to the pandemic has been removed.
	Section 5.2.12. Don't think we've mentioned the White Rose Forest–- worth mentioning this as a regenerative nature recovery scheme?	• Text added covering the White Rose Forest project in North and West Yorkshire: 'A key green infrastructure project in West Yorkshire is White Rose Forest; England's largest community forest working in partnership with local authorities, landowners, businesses, and communities to increase woodland across the region to improve the natural environment. This regenerative nature recovery scheme is working to plant millions of trees in urban centres and rural spaces to help manage flood risk, mitigate climate impacts, and provide space for healthy lifestyles. Their aim is to increase tree cover in North and

		West Yorkshire from 11% to 19% by 2050, which will annually sequester up to 50% of residual CO^2 emissions by 2050 (White Rose Forest, 2021). A key project under the White Rose Forest scheme is Green Streets, which aims to increase tree canopy coverage along cycle paths and active travel routes across North and West Yorkshire. The map below highlights the Green Streets areas in West Yorkshire.' • Map added to highlight the Green Streets areas in West Yorkshire.
	Section 5.2.12. I think greater emphasis could be placed on the critical role our natural environment plays in underpinning a healthy, resilient population and forming strong ecosystem services. A high-quality and accessible natural environment is vital for humans, biodiversity and sustainable places. Also I think we need to emphasise: While some of the regions natural environment is in a good condition, this is by no means true for all West Yorkshire. Our biodiversity and ecosystem services are coming under increasing threat. The above applies to the biodiversity section too	• Text added in Section 5.2.12 under Green Flag Awards for parks: 'The natural environment plays a critical role in underpinning a healthy, resilient population and forming strong ecosystem services. A high-quality and accessible natural environment is vital for humans, biodiversity and sustainable places. The Green Flag Award scheme is the benchmark national standard for publicly accessible parks and green spaces in England and Wales. It was first launched in 1996 to recognise and reward the best green spaces in the country. The number of awards for each individual district is presented in Table 18 below. • Text added to section 5.2.8: 'The Combined Authority understand the critical role that the natural environment plays in underpinning a healthy and resilient population, and supporting biodiversity and sustainable places, which is why they are working to protect it through several

		strategies and plans, some of which are outlined below.'
	Section 5.2.15/17. Although most areas are''t in flood zones, is it still worth acknowledging that floods have had damaging regional impacts in recent years (e.g. Boxing Day floods) and perhaps quantifying some of the costs these have resulted in?	• Text added to Section 5.2.15: 'The State of the Region Review 2022 (WYCA, 2022) indicates that around 3% of residential properties and 13% of commercial properties in West Yorkshire fall within a flood risk zone. Whilst this may seem like a low proportion, flooding incidents have had severe regional impacts in recent years, such as the Boxing Day floods of 2015, when the River Calder burst its banks. This caused damage to over 6,000 homes and businesses, costing the regional economy an estimated half a billion pounds (WYCA, 2023). Further serious flooding has occurred in Calderdale, including Storm Ciara in February 2020, and since then Calderdale have faced 16 additional flood alerts (Calderdale Council, 2021).' • Text amended in Section 5.2.17: 'While most areas are not within flood risk zones, the region has still experienced severe impacts from flooding events and climate change may increase the frequency of flooding, particularly along main river areas like the Aire Valley and River Wharfe.'
	Section 5.2.15. LCR SUDs guidance needs referencing. https://www.westyorks-ca.gov.uk/media/5397/lcr-suds-guidance-final-february-2020-1.pdf	• Text added in Section 5.2.12: 'Leeds City Region have also published guidance on Sustainable Drainage Systems (SUDs) (Leeds City Region, 2020) to promote the use of SUDs in new developments to protect people and property from flood risk.'

	Table 47. Section 2/9: LCR SUDs guidance needs referencing	• Text in No. 2 amended to reference LCR SUDs: 'Through utilising the Leeds City Region Sustainable Drainage Systems Guidance, the LTP should ensure drainage systems are sufficiently resilient to deal with periods of intense rainfall.' • Text in No. 9 added: 'The Leeds City Region Sustainable Drainage Systems Guidance should be used to enable this.'
	Table 47. Section 4: LNRS needs referencing	• Text added in No. 4: 'The LTP should align with the LNRS (currently under development, for publication in 2025) to help tackle biodiversity loss, climate change, and wellbeing. The LTP should aim to protect designated areas and other areas of ecological value, e.g. by ensuring that planning/ design of transport interventions avoid sensitive areas and through the adoption of best practice wildlife friendly designs into road interventions. Where this is not possible, there should be mitigation and compensation for losses''
	Table 47. Additionally worth referencing MT Vision principles (e.g. Environmental Responsibility) in other sections such as Section 17?	• Text added to No. 17: 'The LTP should aim to align with the West Yorkshire Mass Transit Vision 2040 (2022) design principle, 'Environmental Responsibility', which aims to make mass transit zero-emission at point of use and climate resilient.'
WYCA Mass Transit Team	Section 4.3.1. Under transport, would amend the following to include all groups who are more likely to be victims of crime or fear crime, not only women and girls: Improve safety for women and girls on public transport and at transit stops.	• Text amended in Section 4.3.1 under Transport: 'Improve safety for all transport users, specifically vulnerable groups who are more likely to fall victims of or perceive crime, including women and girls, on public transport and at transit stops;'.

