Agenda

Meeting **Environment Directorate - Corporate Director and Executive Member - Highways and Transportation**

To: **Councillor Keane Duncan.**

Date: **Friday, 14th June, 2024**

Time: **2.00 pm**

Venue: **Via Microsoft Teams**

Business

Items for Corporate Director decision

1. Proposed Introduction of Zebra Pedestrian Crossing A6108 Richmond Road - Leyburn *(Pages 3 - 16)*

2. Proposed Consultation on the Implementation of a Lane Rental Scheme (LRS) for North Yorkshire Council *(Pages 17 - 146)*

Barry Khan
Assistant Chief Executive
(Legal and Democratic Services)

County Hall
Northallerton

06 June 2024

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North Yorkshire Council

Environment Executive Member

14 June 2024

Proposed Introduction of Zebra Pedestrian Crossing A6108 Richmond Road - Leyburn

Report of the Assistant Director – Highways and Transportation, Parking Services, Street Scene, Parks and Grounds

1.0 Purpose of Report

1.1 The purpose of this report is to advise the Corporate Director of Environment and Executive Member for Highways and Transportation of the outcome of the public consultation and statutory advertisement which took place wit regard to this proposal and to ask for a decision to be made as to whether or not the proposed Zebra Pedestrian Crossing should be introduced in light of the objections.

1.2 Recommendation outlined in this report.

2.0 Background

2.1 The 'Safer Roads Fund' was established by the Department for Transport to facilitate road safety improvements on the 50 highest risk local 'A' classification roads in England. North Yorkshire County Council (as was) submitted a successful bid for funding for works at a number of locations throughout the County including on the route of the A6108.

2.2 One of the proposed schemes on the A6108 which has been allocated funding is for the improvement of pedestrian facilities along the A6108 Richmond Road. There is an existing pinch point to the southwest of the auction mart resulting in the eastern side of the road not having a suitable footway.

2.3 The Wensleydale School is located some 370m to the northeast of the proposed Zebra Pedestrian Crossing and provides education for up to approximately 500 children aged 11-18. The school is on the eastern side of the A6108. Therefore, those wishing to reach the school on foot (or other premises along the eastern side of the road) from the town center must make multiple crossing movements.

2.4 Detailed investigations were carried out to determine if it would be feasible to construct a new footway on the eastern side of the road at the 'pinch point'. However, due to limited road widths it would not be possible to maintain two-way traffic flows. Options involving traffic signals and a priority system to implement one- way at a time traffic were investigated but discounted for technical reasons. In brief these were:

- Priority system – a suitable level of intervisibility could not be achieved between the two decision points. This could lead to collisions or vehicles having to reverse.

- Traffic signals – this solution was considered inappropriate given the number of uncontrolled accesses that would have been within the extents of the traffic signal-controlled area (including the fire/ police station).

2.5 As an alternative it is believed that the provision of the Zebra Pedestrian Crossing to enable safer crossing of the road will be of general benefit for pedestrians moving between the school, adjacent residential areas, and the Market Place. An assessment was carried out by the NYC Traffic Engineering team in July 2023, which considered the most appropriate type of pedestrian crossing to provide, and a Zebra Pedestrian Crossing was considered most suitable.

2.6 A location plan and general arrangement drawing is provided as Appendix A of this report.

3.0 Consultation Undertaken and Responses

3.1 The proposal has been the subject of public consultation. It has also been subject to public advertisement in accordance with Section 23 of the Road Traffic Regulation Act 1984. Public consultation took place on 05 February 2024 for 28 days. Advertisement took place between 08 and 29 March 2024.

3.2 Councillor Sedgwick who is the local member representing the Leyburn & Middleham Division was amongst the individuals and organisations contacted during the consultation and is supportive of the proposal. Leyburn Town Council is not supportive of the proposal.

3.3 During the consultation stage details of the proposal were also hand delivered to approximately 34 addresses in the vicinity of the site, comprised of a mix of residential and commercial properties. A plan showing the extents of the consultation is contained in Appendix B of this report.

3.4 At the conclusion of the consultation and public advertisement stages, a total of seven notifications of support and one of objection had been received from residents of properties in the immediate vicinity of the location for the proposed Zebra Pedestrian Crossing.

3.5 A further objection was received from the manager of commercial premises located in the vicinity of the proposed Zebra Pedestrian Crossing, a representative of the 'Wensleydale Show' committee and a resident of the town. Details of all the comments received are summarised in Appendix C of this report.

3.6 Design standards for Zebra Pedestrian Crossings are set out in *the Traffic Signs Manual Chapter 6 Traffic Control* (2019). However, this guidance is silent on the offset of such a crossing from junctions or accesses. LTN 2/95, whilst superseded, should still be considered useful guidance, and suggests that a Zebra Pedestrian Crossing should be offset at least 5m from a junction. The proposed location of the Zebra Pedestrian Crossing exceeds this distance; it is approximately 8m from the access with the auction mart car park and approximately 23m from the access with the auction mart itself.

3.7 The layout of the proposed Zebra Pedestrian Crossing has been designed in accordance with all relevant design guidelines and requirements and as such should not present a problem to the drivers of vehicles turning to and from accesses adjacent to the site. With regard to stationary traffic on the approach to the site then it is expected that this may increase the opportunity for maneuver as a driver waiting in line on the main road allows a turning vehicle to proceed. *The Traffic Signs Manual Chapter 6 Traffic Control* (2019) states "Pedestrians establish precedence by stepping onto the crossing and so delays to them are minimal. Vehicle delays are typically 5 seconds for a single person crossing but may increase where irregular streams of people cross over extended periods". Therefore, the benefit to pedestrian safety is considered to far outweigh any minor delay experienced by vehicles using the highway network.

3.8 Alternative locations to situate the crossing further east are limited due to the proximity of existing junctions, existence of bus stops and level differences between the western footway and carriageway. It is also considered that the proposed location will benefit the largest population (including those accessing the Mart from their car park) compared to a location further northeast.

4.0 Financial Implications

4.1 If the proposed introduction of the Zebra Pedestrian Crossing is approved then the costs involved (expected to be in the region of £15,000) would be met fully by the Department for Transport's 'Safer Roads Fund' budget for the A6108 corridor. The costs of ongoing maintenance and repair would be managed within existing highways operations budgets.

5.0 Equalities Implications

5.1 Consideration has been given to the Council's Public Sector Equality Duty and the potential for any adverse impact arising from the recommendations of this report. Officers believe that the recommended options to deliver from this report do not have any adverse impacts on any of the protected characteristics identified in the Equalities Act 2010 or NYC's additional agreed characteristics. The completed Equalities Impact Assessment screening form can be found in Appendix D.

6.0 Legal Implications

6.1 In making these proposals the Council has had regard to its duty pursuant to Section 122 of the Road Traffic Regulation Act 1984 to secure the expeditious, convenient and safe movement of vehicular and other traffic including pedestrians. Officers do not consider that these proposals would be of detriment to those duties.

7.0 Climate Change Implications

7.1 Consideration has been given to the potential for any adverse impacts on Climate Change arising from the recommendations of this report. A Climate Change assessment has been completed and included as Appendix E to this report. It is the view of officers that the recommendations included in this report do not have any adverse impacts on Climate Change.

8.0 Reasons For Recommendations

8.1 In recommending the implementation of the proposed Zebra Pedestrian Crossing it is considered that this will enable the Council to comply with its duties under Section 122 of the Road Traffic Regulation Act 1984 to exercise its function as road traffic authority to secure the expeditious, convenient and safe movement of vehicular and other traffic (including pedestrians).

9.0 Recommendations

9.1 It is recommended that:

i. The Corporate Director for Environment in consultation with the Environment Executive Member for Highways and Transportation, approves the introduction of the Zebra Pedestrian Crossing as outlined in this report and detailed in Appendix A. That the Assistant Chief Executive (Legal and Democratic Services) be authorised to allow the proposed introduction of the Zebra Pedestrian Crossing as identified in Appendix A, (subject to the amendments and recommendations approved by the Corporate Director of Environment in consultation with the Executive Member for Highways & Transportation in light of the objections received) and that the objectors are notified within 14 days of the decision.