	Section 4.3.1,
	
	Under transport, would the following also be relevant?
	
	- reducing transport-related social exclusion /inequalities / the fair and equitable distribution of benefits
	
	- inclusive and accessible transport infrastructure
		• Text added in Section 4.3.1 under Transport:
		  • 'Reduce transport-related social exclusion and inequalities;
		  • Promote inclusive and accessible transport infrastructure;'

	Section 4.3.1. Under economic – transport affordability is part of MT commitments?	• Text added in Section 4.3.2: 'Ensure transport affordability;'.
	Section 4.3.1. Under health - we note 'provide physical access for disabled people' – this should be broadened to inclusive and accessible to include non mobility related disabilities (physical accessibility needs, sensory differences, neurodiversity and hidden disabilities) - promote cycling and remove the gender bias in cycling–- could this be broadened out to improve greater inclusion of groups less likely to cycle (older people, women, children, ethnic minority groups)?	• Text amended in Section 4.3.3: 'Provide inclusive access for people with disabilities, including non-mobility related disabilities, such as physical accessibility needs, sensory differences, neurodiversity, and hidden disabilities. • Text amended in Section 4.3.3: 'Promote cycling and improve the greater inclusion of those less likely to cycle currently, for example older people, women, children and ethnic minority groups ~~remove the gender~~ bias in cycling;'.
	Section 4.3.1. Under equality - Create sustainable communities which are fair for everyone–- including those in other communities, now and in the future–- can be woven into above bullet on creating sustainable communities? - See comment above re: provide physical access for disabled people - Is there something to be added around how people are involved / engaged in/ participate in shaping transport / how lived experience is reflected ?	• Text amended in Section 4.3.4: 'Create sustainable communities which are active, inclusive, safe, ~~fair,~~ tolerant, ~~and~~ cohesive~~;~~ ~~Create sustainable communities which are~~ and fair for everyone–- including those in other communities, now and in the future;' • Text amended in Section 4.3.4: ''Provide inclusive access for people with disabilities, including non-mobility related disabilities, such as physical accessibility needs, sensory

	- Is there a wider point to be made around behaviour change- or is this picked up in health?	differences, neurodiversity, and hidden disabilities. We note the importance of people being involved, engaged with and participating in shaping transport. However, no change has been made to the ISA Scoping Report due to this being a matter for the LTP rather than the ISA. This is because the role of the Scoping Report is to provide a baseline situation of current and likely future social, economic and environmental characteristics with key international, national, regional and local plans, programmes and strategies to define the ISA Framework in which the LTP will be assessed to ensure all the social, environmental and economic issues are fully considered and integrated as part of the ISA process. Behaviour change including around health issues is considered throughout the ISA. Results are presented in an integrated manner and therefore, issues are not discussed separately, and no change was made to the report.
	EQIA. May be helpful to make distinction between disproportionate vs differential effects.	Our methodology for the ISA is a pragmatic approach to following relevant legislation, policy, guidance and best practice to consider environmental, social and economic matters as the LTP is developed. The EqIA, and relevant legislation, for the LTP is not a separate process and has been embedded within the ISA. However, for transparency and clarity, a separate statement on the EqIA will be produced as part of the ISA as an appendix to the main report. The methodology for the EqIA follows the requirements across stages one and two including screening, assessment and reporting. The EqIA will include an assessment of the LTP's objectives and policies against the nine protected

		characteristics and will consider the potential likely effects. As part of the assessment, any potential disproportional or varied effects across the protected characteristic groups will be identified. Therefore, the ISA approach has remained the same.
	EqIA baseline. In terms of data, could also consider access to a car, employment/unemployment, unpaid care, homelessness, language.	All the issues mentioned have been considered throughout the ISA Scoping Report and therefore have not been repeated within the equality section to avoid repetition.
	EqIA baseline. Considerable/disproportionate differences with comparators aren't considered within the commentary, rather differences with comparators are described as‘'high'' or‘'low''. How is disproportionality defined?	Our methodology for the ISA is a pragmatic approach to following relevant legislation, policy, guidance and best practice to consider environmental, social and economic matters as the LTP is developed. The methodology for the EqIA meets the legislative requirements outlined in Section 3.2.2 of the Scoping Report including screening, assessment and reporting of equality matters for the LTP. The role of the Scoping Report is to provide a baseline situation of current and likely future social, economic and environmental characteristics with key international, national, regional and local plans, programmes and strategies to define the ISA Framework in which the LTP will be assessed to ensure all the social, environmental and economic issues are fully considered and integrated as part of the ISA process. Therefore, assessment of effects from the LTP is not undertaken at this stage. As part of the next stage of the ISA, as outlined in Section 3.3 in the Scoping Report, assessments of the LTP's objectives and policies against the nine protected characteristics will be undertaken to consider the potential likely effects on West Yorkshire. These will be shown on a six-point