Appendices

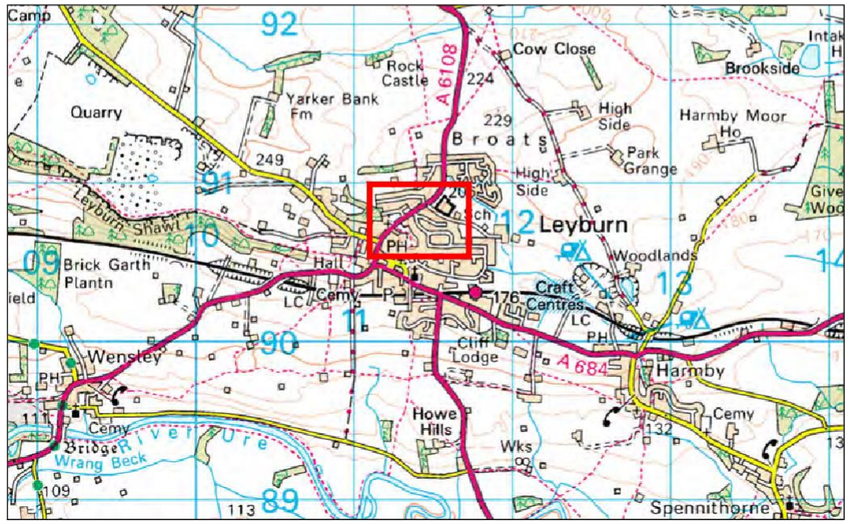
Appendix A – Location Plan and General Arrangement Drawing
Appendix B – Local Consultation Map
Appendix C – Comments Received
Appendix D – Initial Equality Impact Assessment
Appendix E – Initial Climate Change Impact Assessment

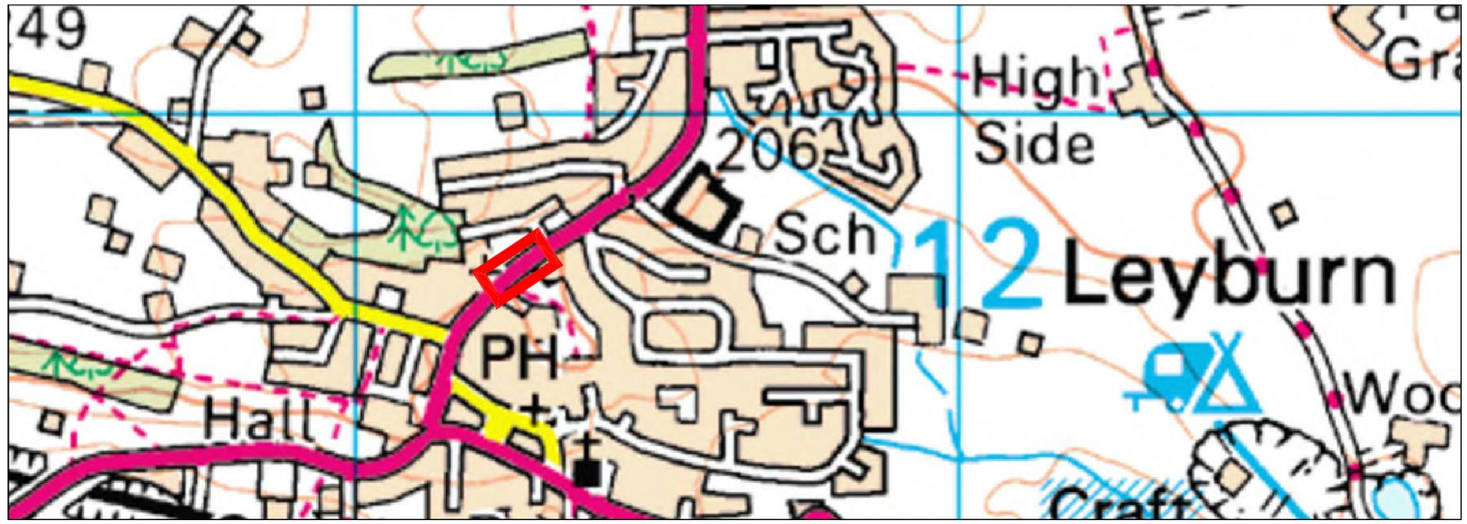
Background Documents - None

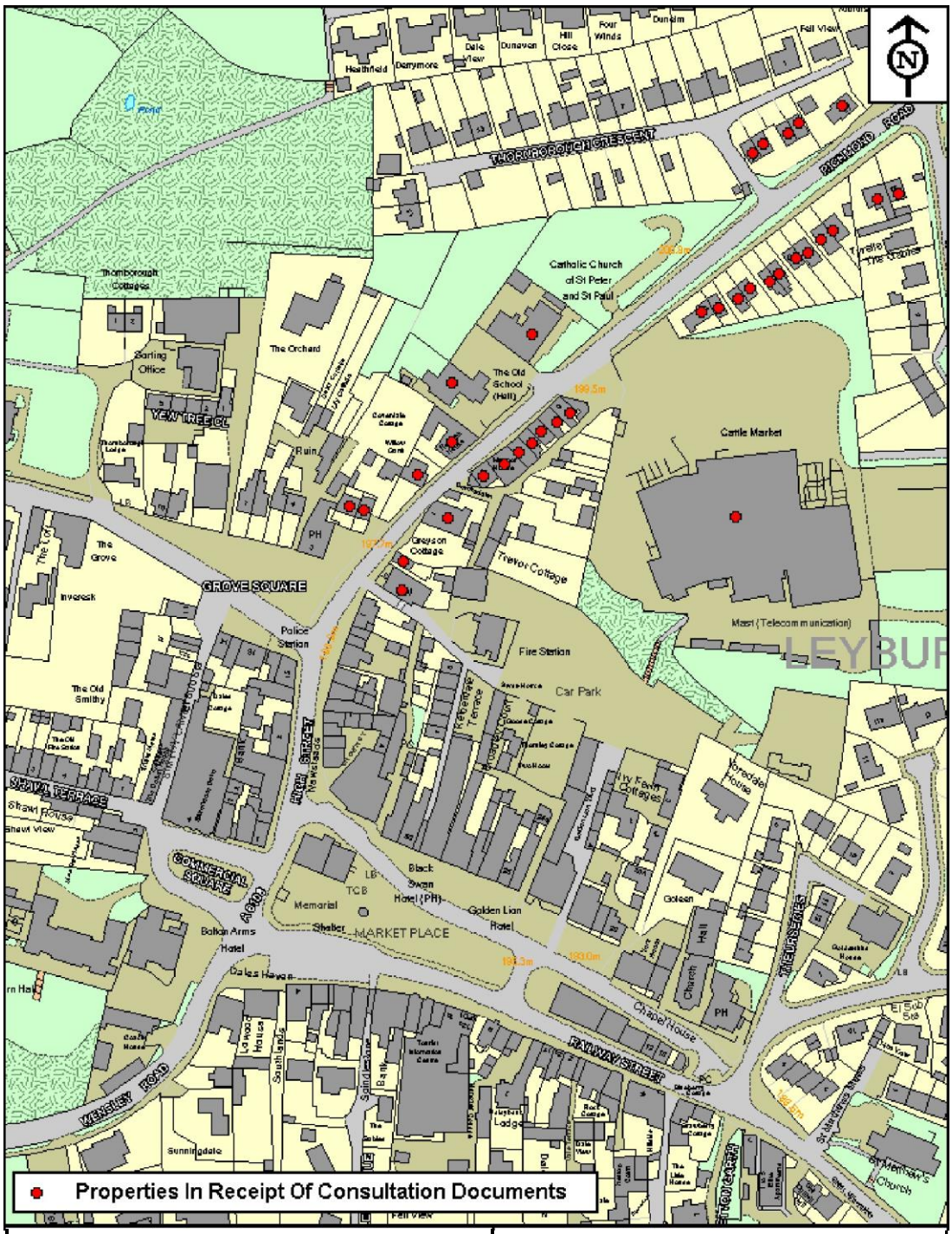
Barrie Mason
Highways and Transportation, Parking Services, Street Scene, Parks and Grounds
Assistant Director
County Hall
Northallerton
14 June 2024

Author of Report: Alexander Gardner

A6108 RICHMOND ROAD PEDESTRIAN IMPROVEMENTS







NORTH YORKSHIRE COUNCIL

Environment Department

Corporate Director: Karl Battersby

Assistant Director: Barrie Mason

Highways & Transponation. Parking Services.