		positive to negative scale and will identify any considerable or disproportionate effects to or between the protected groups as part of the assessment. As part of the assessment, disproportionality is defined as a potential likely effect being too large or small to a protected characteristic. Therefore, the ISA approach has remained the same.
	EqIA baseline. Sources –full source reference so it is clear what is Census data / what comes from mid-year pop estimates, IMD, etc?	The full list of sources are shown in-text and listed in Appendix 2.
	EqIA baseline. Missing some groups like pregnancy and maternity, marriage and civil partnership – if these are scoped out, need to set out why this is (pregnancy and maternity should not be).	Two new sections have been added to 5.5. Equality data, including 5.5.6 Marriage and Civil Partnerships and 5.5.7 Pregnancy and Maternity. Table 42 has been added to 5.5.6 and shows legal partnership status in West Yorkshire. Text has been added to 5.5.6: 'Leeds has the lowest percentage population married or in a civil partnership, whilst Kirklees has the highest percentage. Leeds being a university city may result in it having lower marriage and partnership ratings. For example, it has a large student and young professional population, and its environment caters to this, with student accommodation and high rise 1-2 bed apartment blocks, and limited space for families to settle down. Kirklees also has a larger ageing population, which could also attribute to its higher rates of marriages and civil partnerships. In general, marital status has been shown to have a significant impact on life satisfaction, with those married or in a civil partnership being most likely to report higher life satisfaction than those of any other marital status (WYCA, 2023). Despite this,

		marriage and civil partnership rates across the UK fell between 1991 and 2021, from 58.4% to 46.9%, whilst divorce rates increased from 6.2% to 9.1% (ONS, 2021). Same sex marriage was introduced in 2014, and yet as of 2021, adults in same-sex marriages and all civil partnerships make up less than 0.5% of the population aged 16 years and over. Adults in same-sex marriages and civil partnerships are more likely to be younger, have no religion, and have higher-level qualifications than adults in opposite-sex marriages (ONS, 2021)'. Table 43 has been added to 5.5.7 and shows conceptions and abortions in West Yorkshire. Text has been added to 5.5.7: 'Leeds has the highest total number of conceptions for all ages and those under 16 out of all the West Yorkshire districts, as well as the highest percentage of conceptions leading to abortions. For under 16's, however, Leeds has the lowest percentage of conceptions leading to abortions. Calderdale has the lowest number of conceptions across both age categories, whilst Bradford has the lowest percentage of conceptions leading to abortion. Pregnancy and maternity can affect how people travel, but the inclusivity and accessibility of transport options can also play a major role. A study conducted by the University College London found that pregnant women would alter their journeys to less busy times, choose a slower service because they were less crowded despite it lengthening their commute time, and opt to drive over using public transport (O'Toole, 2022). Lack of seats and lifts in public transport hubs can also make it difficult for pregnant people and those using prams to get

		around easily. These adjustments and design flaws indicate the exclusion of women, pregnant people, and parents from public transport. The above has also been added to Table 46.
	EqIA baseline. Will there be a more detailed literature review produced? Some considerations below: Sex - Consideration of safety / fear of crime Disability - Engagement barriers - Consideration of range of disabilities in inclusive design - Affordability - Safety - Employment barriers - Health Ethnicity / race - Ethnicity breakdown is very high level / not in line with Census reporting - Affordability - Safety - Employment - Health Age	The equality baseline has been completed as part of the wider ISA baseline. No further literature review will be completed at part of this ISA. All baseline analysis is conducted based on publicly available data and considers wider social, economic, and environmental characteristics of the study area. All the issues mentioned have been considered throughout the ISA Scoping Report. All protected characteristics will be considered as part of the ISA and will be included within the assessment of the LTP. Therefore, no changes have been made to the ISA Scoping Report.

	- Text refers to age groups (under 16s, 16-34, etc) which don't align to the data table. Suggest data table should reflect references in text. - Also missing literature on differential effects experiences by children, young people, working age and older people like safety, health, employment, affordability etc.	
	Key issues. Further issues for considerations which have come through EDI Strategy evidence/ engagement – it doesn't feel like 'population growth and make-up of the local population' is the actual 'issue' – is there an alternative way of articulating what the social issues are? It feels like this could be further separated out - Accessibility of current network /connectivity? - Unequal distribution of transport benefits and transport related social exclusion – may be covered in deprivation, but worth setting out current situation with regard to access / benefits here - Pop growth – talks about equality in terms of access to transport, but should also cover how comfort / safety / access in terms of entire journey/ experiences. - Noted that road safety, crime and fear of crime, affordability, physical activity mentioned below – just need to ensure that differences in groups' experiences filter through these as well and link to EqIA objectives - Similar comment re crime and fear of crime and coverage of groups beyond women and girls. Also note it appears to be picked up in the standalone consideration and within issue 13. – any issue with repetitiveness in the table? - Other opportunities include how people are involved/ engaged in the LTP and development of the system.	• Text amended in Table 47 for No.13 – Key issue: '~~Population growth and make-up of the local population~~ Different needs arising from the growth and complex composition of the local population' • ISA objectives relating to accessibility are included in Section 7.1. Social exclusion in transport is covered under No.16 Deprivation in Table 47 and matters relating to social exclusion are referenced throughout the Scoping Report and have not been repeated within the equality section to avoid repetition. We note the importance of considering all transport users experiences. Table 47 (previously Table 44) is to highlight key issues however the full baseline has fed into the ISA Framework. As part of this, Objective 13 is focused on equality of opportunity, accessibility and affordability and Objective 14 focused on safety, crime and the fear of crime. All assessment criteria supporting these objectives relates to all transport users and will consider each group's experience in the ISA and the separate Equality Screening Assessment which will be within the appendices to the ISA main report. We note the importance of people being involved, engaged with and participating in shaping transport. However, no change has been made to the ISA Scoping Report due to this being a matter for the