StrElet Scene, Parks 8.: Grounds

Project:- Proposed Zebra Crossing

Drawing Title: A 108 Richmond Road - Leyburn

Area 1 Richmond **Drawn** **Date:-**

Scale: NTS **Drawing No.:-**

Results Of Consultation For Proposed Zebra Crossing - A6108 Richmond Road, Leyburn

Responses In Support Of Proposal	Consultee Comment	Officer Comment
Councillor Sedgwick	Supports the proposal	
Local Resident 1	Supports the proposal	
Local Resident 2	Supports the proposal	
Local Resident 3	Supports the proposal	
Local Resident 4	Supports the proposal	
Local Resident 5	Will be a useful Traffic Calming measure but Waiting Restrictions are needed near to the Secondary School	The request for Waiting Restrictions is noted but does not fall within the scope of this project
Local Resident 6	Will assist pedestrians, slow down traffic and assist with access to and from the Auction Mart	Noted and agreed
Local Resident 7	A full width footway is needed on both sides of the A6108 to the west of the site	This was considered but the dimensions of the Highway are not conducive to this. The Zebra Crossing is proposed to allow pedestrians to cross to the side of the road with the full width footway
	A 20 Mph Speed Limit should be introduced	Not within the scope of this project

Responses Not In Support Of Proposal	Consultee Comment	Officer Comment
Leyburn Town Council	The proposed location is too near to the vehicular access for the Auction Mart and would be better placed towards the school	The proposed location meets all the relevant design guidelines. Siting the crossing nearer to the school would present difficulties with regard to the proximity to junctions and differences in level. Officers offered to meet the Town Council to discuss the proposals in detail, but this was declined.
Wensleydale Show Chair	The proposed Zebra crossing will cause undue delay to traffic travelling to and from the show field. The principle of a crossing is supported but this should be a signalised crossing which will not cause traffic to be stopped as frequently.	The show takes place on one day each year. If this is found to be a problem then the organisers will be asked to arrange for a Traffic Management operative to manage the use of the crossing on show days as part of the Safety Advisory Group (SAG) process.
Leyburn Auction Mart	Traffic on the A6108 waiting for pedestrians to cross will obstruct the vehicular access at the Auction Mart	The proposed location meets relevant design guidelines. Whilst there may be additional delay to vehicles at peak times, the benefit to pedestrians is expected to outweigh this. With regard to the proposed crossing it is expected that the flow of pedestrians wishing to cross at off-peak times will not create a problem.
	Larger vehicles entering and leaving the site will be obstructed by traffic on the A6108 waiting for pedestrians to cross	Queuing traffic may afford a greater opportunity for drivers to turn from the Auction Mart as drivers on the A6108 give way.
	The Auction Mart has a small car park on the opposite side of the road which will experience the same issues as the vehicular access to the main site	The proposed location meets relevant design guidelines. Any queuing traffic may afford a greater opportunity for drivers to turn from the Auction Mart as drivers on the A6108 give way. The crossing would also be of benefit to those wishing to cross from the car park to the auction mart.
Resident 1	There is no problem for pedestrians crossing the road at the location in question and there is ample footways on each side. The proposal is a waste of money which could be better spent elsewhere in the town. The crossing will be a 'white elephant'	The crossing is proposed in order to assist pedestrians heading towards the Market Place to cross the A6108 before encountering a narrow section of footway which owing to space constraints cannot be widened. It will assist pedestrians travelling to and from the adjacent school and residential areas.

Resident 2	The information provided as part of the consultation provides insufficient detail with no evidence of need, no risk assessment and no alternative options. Providing an informed response is therefore 'nigh on impossible'	It is considered that sufficient details of the proposals were provided as part of the consultation process. The issue of risk assessments etc. would not usually form part of this process.
	Having two Zebra Crossings in close proximity will seriously and adversely affect the flow of traffic to and from the town centre. The present Zebra Crossing causes such issues with pedestrians wishing to use the crossing having priority and both crossings should be of a signalised type to alleviate this issue	Whilst there may be additional delay to vehicles at peak times, the benefit to pedestrians is expected to outweigh this. With regard to the proposed crossing it is expected that the flow of pedestrians wishing to cross at off-peak times will not create a problem. The number of pedestrians crossing at off-peak times would not be expected to meet the criteria to justify the introduction of a signalised crossing
	The proposed crossing would potentially be of more benefit nearer to the school	Siting the crossing nearer to the school would present difficulties with regard to the proximity to junctions and differences in level. It would also have less benefit to other potential users.

Initial equality impact assessment screening form
This form records an equality screening process to determine the relevance of equality to a proposal, and a decision whether or not a full EIA would be appropriate or proportionate.

Directorate	Environment
Service area	Highway Operations
Proposal being screened	Proposed Introduction of Zebra Pedestrian Crossing A6108 Richmond Road - Leyburn
Officer(s) carrying out screening	Alexander Gardner, Improvement Manager Ian Beighton, Project Engineer
What are you proposing to do?	Install a new zebra pedestrian crossing along Richmond Road, Leyburn
Why are you proposing this? What are the desired outcomes?	To improve pedestrian connections along Richmond Road and to provide a safe pedestrian crossing point.
Does the proposal involve a significant commitment or removal of resources? Please give details.	No

Impact on people with any of the following protected characteristics as defined by the Equality Act 2010, or NYC's additional agreed characteristics

As part of this assessment, please consider the following questions:

- To what extent is this service used by particular groups of people with protected characteristics?
- Does the proposal relate to functions that previous consultation has identified as important?
- Do different groups have different needs or experiences in the area the proposal relates to?

If for any characteristic it is considered that there is likely to be an adverse impact or you have ticked 'Don't know/no info available', then a full EIA should be carried out where this is proportionate. You are advised to speak to your directorate representative for advice if you are in any doubt.

Protected characteristic	**Potential for adverse impact**		**Don't know/No info available**
	Yes	**No**	
Age		✓	
Disability		✓	
Sex		✓	
Race		✓	
Sexual orientation		✓	
Gender reassignment		✓	
Religion or belief		✓	
Pregnancy or maternity		✓	
Marriage or civil partnership		✓	
People in rural areas		✓	
People on a low income		✓	
Carer (unpaid family or friend)		✓	
Are from the Armed Forces Community		✓	

Does the proposal relate to an area where there are known inequalities/probable impacts (for example, disabled people's access to public transport)? Please give details.	The proposals will help all pedestrians to cross the road in a location with no existing provision.

Will the proposal have a significant effect on how other organisations operate? (for example, partners, funding criteria, etc.). Do any of these organisations support people with protected characteristics? Please explain why you have reached this conclusion.	No.			
Decision (Please tick one option)	EIA not relevant or proportionate:	✓	Continue to full EIA:	
Reason for decision	No expected adverse impact			
Signed (Assistant Director or equivalent)	Barrie Mason			
Date	06/06/2024			

Initial Climate Change Impact Assessment (Form created August 2021)

The intention of this document is to help the council to gain an initial understanding of the impact of a project or decision on the environment. This document should be completed in consultation with the supporting guidance. Dependent on this initial assessment you may need to go on to complete a full Climate Change Impact Assessment. The final document will be published as part of the decision-making process.