		LTP rather than the ISA. This is because the role of the Scoping Report is to provide a baseline situation of current and likely future social, economic and environmental characteristics with key international, national, regional and local plans, programmes and strategies to define the ISA Framework in which the LTP will be assessed to ensure all the social, environmental and economic issues are fully considered and integrated.
	Framework. It feels like the equality considerations could be a little more woven through framework – the worry with putting the majority of considerations under a single objective is that we lose some of the detail / distinction between performance in different equality areas– can this objective be further split out – in the same way Crime and Safety has? Would also review all the 'test' questions being asked to ensure they capture everything discussed in previous sections.	There are three specific EqIA objectives: • 13. Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society – covers equality and inclusive design regarding age, disability, ethnicity, religion, income level and gender. The criteria also include accessibility and affordability of transport options. • 14. Improve transport safety, reduce crime and fear of crime, and promote community safety • 15. Reduce environmental impacts of transport including air, noise and light pollution However, in addition to these EqIA specific objectives, there are assessment criteria regarding the accessibility of services, facilities and amenities, supporting equality opportunity of all transport users and enhancing the equality of experiences across travel modes throughout the ISA Framework. Therefore, no change has been made to the ISA objectives.

		The ISA Framework has been reviewed following all consultation comments received to ensure all issues are considered as part of the Framework.
	Table 44 and Main text, There seems to be a lack of consistency or continuity between the main text and the summary set out in table 44. For example, mention is made of need to address the needs of different communities/neighbourhoods etc but the scope does not go into that level of detail where there appears to be a lack of analysis by gender, ethnicity, age, qualifications etc at detailed spatial analysis to identify pockets of deprivation etc which is surely key when considering how changes in transport will impact on particular groups and localities. Such data is available from 2021 Census. It also has travel to work data which while impacted by COVID would highlight how different genders/ethnicities etc use/are dependent on different modes of transport.	Table 47 (previously Table 44) is meant to provide a summary of integrated issues identified through the baseline data. Analysis by gender, ethnicity, age, and qualifications by district have then been included in Section 5. Relevant data from 2021 Census have all been considered and included across the baseline analysis. Therefore, no change has been made to the ISA Scoping Report.
	Overall. The analysis of emissions was not particularly useful as it was impacted so much by COVID so no conclusions can be drawn from it - this should be heavily caveated.	• Text has been added to Section 5.2.2. to state that Covid-19 occurred during the data collection time: 'However, it is noted that this data was gathered during the Covid-19 Pandemic which reduced road traffic and therefore, impacted emission levels recorded'. • Table 3 has been updated with 2022 data and the following commentary has been added: '~~Three~~ Four-year data across 2019 – ~~2021~~ 2022 showed an overall reduction of transport emissions in West Yorkshire but the trend is not consistent. For most forms of transport (excluding road transport on minor roads), emissions fall in 2020 due to Covid-19 restrictions affecting travel but rise again in 2021 once these restrictions are lifted. Emissions from transport continued to rise across all districts in 2022, except for Wakefield, which fell close to its 2020

		levels. This gradual increase highlights the reopening of businesses, return to work, and travel. With 2022 emissions still remaining lower than those recorded in 2019, it is evident that active and sustainable travel options are becoming more popular.'
	Overall. Some data such as numbers of crimes is not very useful – needs to be converted to rates per population.	• Text amended in Section 5.4.7: 'Total recorded crimes (excl. fraud) in West Yorkshire make up 6% of England's total recorded crimes, ~~whilst Yorkshire and the Humber make up 12%.~~ whereas the total population of West Yorkshire only account for 4% of England's population. Similar when compared with Yorkshire and the Humber region, West Yorkshire make up 50% of the crime regionally, but only constitute 42% of the regional population.'
	Overall. Not clear whether the migration figures quoted are both internal UK and international migration or just the latter.	• Text added in Section 5.5.4. and Table 47: 'Between 2011 and 2021, 134,835 people arrived in the West Yorkshire by international migration'.
	Table 44. There are some policies outlined in table 44 which are possibly not for a LTP to address directly being more related to planning issues. Its not clear how the assessments will be defined ie when does a positive benefit become a very positive one. Related to that its not clear how trade offs will be dealt with – ie a policy may make one thing worse and one thing better and if dealt with at a qualitative level how do you assess a positive economic benefit against a very negative noise effect.	We note that the focus for the LTP will be on transport policy for West Yorkshire. However, the ISA Scoping Report needs to consider a comprehensive baseline to ensure all key issues which may impact the LTP are considered to inform the creation of the ISA Framework. Therefore, Table 47 (previously Table 44) identifies all relevant issues that need to be considered throughout the plan-making process for the ISA Framework and to support the development of the LTP. Our methodology for the ISA is a pragmatic approach and has been utilised elsewhere as