If you have any additional queries, which are not covered by the guidance please email climatechange@northyorks.gov.uk

Title of proposal	Proposed Introduction of Zebra Pedestrian Crossing A6108 Richmond Road - Leyburn
Brief description of proposal	Provision of a zebra crossing along the A6108 Richmond Road, Leyburn. There is no footway along the eastern side of the road. This proposal will allow pedestrians to cross the road and access the Wensleydale School and other premises along the road.
Directorate	Environment
Service area	Highway Operations
Lead officer	Alexander Gardner, Improvement Manager
Names and roles of other people involved in carrying out the impact assessment	Iain Beighton, Project Engineer

The chart below contains the main environmental factors to consider in your initial assessment – choose the appropriate option from the drop-down list for each one.

Remember to think about the following;

- Travel
- Construction
- Data storage
- Use of buildings
- Change of land use
- Opportunities for recycling and reuse

Environmental factor to consider	For the council	For the county	Overall
Greenhouse gas emissions	No effect on emissions	No Effect on emissions	No effect on emissions
Waste	No effect on waste	No effect on waste	No effect on waste
Water use	No effect on water usage	No effect on water usage	No effect on water usage
Pollution (air, land, water, noise, light)	No effect on pollution	No effect on pollution	No effect on pollution
Resilience to adverse weather/climate events (flooding, drought etc)	No effect on resilience	No effect on resilience	No effect on resilience
Ecological effects (biodiversity, loss of habitat etc)	No effect on ecology	No effect on ecology	No effect on ecology
Heritage and landscape	No effect on heritage and landscape	No effect on heritage and landscape	No effect on heritage and landscape

If any of these factors are likely to result in a negative or positive environmental impact then a full climate change impact assessment will be required. It is important that we capture information about both positive and negative impacts to aid the council in calculating its carbon footprint and environmental impact.

Decision (Please tick one option)	Full CCIA not relevant or proportionate:	✓	Continue to full CCIA:	
Reason for decision	It is not considered that the proposed introduction of a zebra crossing along A6108 Richmond Road, Leyburn will have a material impact on any of the factors listed in the above table. By improving pedestrian provision along Richmond Road, facilities will be improved for non-car modes.			
Signed (Assistant Director or equivalent)	Barrie Mason			
Date	06/06/2024			

North Yorkshire Council

Environment Executive Member

14 June 2024

Proposed Consultation on the Implementation of a Lane Rental Scheme (LRS) for North Yorkshire Council

Report of the Assistant Director - Assistant Director for Highways and Transportation, Parking Services, Street Scene, Parks and Grounds Environment Directorate

1.0 PURPOSE OF REPORT

1.1 To seek approval from the Corporate Director of Environment and Executive Member for Highways and Transportation, to commence the formal consultation process for a Lane Rental Scheme for North Yorkshire

2.0 INTROUCTION

2.1 Lane Rental Schemes charge utility companies for the time their roadworks occupies highway space, incentivising them to complete works more efficiently and outside of peak traffic hours. Successful implementations in cities like London and Kent have demonstrated significant reductions in roadwork duration and associated traffic disruptions. As urban areas continue to grow and infrastructure ages, the need for efficient roadwork management becomes increasingly critical. NYC has commenced a project to introduce a Lane Rental Scheme (LRS) for North Yorkshire, which subject to Secretary of State approval, is due to commence in April 2025.

2.2 This project is now at a stage where all of the key scheme documents are prepared and ready for stakeholder consultation, including a proposed list of Lane Rental Streets, covering 7.2% of our overall road network, or almost 800Km.

2.3 In order to comply with the Department for Transport (DfT) requirements, NYC is required to consult with key stakeholders prior to its implementation for a period of three months to allow ample time for those affected to make a valid contribution. Subject to Corporate Director approval and Executive Member approval, formal consultation is due to commence after the 04 July's General Election.

2.4 Both Internal and external stakeholders will be consulted on the proposed LRS for North Yorkshire, including utilities, contractors, emergency services, and a wide range of interested parties, set out further in Appendix A.

2.5 The development of a detailed Cost Benefit Analysis (Cost Benefit Analysis) is a requirement for making a Lane Rental Scheme application. The analysis considers the impact of Lane Rental charges over the full range of required social and economic variables that have been specifically agreed in consultation with the UK Department for Transport (DfT).

2.6 The consultation is proposed to include the following, details of which can be found in the appendices.

- North Yorkshire Lane Rental Scheme Proposed Scheme Document (Appendix B)
- North Yorkshire Lane Rental Scheme Proposed Charges Policy and Table (Appendix C)
- North Yorkshire Lane Rental Scheme Proposed Evaluation Plan (Appendix D)

- North Yorkshire Lane Rental Scheme Cost Benefit Analysis (Appendix E)
- North Yorkshire Lane Rental Scheme Cost Benefit Analysis Summary (Appendix F)
- North Yorkshire Lane Rental Scheme Proposed Streets Summary Map (Appendix G)
- North Yorkshire Lane Rental Scheme Proposed Streets (Appendix H)

3.0 CONSULTATION OVERVIEW

The consultation process involves the following:

3.1 Stakeholder Engagement and Feedback

i) Public and Local Business Concerns: Understanding the impact of roadworks on daily commuting, local businesses, and emergency services is crucial. Consultation provides a platform for these groups to voice their concerns and suggestions, ensuring the scheme addresses real-world issues effectively.

ii) Utility Companies and Contractors: Their operational insights are vital for designing a practical and enforceable scheme. They can provide feedback on how Lane Rental would affect their scheduling, costs, and resource allocation.

3.2 Policy Transparency and Accountability

i) Building Public Trust: A transparent consultation process demonstrates the authority's commitment to considering public opinion and mitigating potential negative impacts. It builds trust and public support for the initiative.

ii) Data-Driven Decision Making: Gathering input from various stakeholders ensures that the scheme is based on comprehensive data, leading to more effective and equitable policy decisions.

3.3 Optimising Scheme Design

i) Identifying Optimal Charging Mechanisms: Consultation can help determine the most effective and fair charging structures, ensuring that fees are proportional to the disruption caused and do not unfairly burden works promoters.

ii) Flexibility and Adaptability: Stakeholder feedback can highlight potential challenges and areas needing flexibility, allowing for adjustments in the scheme's design to better suit local conditions and requirements.

3.4 Economic and Social Impact Assessment

i) Cost-Benefit Analysis: Engaging with stakeholders provides detailed insights into the economic implications of the scheme, helping to balance the benefits of reduced traffic disruption against the potential costs to utility companies and, ultimately, consumers.

ii) Social Considerations: Ensuring that the scheme does not disproportionately impact vulnerable groups or lead to unintended social consequences is crucial. Consultation helps identify and mitigate such risks.

4.0 IMPLEMENTATION CONSIDERATIONS

4.1 Scope of Consultation:

i) Target Groups: Include residents, local businesses, utility companies, contractors, emergency services and transport advocacy groups.

ii) Methods: Use focus groups, and online platforms to gather a wide range of opinions and data.

4.2 Timeline

i) Preparation Phase: Develop consultation materials and define key questions and objectives.

ii) Consultation Phase: Conduct the consultation over 3 months, ensuring ample opportunity for stakeholder participation.

iii) Analysis Phase: Review and analyse the feedback, preparing a comprehensive report to inform the final scheme design.

4.3 Communication Strategy

i) Awareness Campaign: Implement a robust communication plan to inform with stakeholders about the consultation process, its importance, and how they can participate.

ii) Regular Updates: Provide regular updates on the consultation progress and how feedback is being used to shape the scheme. Following completion of the consultation process the intention is to provide an update including the comments and queries from stakeholders, along with the Authority's responses.

5.0 ALTERNATIVE OPTIONS CONSIDERED

5.1 The alternative option would be not to introduce an LRS for North Yorkshire and retain the current permit scheme only. Whilst the permit scheme is a successful operation, it fails to incentivise works promoters to work outside peak hours. The current permit fee discounts and Fixed Penalty Notice charges are not enough of a deterrent for works promoters to work at appropriate times. Whilst the permit scheme is cost neutral, with increasingly rising costs the scheme is in danger of running at a loss unless the fees are reviewed. A separate review will take place to consider increasing the existing permit fees to the maximum allowed by the DfT and a report will be presented to the Corporate Director for Environment and Executive Member for Highways and Transport in due course.

6.0 FINANCIAL IMPLICATIONS

6.1 The costs associated with going out to consultation will include the fee to our consultants which is around £50,000 to produce the relevant documentation, including the cost benefit analysis and the lane rental street analysis and designation. These costs can be claimed back from the Lane Rental Scheme surplus funds once the scheme is in place as a "set up cost". The expected recoverable set up costs for the scheme have been estimated at £150,000

6.2 More generally, in relation to the proposed introduction of a Lane Rental scheme for North Yorkshire, introducing a daily charge on a percentage of the Network of up to £2,500 for all works, incentivises works promoters to work at different times of day or work differently to minimise disruption to the travelling public.

6.3 Unlike the current permit scheme, which is cost neutral, it is expected that Lane Rental will enable the Authority to cover the set-up costs and running of the scheme.

6.4 If there is any surplus generated by the Scheme this is to be used to fund projects that reduce disruption and other adverse effects caused by street works. There is scope for decisions on the projects to be made by a joint working group, made up of the Authority and Statutory Undertakers.

7.0 LEGAL IMPLICATIONS

7.1 The legal authority for Lane Rental is set out in Section 74 A of the new Roads and Streetworks Act 1991 and the Street Works (Charges for Occupation of Highways)(England) Regulations 2012.

7.2 The consultation will be carried out in line with legal requirements:

- Consultation must be at a time when proposals are still at a formative stage.
- Proposer must give sufficient reasons for any proposal to permit intelligent consideration and response.
- Adequate time must be given for consideration and response.
- The product of consultation must be conscientiously taken into account in finalising any pursuing these proposals.

and will ultimately require final approval from the Secretary of State.

8.0 EQUALITIES IMPLICATIONS

8.1 No equalities implications foreseen see EIA screening form Appendix I.

9.0 CLIMATE CHANGE IMPLICATIONS

9.1 It is expected that there will be a positive impact on climate change as a result of the introduction of an LRS for North Yorkshire. It is anticipated that the scheme will trigger behavioural change in promoters, to better plan and coordinate their works activity, in order to ensure that quality road works are carried out as quickly and efficiently as possible, without a need to return to site and incur further charges. This should reduce disruption and therefore, result in fewer greenhouse gas emissions, as set out further Appendix J and K.

10.0 CONCLUSIONS

10.1 A consultation on the proposed Lane Rental Scheme is essential to ensure its successful implementation and acceptance. It fosters stakeholder engagement, ensures policy transparency and aids in designing a scheme that is both effective and equitable. The insights gained from this process will be invaluable in crafting a Lane Rental Scheme that meets the needs of all parties involved and contributes to more efficient and less disruptive roadworks on the network.

11.0 REASONS FOR RECOMMENDATIONS

11.1 Initiate the consultation process with a well-defined scope and timeline.

11.2 Engage a diverse range of stakeholders to gather comprehensive feedback.

11.3 Utilise the consultation findings to design a balanced and effective Lane Rental Scheme.

11.4 Maintain clear and ongoing communication with the public and stakeholders throughout the process.

11.5 By following these recommendations, the implementation of the Lane Rental Scheme can achieve its objectives of reducing traffic disruption and improving urban mobility while maintaining stakeholder support and public trust.

12.0 RECOMMENDATION

12.1 That the Corporate Director for Environment, in consultation with the Executive Member for Highways and Transportation give approval to go out to consultation for the North Yorkshire Lane Rental Scheme, having given due consideration to the consultation documents, set out further in this report.

APPENDICES:

Appendix A - North Yorkshire Proposed list of consultees.
Appendix B - North Yorkshire Lane Rental Scheme Proposed Scheme Document
Appendix C - North Yorkshire Lane Rental Scheme Proposed Charges Policy and Table
Appendix D - North Yorkshire Lane Rental Scheme Proposed Evaluation Plan
Appendix E - North Yorkshire Lane Rental Scheme Cost Benefit Analysis
Appendix F - North Yorkshire Lane Rental Scheme Cost Benefit Analysis Summary
Appendix G - North Yorkshire Lane Rental Scheme Proposed Streets Summary Map
Appendix H - North Yorkshire Lane Rental Scheme Proposed Streets Full ESUs
Appendix I - EIA Screening form
Appendix J - Climate Impact Assessment screening form
Appendix K - Climate impact Assessment

BACKGROUND DOCUMENTS: Lane rental schemes: guidance for English highway authorities https://www.gov.uk/government/publications/street-works-lane-rental/lane-rental-schemes-guidance-for-english-highway-authorities

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Environment Directorate
County Hall
Northallerton
23 May 2024

Report Author – Alex Hollifield, Team Leader, Network Information and Compliance
Presenter of Report –Allan McVeigh, Head of Network Strategy

List of proposed Consultees

Internal Contacts

Cabinet Member for Highways
Corporate Director for Environment
Development Management
Environmental Health
Head of Environmental Health
Head of Highway Operations
Head of Legal (Highways)
Head of Network Strategy
Head of Planning (or equal individual)
Head of Integrated Passenger Transport
Highway Area Managers
Highways Area Offices
Highway Asset Management
MP(s) For North Yorkshire
Road Safety
Scheduled Maintenance Contractor
Strategic Environmental Contractor
Strategic Highways Contractor
Street Lighting Contractor
Traffic Signals

Representatives of Vulnerable Groups

Guide Dogs Association for the Blind
Safeguarding Adults Boards
Local Safeguarding Children Board
Safer Communities Partnership
Police and Crime Commissioner
Wheelchair Services
Disabled Groups, Support and Disability Resources
Community Information Service

Central Government

Department for Transport
Department for Transport
National Highways
Environment Agency

Local Emergency Services

Fire and Rescue Service
Police
Ambulance Service

Local Bus Operators / Local Passenger Transport Executive

Arriva Yorkshire
Arriva North East

East Yorkshire
Transdev
Connexions Buses
Reliance
First York
Hodgsons
Kirkby Lonsdale
Procters Coaches
Ryedale CT
Shoreline Suncruisers
Stagecoach Merseyside & South Lancashire
Upper Dales Comm Partnership
Upper Wharfedale CIC
Western Dales Bus (seasonal)
York Pullman Bus Company
IPT Fleet
Thornes Independent
Go North East (seasonal)
21 Transport

Regulators / Interested Authorities or Persons

Ofgem
Ofwat
Ofcom
Office of Rail and Road
Health and Safety Executive

IT and Systems Suppliers

Internal Contact
Highways IT System Supplier

Local and National Passenger Transport

Network Rail
Passenger Focus
Canal & River Trust
NYC Passenger Transport

Representative and Local and National Interest Groups

Local Chamber of Commerce
Local Road Safety Partnership
Local Vulnerable Road User Group
Local HAUC
Automobile Association
British Motorcyclists Federation (BMF)
British Cycling
Approved Driving Instructors Association
Freight Transport Association / Logistics
Guide Dogs Association for the Blind
Joint Authorities Group
Road Haulage Association
Royal Automobile Club
National Joint Utilities Group
HAUC England

National Highways

Surrounding Local Authorities

Barnsley
Bradford
Calderdale
Darlington
Doncaster
Durham
East Riding
Hartlepool
Hull
Kirklees
Leeds
Middlesborough
National Highways
Network Rail
Newcastle
North Tyneside
Northumberland
Redcar & Cleveland
Rotherham
Sheffield
South Tyneside
Stockton
Sunderland
Wakefield
York