		standard IA practice to consider environmental, social and economic matters as the LTP is developed. This is outlined in Section 7.2. The approach is also in line with national legislation, policy and guidance. To clarify, the assessment will be undertaken using professional judgement with the ISA Framework to ensure all key issues facing the LTP are considered in the assessment. We are transparent about the assessment criteria and each objective will be applied consistently when assessing the LTP. In addition, as part of the assessment, synergistic and cumulative effects will be identified and considered to ensure that all potential impacts are considered collectively. As the LTP is assessed, recommendations will be made to enhance and strengthen the plan against each objective which the plan writers will then consider and decide what is included as part of the Plan. Therefore, the IA approach has remained the same.
	Section 3.2.3. HIA paragraph could be a bit more detailed in terms of what is proposed ot be assessed as part of the HIA, similar to EqIA. For example, a high level overview of which health determinants are being looked at and scoped in and why (this would be helpful in relation to aligning the Mass Transit HIA approach to that followed for LTP, where appropriate).	• Text amended in Section 3.2.3: '~~HIAs ensure that plans minimise negative and maximise positive health impacts. A process is set out by the UK's Department of Health's Health Impact Assessment of Government Policy (2010), to follow in carrying out HIA. There is no statutory requirement to undertake a HIA however theassessment is included to ensure wider potential impacts relating to health are fully considered with the IA.~~ There is no statutory requirement to undertake HIA as part of the plan-making process. It is included to ensure a wider definition of potential impacts is considered with the ISA. HIA has one overarching aim: to ensure that plans and policies minimise

		negative and maximise positive health impacts. The carrying out of the HIA follows the process set out by the UK's Department of Health in the Department of Health (2010) Health Impact Assessment of Government Policy. Consideration of the determinants of health and the broad requirements of the Department of Health HIA screening questions have been integrated into the IA Framework. The Department of Health guidance states that 'the determinants of health are the focus of HIA. They are the social, economic, environmental and cultural factors that indirectly influence health and wellbeing. They include what we eat and drink; where we live and work; and the social relationships and connections we have with other people and organisations'. This includes natural environment, built environment, activities, local economy, community, lifestyle and people. The assessment team used the Department of Health determinants of health to help guide the framework for assessing how the LTP may affect health (i.e. by affecting the determinants of health). This is reflected in the IA Framework outlined in Chapter 7.'
	Page 74. Reference link to survey report has disappeared - Error! Reference source not found.	• Issue has been amended.
	Overall. No mention of mental health as part of the HIA and how the ISA will assess issues related to this. A number of the health indicators included have an element	All components of health including mental health are considered throughout the ISA. The ISA is conducted based on publicly available data and

	of mental health considerations e.g. crime and fear of crime, obesity , access to open space etc. Baseline information needs to be added on mental health state and how the LTP objectives will help address identified challenges.	results are presented in an integrated manner. Therefore, issues regarding mental health are not discussed separately and no change was made to the report.
	Section 7.2. Perhaps it might be useful to apply a RAG system to the score criteria for ease of understanding for readers.	We note WYCA Mass Transit's suggestion for applying the RAG system to the scoring criteria of the ISA. However, our methodology is a pragmatic approach and utilised elsewhere as standard ISA practice to consider environmental, social and economic matters as the LTP is developed. The approach is also in line with national legislation, policy and guidance. Therefore, the ISA approach has remained the same.
	Table 44. 1. Suggest bluntly stating MT an opportunity 'The LTP should seek to ensure that reducing CO2 is a fundamental principle of the LTP itself (e.g. promotion of sustainable modes of transport – including new opportunities for mass transit…'	• Text amended in Table 47 (previously Table 44) for No. 1 – Implications/opportunities for LTP: 'The LTP should seek to ensure that reducing CO2 is a fundamental principle of the LTP itself (e.g. promotion of sustainable modes of transport).
	Table 44. 2. Suggest softening wording: 'using materials/techniques which reduce surface run-off) and slow the flow of water to main water courses where possible'.	• Text amended in Table 47 (previously Table 44) for No.2 – Implications/opportunities for LTP: 'The LTP should seek to ensure that transport infrastructure minimises any negative effect arising from flooding (e.g. by conducting flood risk assessments and using materials/techniques which reduce surface run-off) and slow the flow of water to main water courses where possible.'
	Table 44. 4. Suggest revision:	• Text amended in Table 47 (previously Table 44) for No.4 – Implications/opportunities for LTP: 'avoid the fragmentation of green infrastructure,