Utility Companies Operating Locally or with a National Presence

B4rn
BT_Openreach
CityFibre
Connexin
Cornerstone
EE
ENWL
ESP
Fulcrum
GEO
Grain Connect
GTC
Hutchinson 3G
Kcom
Lastmile
Mua Group
National Grid
Netomina
NetworkRail
NGN

Northumbrian water
NPG NE
NPG Yorks
NYNET
Power On Connections
Quickline
ROMEC
Ruralfibre4u
SCD
Streetwork Solutions
Telefonica 02
ThreeG_UK
Virgin Media
Vodafone
Voneus
YorkshireWater
ZZoomm
Section 50 applicants over the last 12 months

North Yorkshire Council
Network Information and Compliance

The North Yorkshire
Lane Rental Scheme

Third DRAFT

August 2023

Document Control Sheet
Document prepared by: JSS

Record of Issue

Title:	North Yorkshire Lane Rental Scheme (NYLRS) Document

Issue	Status	Author	Date	Recipients
V1	1st Draft	JSS	23/08/23	Project Steering Group
V2	2nd Draft	JSS	04/09/2023	Joint Development Group
V3	3rd Draft	JSS	13/03/24	Project Steering Group

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INTRODUCTION

The North Yorkshire Lane Rental Scheme (NYLRS) has been introduced to enable North Yorkshire Council (NYC) to support its duty to co-ordinate and manage all street and road works, also known as activities, on the highway, in order to minimise disruption in accordance with the Network Management Duty a key principle of the Traffic Management Act 2004.

The NYLRS will also support the Council's emerging Local Transport Plan (LTP), which is currently in development, and which is planned to be in place by May 2024.

The Department for Transport (DfT) is currently developing new guidance for LTPs and also for a linked plan setting out plans for Quantified Carbon Reduction and these developments will be supported as well.

The NYLRS will also align with the objectives of the North Yorkshire Permit Scheme, particularly:

- Encourage a proactive approach to planning and undertaking of works on the highway.
- Ensure parity of treatment for all activity promoters.
- Reduce any unreasonable occupation of the Highway through efficient coordination and to minimise the impact of works on the travelling public.

OBJECTIVES & PRINCIPLES

The NYLRS seeks to limit the amount of disruption to North Yorkshire roads by encouraging the undertaking of activities at the least disruptive time for road users, and for the early completion of works.

The NYLRS is designed to limit the carrying out of activities at specified locations by applying a daily charge for any part(s) of the day that the highway is occupied by the activities during chargeable hours.

The daily charge will not apply if the activities take place outside of the specified Traffic-Sensitive times.

The NYLRS therefore provides a mechanism for providing all activities' Promoters with an incentive to change behaviour and minimise their occupation of Lane Rental Streets at the most Traffic-Sensitive times which are the most critical parts of North Yorkshire's highway network.

The NYLRS applies the following guiding principles:

- The cost of disruption from activities on the highway network must be recognised.
- Inconvenience to all people using a street must be minimised, but especially for people with particular accessibility requirements, and also other vulnerable road users such as people walking or cycling.

The objectives of the NYLRS are to:

- Apply the scheme to all work Promoters on a consistent basis.
- Promote behaviour change to minimise the duration of occupation of the highway at the busiest locations at the most Traffic-Sensitive times.
- Minimise the number of works taking place during the most Traffic-Sensitive times; and
- Contribute to reducing disruption to all road users.

North Yorkshire Council will measure these objectives and evaluate whether they are being met. The means by which that will be achieved are set out in the Evaluation and Governance section of the NYLRS below.

The NYLRS is expected to become operational in early 2025.

NATIONAL INFRASTRUCTURE

The NYLRS will support, wherever possible, UK national infrastructure projects including:

- Airport expansion.
- High speed rail.
- Nationwide full fibre broadband by 2033.
- Half of the UK's power provided by renewables by 2030.
- Three quarters of plastic packaging recycled by 2030.
- Preparing for 100 per cent electric vehicle sales by 2030.
- Ensuring resilience to extreme drought; and
- A national standard of flood resilience for all communities by 2050.

IMPROVEMENTS EXPECTED

The expected improvements from the NYLRS are:

- Behavioural changes that minimise the duration of occupation of the highway at the busiest locations at Traffic-Sensitive times.
- Reductions in the number of works taking place during Traffic-Sensitive times; and
- Contributions towards maintaining or improving journey time reliability on the highway network.

REGULATORY COMPLIANCE

The New Roads & Street Works Act 1991 (NRSWA), as amended by the Transport Act 2000 and the Traffic Management Act 2004 (TMA), contains provision for Highway Authorities to operate lane rental schemes that involve charging Promoters for the time their street or road works occupy the highway.

The NYLRS, which applies charges determined by reference to the duration of works, is based on the Street Works (Charges for Occupation of the Highway) (England) Regulations 2012 (the "Lane Rental Regulations") made under Section 74A, and is designed to operate in conjunction with Section 74 of NRSWA, and the Traffic management (North Yorkshire County Council) Permit Scheme Order ("NYPS"), subject to certain exemptions on charges and fees contained within the Scheme.

The Regulations are the Street Works (Charges for Occupation of the Highway) (England) Regulations 2012 ("the Regulations") made under Section 74A of NRSWA. NRSWA contains provision for two forms of charge for works:

- Section 74 – Charge for occupation of the highway where works unreasonably prolonged; and
- Section 74A – Charge determined by reference to duration of works.

The power for Local Authorities to implement lane rental schemes in England is subject to the approval of the Secretary of State.

The Prescribed Charge in the Regulations is the charge multiplied by the number of days, including part days, comprising the duration of the works.

Section 59 of NRSWA places a duty on Highway Authorities to co-ordinate works of all kinds on the highway.

Equally important is the parallel duty on works Promoters to co-operate in this process under Section 60 of NRSWA.

As well as the duty to co-ordinate under Section 59 of NRSWA, North Yorkshire Council has a duty under Section 16 of the TMA to manage its road network (the Network Management Duty) with a view to achieving, so far as may be reasonably practicable, having regard to its other obligations, policies and objectives, the following overriding objectives:

- Securing the expeditious movement of traffic on the Authority's road network; and
- Facilitating the expeditious movement of traffic on road networks for which another Authority is the Traffic Authority.

In preparing the NYLRS, North Yorkshire Council has had regard to the requirements of the Public Sector Equality Duty under section 149 of the Equality Act 2010.

In accordance with the DfT's Guidance for Lane Rental Schemes, NYC has consulted with all relevant stakeholders during the development of the NYLRS.

SCOPE OF THE SCHEME

The NYLRS has been designed to ensure that charges are only applied when works Promoters occupy the highway at Traffic-Sensitive times and to allow exemptions or reduced charges to encourage Promoters to adopt less disruptive working practices.

PROMOTERS

The NYLRS and the associated charging regime applies to all Promoters.

SPECIFIED WORKS

The NYLRS applies to all works, as defined in the Glossary, that require a permit under the relevant section of the OPS, are executed under a NRSWA Section 50 licence, or are executed under an agreement pursuant to Section 278 of the Highways Act 1980 or are executed under an agreement pursuant to Section 106 of the Town and Country Planning Act 1990.

In addition, unless covered by an exemption, any works would be liable to Lane Rental charges. Exemptions are shown below.

The NYLRS applies to works in a carriageway or a cycle track, or where works in a verge or on a footway encroach on a carriageway or a cycle track.
The NYLRS does not apply to works that are carried out in a verge or on a footway of a lane rental chargeable street that does not involve any occupation of a carriageway, a cycle track, (such occupation includes use by any associated plant, vehicles, or materials, or for any temporary arrangements for providing a walkway for pedestrians, as a result of, or as part of the works).

SPECIFIED LOCATIONS

Under the DfT's Lane Rental Guidance Document, Lane Rental charges are to be targeted at the most critical parts of an Authority's highway network, which are streets where evidence shows that works in the highway cause the highest levels of disruption and thus require the greatest efforts to manage the impact the works may have on pedestrians, cyclists, buses, freight or other general motor vehicles.
The streets selected on the North Yorkshire Highway Network are those where the Lane Rental charge will, by encouraging behaviour change, have the most effect in reducing disruption and the cost of disruption.
The NYLRS will apply at the specified locations that are designated as a Lane Rental record within the current version of North Yorkshire's Additional Street Data (ASD) file. This is published on the National Street Gazetteer hub (as defined in the Glossary).
The Lane Rental designation record will identify:

- If it applies to the whole street or part street.
- If it applies to the carriageway or cycle track.
- If it is a tidal record, it will identify the direction affected and the Lane Rental operational times, for example eastbound from 06:30 to 09:30.
- The days and times when Lane Rental will apply.
- The applicable charge.

North Yorkshire Council will also publish a standard data set derived from the ASD file that spatially defines the specified locations that can be uploaded into industry or corporate geographical information systems.

SPECIFIED DAYS AND TIMES

Lane Rental charges under the NYLRS will apply to specified locations at specified days and times detailed in the 'NYLRS List of Lane Rental Streets'.
No charges will apply on Christmas Day or Boxing Day.
Subject to a street being a Specified Location, lane rental charges can apply:

- Whenever a street is designated as traffic sensitive, including weekends and Bank Holidays – except for Christmas Day and Boxing Day. The Traffic Sensitive times on a Bank Holiday will be the same as those for a Sunday at that location; and
- During specified days of the year, for example during school term time, seasonally affected streets.

The specified days and times for the specified locations will be identified on the NSG and additional street data. Related information, such as term-time dates, seasonally affected streets should also be published on the Authorities website.
North Yorkshire Council will confirm future charging arrangements for any ad-hoc or new Public or Bank Holidays designated over the life of the NYLRS.
At the very widest extent charges can apply from 06:30 to 22:00 in some locations, with reduced charging hours in other locations.

WORKS BY NORTH YORKSHIRE COUNCIL OR THIRD-PARTY DEVELOPERS

Works carried out by or on behalf of North Yorkshire Council, including those by third party developers pursuant to an agreement under Section 278 of the Highways Act 1980, fall outside of the scope of 74A of NRSWA.
However, since it is North Yorkshire Council's intention to minimise all disruptive occupation of the Traffic-Sensitive parts of the North Yorkshire Highway Network, as part of the NYLRS, North Yorkshire Council will apply the same Lane Rental charge to its own works and works carried out under a Section 278 Highways Act agreement, as it does to statutory undertaker works.

IMMEDIATE WORKS

Immediate works, (which can include immediate emergency & immediate urgent works) that must be carried out during the charging period to avoid significant danger to public safety or significant damage to property will be provided with a 'Lane Rental Charge Free Period' to enable the immediate works to be dealt with.
The Lane Rental charge free period shall begin from the start of the immediate works and shall apply for a period of 48 hours after which time the normal lane rental rules for the location will apply on and from the third calendar day.
In order to minimise disputes, works Promoters claiming this waiver must, when requested by North Yorkshire Council, provide documentary evidence of the nature of the immediacy before the waiver will be granted.
This evidence will need to be sufficient to demonstrate the works categorisation as immediate works.

PERMIT SCHEME

Under the existing North Yorkshire Permit Scheme (NYPS), anyone intending to carry out activities on the highway must apply for permission from NYC in advance of the activities.
North Yorkshire has operated the NYPS on its highway network since February 2018 and all provisions of that scheme and those set out under Section 50 of NRSWA apply to the NYLRS.
The NYLRS is designed to work in conjunction with the NYPS to complement the powers provided within the NYPS.
The operation of the NYLRS will complement the North Yorkshire Permit Scheme. The information provided in a permit application and relevant notices, subject to any agreed correction, will be used to determine any daily lane rental charges.

PERMIT APPLICATION ON A LANE RENTAL STREET

As the content of the permit application will determine whether the planned or immediate works is within the scope of the NYLRS it is imperative for the Promoter to include accurate details for location and duration, including times.
For all permits where the NYLRS applies, the Permit Authority will assume, the activity is subject to the NYLRS. If the Promoter intends to work under a waived or reduce lane rental charge within the NYLRS, they must include relevant text in their permit application.

PERMIT VARIATIONS

The NYPS allows for a Promoter to vary a permit in instances where unforeseen circumstances prevent the completion of an activity within the agreed times and where the activity may extend beyond the reasonable period.
If the variation will result in the activity taking place in a different Lane Rental charging band to that of the original activity, then this must be clearly indicated on the permit variation application.
Promoters should also indicate any instances where the revised activity will result in work being carried out in a Lane Rental chargeable area for any part of the activity duration.

HIGHWAY AUTHORITY IMPOSED CHANGES

In any instances where the Permit Authority issues a Highway Authority Imposed Change to a Promoter which results in an activity becoming subject to the scope of the NYLRS, or an increased rate of NYLRS charge, no new charge or any increase in charges will be applied as a result of the Permit Authority's instruction.

PERMIT FEES

A permit fee will not be charged where an activity is liable to a NYLRS charge.
The NYPS related process and procedures as defined in the North Yorkshire Permit Scheme are integral to the NYLRS.
Where an activity is not liable for a NYLRS charge, then the relevant permit fee will apply.
Where a permit fee has been applied but it is discovered, without a Promoter variation, that the activity carried out by the Promoter should have been subject to a NYLRS charge, then all permit related fees will be returned and NYLRS charges applied.

LANE RENTAL CHARGES

In accordance with the Regulations and the Scope of the NYLRS, NYC will apply a daily rate of charge for the duration of the specified works carried out by the undertaker of the activities for the Promoter of the activities at the specified location during the specified times and days.

CALCULATING THE CHARGE

To calculate the daily rate of charge, other than for immediate works, the duration of the activities shall begin on the date specified in the actual start of works notice and end on the date specified in the works stop notice, the date activities ended.

For all types of immediate works, the charges will apply on and from the third calendar day of occupation – taking the works start as stated within the relevant permit application and ending on the date stated on the relevant Section 74 works clear, works closed or works stop notice.

Promoters are strongly encouraged to consider the carrying out of immediate works outside of specified times or days wherever possible.

When calculating the actual work start and finish dates for all activities, the Permit Authority or the Promoter may provide additional information to prove a variation to the duration of the works and/or activity type, if different to any submitted application or notice.

In all circumstances any NYLRS charge will be applied according to the actual occupation and activity.

Section 74 overrun charges will apply in accordance with the Section 74 Regulations following the end of the agreed reasonable period, in addition to the NYLRS charges.

CHARGE CATEGORIES

The Regulations allow for a prescribed daily rate of charge, which may be waived or reduced in particular cases.

In accordance with the Regulations and with consideration to the objectives of the NYLRS, there are a range of charge categories depending on the traffic control type, works type, location, times and days of work.

The ‘NYLRS List of Lane Rental Streets and ‘NYLRS Charges Policy and Table’ sets out the traffic control type, works type, location, times and days of work and any applicable charge.

If an activity spans more than one traffic control type at any time during the duration of the activities, then the daily rate of charge will apply for the days the different traffic control type is in place.

In instances where the works have fully moved to a lower traffic control type, thereby changing the charging to be applied, the Promoter must submit a timely permit variation. If the permit variation is solely for the purpose of notifying that the works have transferred from one traffic control type to another, then this permit variation would not be subject to a permit fee.

For the calculation of charges in such instances the Permit Authority will determine the timings for such changes based on the receipt of the associated permit variation.

EXEMPTIONS

No charges will apply on Christmas Day or Boxing Day.