	Avoid the fragmentation of green infrastructure, where possible which contributes to protecting natural habitats and biodiversity. Any impacts should be minimised and mitigated appropriately;	where possible, which contributes to protecting natural habitats and biodiversity. Any impacts should be minimised and mitigated appropriately;'
	Table 44. 5. Suggest revision: It should also aim to ensure that transport interventions avoid sensitive areas where possible and respect particular landscape or townscape settings	• Text amended in Table 47 (previously Table 44) for No.5 – Implications/opportunities for LTP: 'The LTP should seek to preserve and enhance the character of the county's landscape and townscape by ensuring that its integrity and valuable natural open space is not lost. It should also aim to ensure that transport interventions avoid sensitive areas where possible and respect particular landscape or townscape settings, in particular on the special qualities and setting of nationally designated landscapes including the Peak District National Park, Yorkshire Dales National Park and Nidderdale Area of Outstanding Natural Beauty (AONB).'
	Table 44. 9. Suggest softening wording (e.g. by incorporating SuDS in road drainage design/ transport interventions where possible.	• Text amended in Table 47 (previously Table 44) for No.9 – Implications/opportunities for LTP: 'The LTP should seek to prevent pollution of watercourses and groundwater (e.g. by incorporating SuDS in road drainage design/transport interventions where possible, to enhance water quality and reduce pollution and flood risk and by promoting porous surfacing for transport infrastructure). The Leeds City Region Sustainable Drainage Systems Guidance should be used to enable this.'
	Table 44.	• Text amended in Table 47: 'The LTP should aim to align with the West Yorkshire

	10. Clarification on wording The LTP should aim to align with the West Yorkshire Mass Transit Vision 2040 (2022) targets – which targets and how?	Mass Transit Vision 2040 (2022) ~~targets~~, as well as the West Yorkshire 'Tackling the Climate Emergency: Emission Reduction Pathways Report' (2020) ~~targets~~ to increase trips made by public and active transport.
	Table 44. 12. Suggest rewording The LTP should seek to reduce road congestion (therefore reducing the time to commute) and improve road and public transport journey reliability.	• Text amended in Table 47 (previously Table 44) for No.12 – Implications/opportunities for LTP: 'The LTP should seek to reduce road congestion (therefore reducing the time to commute) and improve ~~rail and~~ road <u>and public transport</u> journey reliability.'
	Table 28/29. Some of the figures in Tables 28 & 29 look a bit squiffy – the 'West Yorks Total' column does not reflect the sum of the 5 Districts parts e.g. a life expectancy for males of only 63(!) when 5 Districts all late 70s.	• In Table 28, the West Yorkshire data has been updated. • In Table 29, the West Yorkshire data has been updated.
	Table 39. Table 39 – Kirklees also bit conspicuous.	• Figure amended in Table 39 for Kirklees – Gender identity the same as sex registered at birth: '~~6.31%~~ <u>93.40</u>%'.
	Misc. Some of these (seemingly) skewed table results subsequently quoted in the accompanying text to be reviewed and revised.	• The document has been reviewed, all results and accompanying texts have been updated according to the latest available public data.
	Misc. 'Green Belt' should always be capitalised.	• The Scoping Report has been reviewed and all text was amended.
	Page 74. Missing reference on page 74.	• Issue has been amended.
	Page 75. Bullet point list on pg 75 refers to '% population' is this W Yorks or national? Reference to SW England appears erroneous if not redundant.	• Text amended in Table 30: '% of population stating poor health', as the figures reflects the percentage of population in each district found with poor health.

		• We have reviewed the document and did not find any reference to SW England. Therefore, no change was made.
Transport for the North	ISA objectives. TfN agrees that the ISA Objectives and criteria as laid out within the scoping report, provide a sound and robust framework against which to assess the new West Yorkshire LTP, subject to the following comments:	No action required.
	ISA objectives. Objective 2, Protect and enhance biodiversity, geodiversity and the green infrastructure network – the criteria in this objective might usefully mention the need to support Local Nature Recovery Strategies specifically, and also to work with local nature recovery groups such as Nature North and their 'Green Connected Pathways' proposition.	• Text added to ISA Objective 2: 'Support Local Nature Recovery Strategies and work with local nature recovery groups?'
	ISA objectives. Objective 10, Promote sustainable modes of transport, including public transport and active travel – the promotion of sustainable modes of transport would seem to be more of an activity through which one might achieve multiple ISA objectives, rather than an objective in its own right (e.g. to improve accessibility, improve air quality and reduce GHG emissions). However, if WYCA want to draw out specific emphasis and importance on the promotion of sustainable modes, then it may be appropriate to signpost this within a specific objective	No action required.
	ISA objectives. TfN's Integrated Sustainability Appraisal for its Strategic Transport Plan included an ISA objective in relation to co-ordinating land use and strategic transport planning across the region. In the same way, it may be useful for WYCA's ISA to highlight the need to coordinate land use planning with local transport planning. This would ensure that WYCA's plan is appraised against how it will ensure new housing and employment areas are served by adequate sustainable transport options. This could perhaps sit as a criteria within Objective 10.	• Text added to ISA Objective 10: 'Coordinate with land use planning to ensure new housing and employment areas are served by adequate sustainable transport options?'

	Relevant TfN plans and strategies should be considered within the review of relevant plans, policies and programmes, and key evidence to utilise in your baseline review. In particular:' TfN's Strategic Transport Plan: Transforming the North (2024) TfN's Strategic Transport Plan: People and Place Framework (2024) TfN's Strategic Transport Plan: Vision, Strategic Ambitions and SMART Objectives (2024) TfN's Strategic Transport Plan – Integrated Sustainability Appraisal Main Report and Appendices (2024) TfN's Strategic Transport Plan – Habitats Regulation Assessment and Appendices (2024) The Northern Powerhouse Independent Economic Review – 2023 Update (TfN and NP11) TfN's Freight and Logistics Strategy (2022) TfN International Connectivity and Aviation Policy Position Statement (2022) TfN's Connecting Communities: Socially Inclusive Transport Strategy for the North of England (2023) TfN: Transport and social exclusion in the North in 2023/24 TfN analysis using its Transport-Related Social Exclusion Tool (2022) Clean Mobility Policies using TfN's Clean Mobility Tool Quantified Carbon Reduction Dashboard, TfN, restricted public access (WYCA officers do have access) – allows interrogation of WYCA surface transport carbon emissions. TfN Electric Vehicle Charging Infrastructure Framework, containing information on existing charging infrastructure coverage -	• The recommended documents have been added to the ISA Scoping Report's review of the plans, programmes and strategies within Appendix 1.
Natural England	Declined to make comments	No action required.

Historic England	No Response	No action required.
Environment Agency	City of Bradford Metropolitan District Council - Strategic Flood Risk Assessment Level 1 (Update Nov 2023)	• Text amended in Section 5.2.15: • ‘~~The Bradford Local Flood Risk Management Strategy (2016) indicates that flood risk across the Bradford District is mainly caused by overland flow, following short, hight intensity, or heavy rainfall events and overtopping rivers and watercourses. The Strategy sets out 6 main objectives and measure for managing local flood risk, by better understanding, collaborating, and prioritising impact mitigation. The strategy also states that most funding for flood risk management works and activities will come from central government, where locations with high concentration of risks will be favoured. 12 wider environmental objectives were also set out to assist with climate change adaptation, including minimising the impacts of flooding to the district’s transport network and key infrastructure.~~ • <u>The Bradford Level 1 Strategic Flood Risk Assessment (2023) indicates that flood risk across Bradford is varied, including main fluvial risk from the River Aire, River Wharfe and their tributaries through the north and centre of the district, surface water risks across the district, groundwater risks</u>

		concentrated to the west of city centre, Keighley, Burley-in-Wharfedale and Addingham, and reservoir flood risk confined to areas downstream near reservoir. The SFRA provides recommendation to Bradford's planning policies, including development restriction within the functional floodplain, consideration of surface water flood risk at an equal weight as fluvial risk, consideration for climate change modelled extents, utilisation of the sequential approach in site allocation and site layout, development requirements for appropriate investigation and the use of SuDS, consideration for natural flood management techniques, phasing of developments, and granting of planning permission subject to appropriate site-specific FRA has been provided. • Reference for the additional document has been added to Appendix 2 and the old reference has been removed.
	Calder Catchment Strategic Flood Risk Assessment (2016)	The Calder Catchment Strategic Flood Risk Assessment (2016) has already been included in Section 5.2.15. Therefore, no change has been made to the section.
	Kirklees Metropolitan District Council - Local Flood Risk Management Strategy (2024)	• Text amended in Section 5.2.15:

		• ‘~~The Calder Catchment SFRA – Volume II (Kirklees Council) (2016) provides a review of flood risk across the district, which suggests that the council must generate a finalised list of proposed development sites as part of the Local Plan. It is also noted that each individual site will require further investigation when assessing potential sites for development.~~ • The Kirklees Local Flood Risk Management Strategy (2024) identified 35,000 properties in Kirklees that are currently at risk or will be affected from surface water flooding in a 1 in 1,000-year rainfall event, and 9,000 at risk from main rivers in a 1 in 1,000-year fluvial event, where the numbers are expected to increase in the future due to climate change. The strategy sets out its vision to develop resilience in their communities to flooding both now and in the future, and to enhance the environment for future generations. • Reference for the additional document has been added to Appendix 2 and the old reference has been removed.
	Leeds City Council - Strategic Flood Risk Assessment (Update 2022)	• Text added to Section 5.2.15: ‘In 2022, Leeds City Council produced a Local Plan Update (2022) including the Flood Risk Background Paper as a Development Plan

		Document. The update aims to address the changing climate, pointing out an increase in local rainfall and its potential impacts on flood risks. With an updated assessment approach, the 2022 SFRA seeks to recognise the high level of flood risk but not necessarily restrict existing developments. It highlights that developers should take into account of both flood alleviation schemes and residual risks during early stage of planning and encourages more sustainable drainage systems to be used for managing surface water.' • Reference for the additional document has been added to Appendix 2 and the old reference has been removed.
	In our strategic planning remit, we only have a few minor comments to add. Firstly, on p56, there is reference to source protection zones for public drinking water supply. There is no reference to private abstractions or how this aspect will be addressed by the ISA framework. Each local authority will hold the relevant data to assist. Second, under Waste and Mineral Assets, only coal is mentioned and there is no reference to other sources of mineral assets, such as clay, sand and gravel, sandstone, and millstone grit. There may also be an omission here with no reference of recycled secondary aggregates that would reflect the need to better manage construction, demolition, and excavation wastes.	To support the ISA Scoping Report, data on the national level regarding private water abstractions is available, with district specific information for West Yorkshire not publicly available. The purpose of the Scoping Report is to provide a baseline situation of the current and likely future social, economic and environmental characteristics of West Yorkshire using publicly available information. Therefore, information regarding private water abstractions has not been included within the ISA Scoping Report. • Text added in Section 5.2.16 under subheading 'Other mineral assets'.
	In our strategic planning remit the Environment Agency is satisfied that the main objectives have been identified at this stage in the ISA framework. We would nonetheless direct you to our other comments listed below, where we have taken the opportunity to highlight minor omissions or suggested amendments to refine certain wording.	See below actions taken.

	We acknowledge and support the identified 7no. key themes. We would offer the following comments specifically in relation to Climate Change & Energy, plus Land: Climate Change & Energy The report makes direct reference in the 7th bullet point to adaptation, but there is no mention of mitigation. We would strongly recommend making direct reference to also include the need for mitigation and these equally applies to other relevant sections of the report. We would highlight that this approach has been applied later at p125 in the Assessment Framework criteria. Additionally, there is reference to the likely increased frequency of flood risk from the effects of climate change. We would also add here that the intensity of effects may also be a factor. Again, the report adopts this dual approach in Table 44 at Section 6 when considering increased flood risk and the implications/ opportunities for the LTP. Land We would suggest a minor amendment to provide greater clarity and focus when seeking to promote the planting of trees. Inserting suitable prior to '…land allocated to the planting of trees.' at the 2nd bullet point would remove any doubt of random application and highlight the intended purpose of the strategic vision.	• 'Climate change mitigation' added to the list in Section 4.3.1 under Climate change and energy • Text amended in Section 5.2.12 and Table 47 (was 44): 'Flooding is likely to become a more frequent occurrence as a result of climate change and the intensity of its effects.' • Text amended in Section 4.3.1. under Land: 'Increase the amount of suitable land allocated to the planting of trees.'
	Green Infrastructure We are supportive and welcome the importance the scoping report places on green infrastructure. At paragraph 5.2.12, however, the report references a study that correctly places significant emphasis and references green and blue infrastructure. While we recognise there may be a reluctance to duplicate or insert water elements in this section, there is a risk of diluting the importance and connectivity of green and blue infrastructure. By referencing both and yet only presenting one in the title underpins this point. The Environment Agency would suggest revising the paragraph title and all related references to display green and blue infrastructure.	• Title of Section 5.2.12 amended to 'Green and blue infrastructure.' • References to 'green infrastructure' throughout the report have been amended to 'green and blue infrastructure' where suitable. • Question added to Assessment Framework under No. 2: 'Explore the suitable connectivity between green and blue infrastructure?'

	Further, we note at p124-125 in the Assessment Framework criteria that the report asks questions related to the impacts upon and potential opportunities for biodiversity and geodiversity. We would welcome consideration of a question here that invited consideration of suitable connectivity between green and blue infrastructure. The realignment of green and blue infrastructure in these identified paragraphs will correspond with reference to both in the summary conclusions in Table 44 at Section 6.	
	<u>Flood Risk</u> We support the key links and evidence base that connects the issues of climate change, flood risk and a need to enhance water quality. The Environment Agency have already provided useful resources to assist in presenting both the current and forecasted position. We reinforce the comment above that reflects the frequency and the omission of intensity in the accepted relationship between climate change and flood risk. In conjunction with our comment at A1 above, we also note a minor inconsistency that you may wish to explore. On p53 the report states that, '… all five districts within West Yorkshire have drafted a Strategic Flood Risk Assessments (SFRAs)'. Following this, on p64, the report then shifts to indicate that, '…All five councils have published strategic flood risk assessments'. The WYCA may wish to consider revising this text to correctly reflect the status of these key evidence base documents. Further, we would highlight that the local authorities are expected to continually place these documents under review and, given the likely interaction between transport infrastructure and flood risk, it may be prudent to regularly check any mapping revisions throughout the lifetime of the West Yorkshire Mass Transit scheme. In the Assessment Framework we welcome the commitment to 'Increase resilience of the transport network to climate change and associated extreme weather events' and the Environment Agency support the questions asked in the criteria, particularly in relation to the functional floodplain. We would however suggest WYCA consider amending the criteria to clearly reflect that any related element of a transport scheme does not increase flood risk to others. This suggestion may be equally applicable to- other	• Text in Section 5.2.15 has been amended: 'In order to address the emerging concern, all five districts within West Yorkshire have ~~drafted~~ <u>published</u> a Strategic Flood Risk Assessments (SFRAs) as follows, to address flood risks across their management area'. • Text added to Section 5.2.15: 'The local authorities are expected to continually place these documents under review and given the likely interaction between transport infrastructure and flood risk, it may be prudent to regularly check any mapping revisions throughout the lifetime of the West Yorkshire Mass Transit scheme.' • Text added to the Assessment Framework under No. 4: 'Ensure that transport schemes and any related elements do not increase flood risk to others?'

	LTP implications/ opportunities that seek to promote SuDS, flood alleviation and nature-based solutions that have multi-focus targets.	