Charges will be waived for a period of 48 hours for immediate works after which time the normal lane rental rules for the location will apply.

Certain types of works are exempt from Lane Rental charges under the NYLRS as follows:

- Works which are confined to a verge or footway with no impact on the carriageway or cycle track at a specified location.
- Works in a specified location, other than at a specified time.

If one of the above applies, the activities Promoter must record the appropriate Lane Rental charge waiver or exemption in the permit application and, if possible, works clear, works closed or works stop notices.

Failure to do so will result in appropriate action being taken.

LANE WIDTHS

The minimum acceptable Lane Widths allowable under the NYLRS will be as defined in Safety at Street Works and Road Works a Code of Practice or otherwise in any superseding code of practice as that suitable for “Normal traffic including buses and HGV”;

Lane rental charges will not be applied to works which do not reduce the number of lanes, or prescribed width, available to traffic or if normal traffic flows can be maintained.

VARIATIONS TO LANES AVAILABLE WITHIN AN ACTIVITY

In such instances where the reduction of lane width changes during an activity, the Promoter must submit a permit variation to the Permit Authority clearly indicating the change applied at the relevant time the change is made. There will be no permit fee for such variations.
For the calculation of changes in such instances the Permit Authority will determine the timings for such changes based on the receipt of the associated permit variation.

WORKS SPANNING MULTIPLE STREETS

Consideration will be given to applying a single charge at the highest applicable daily charge, where a set of works span multiple streets, but only on condition that the works only impact traffic travelling in the same direction when passing the works. For example, traffic travelling from west to east along the same length of road.

HIGHWAY OCCUPATION

Without exception, works will be defined as complete when the Promoter has completed any required reinstatement and:

- Removed all signing, lighting and guarding in respect of the works; and
- Removed all remaining spoil, unused materials and other plant in respect of works; and
- Returned the highway fully to public use (normal traffic capacity).
-

REMEDIAL WORKS

Remedial works carried out at Traffic-Sensitive times at specified locations to rectify defective reinstatements on the carriageway or on the footway or verge which impacts on the carriageway will be subject to the maximum daily charge for the applicable band.

REDUCED CHARGES

In accordance with the Lane Rental Regulations, North Yorkshire Council may waive or reduce Lane Rental charges as it deems appropriate.
Details of when charges may be waived or reduce can be found in North Yorkshire County Council's currently published 'NYLRS Charges Policy and Table'.
An application to waive or reduced charges must be made and agreed in advance of the works commencing by submitting a 'Waiver / Charge Reduction Request' electronically or via a form available from North Yorkshire Council.

COLLABORATIVE WORKS

Any opportunity for two or more Promoters to collaborate their activities to reduce the occupation of the highways is strongly encouraged.
Collaborative works that are carried out concurrently and / or consecutively by two or more works Promoters at the same location can apply to have charges reduced for the period of collaboration.
In such circumstances, where works are carried out at the same location by two or more Promoters concurrently, the daily charge rate will be split between the associated Promoters following confirmation and acceptance in writing by all parties.
This equates to a minimum of a 50% charge reduction for collaborative working for each Promoter.
In some instances, charges may be reduced for collaboration where the works originate from two distinctively different operational divisions of the same organisation.

MAJOR INFRASTRUCTURE IMPROVEMENTS

Consideration will be given to reducing charges for major works that deliver significant highway infrastructure improvements, substantially extend/renew the longevity of an asset, or future proof a highway to protect it from being excavated again.
Please see the North Yorkshire Council's currently published NYLRS Charges Policy and Table.

MONITORING ACTIVITY

The calculation of the daily rate of charge, in most circumstances, is based on the dates specified in the relevant Section 74 notices.
If during the monitoring of activities on the highway, the Permit Authority obtains evidence that the actual activity carried out by the Promoter varied from the notices received and as a result became subject to a daily rate of charge, then all relevant NYLRS charges or permit fees will apply.

The Permit Authority recognises the effect that unforeseeable circumstances can have on the carrying out of activities and will always consider fairness and any impact when taking appropriate action.
In such circumstances the Promoter is advised to contact the Permit Authority at the earliest opportunity to inform them of the reasons for change and to discuss mitigating action being taken to prevent any unnecessary disruption to the highway.
In all circumstances of monitoring activity, if the Permit Authority considered that an offence has been committed by the Promoter they may consider applying any relevant sanction or pursuing a prosecution.

PAYMENT AND RECONCILIATION

For the collection of lane rental charges from the Promoter, the Permit Authority will comply with the Regulations.

TRANSITIONAL ARRANGEMENTS

The NYC will provide Promoters with no less than 12 weeks formal notice for the coming into effect of the NYLRS.
The basic rules of transition will apply to all works which could be covered by the scope of the NYLRS:

I. The NYLRS will apply to all activities first notified to the NYPS, or in respect of which an application for a Permit or Provisional Advanced Authorisation (PAA) is made, after the NYLRS come-into-effect date.
II. Major schemes with a valid forward planning notice submitted on the permit system with a start date within twenty-four months of the NYLRS come-into-effect date will not be subject to charge.
III. Works, that are executed under a NRSWA Section 50 licence, or an agreement pursuant to Section 278 of the Highways Act 1980 that actually start within the three months of the NYLRS come-into-effect date will not be subject to charge.
IV. Major activities with a permit prior to the NYLRS coming into effect that actually start within the three months of the NYLRS come-into-effect date will not be subject to charge.
V. Standard, Minor and immediate works with a permit prior to the NYLRS coming into effect that actually start within the one month of the NYLRS coming into effect date will not be subject to charge; and
VI. If any activities covered by (iv) and (v) are varied by duration or methodology once the NYLRS is in effect, they will become subject to a charge.

In advance of the NYLRS coming into effect and during the period of notice, the Permit Authority will operate a shadow-running of the NYLRS for a period of 4 weeks.
This period will provide opportunity for the Promoter and Permit Authority to embed new ways or working, including operating processes and IT system usage.
If during this period and prior to a NYLRS coming into effect any Promoter considers that they have a planned activity that may affect their compliance to the NYLRS, they must contact the Permit Authority at the earliest opportunity to discuss a practical resolution.
During the transition and formal notice period, prior to a NYLRS coming into effect, no NYLRS charges will apply.
There are no dis-applied or modified sections from NRSWA as a result of the NYLRS coming into effect.

Timeline Overview	Month 1	Month 2	Month 3	Month 4	Month 5
SoS Approval					
Notice Given to promoters					
Statutory Instrument Process					
Shadow Running + No Charges					
NYLRS Commences + Charges					

DISPUTE RESOLUTION

North Yorkshire Council is committed to delivering its Network Management Duty through the use of all tools available.
North Yorkshire Council is committed to maintaining a positive working relationship with all stakeholders and particularly those that carry out road and street works on the North Yorkshire Highway Network.
Please see the Code of Practice for Co-ordination of Street Works and Road Works and Related Matters, HAUC (England) Edition, Chapter 13 Dispute Resolution, or the equivalent relevant documents.

DISPUTE REVIEW

If agreement cannot be reached locally on any matter arising in relation to the NYLRS, the dispute will be referred for review on the following basis:
Straightforward issues. Where North Yorkshire Council and the Promoter(s) consider that the issues involved in the dispute are relatively straightforward, the matter will be referred to impartial members of YHAUC for review.
That review should take place within the timescales set-out in the HAUC dispute process, from the date of referral. Both parties will accept the result as binding.
Complex Issues. If North Yorkshire Council and the Promoter(s) involved in the dispute think the issues are particularly complex, HAUC(England) will be asked to set up a review panel of four members - two Utilities and two Highway Authorities. One of the four persons will be appointed as Chair of the panel by the HAUC(England) joint chairs.
Each party must make all relevant financial, technical and other information available to the review panel.
The review would normally take place within the timescales set-out in the HAUC(England) dispute process, from the date on which the issue is referred to HAUC(England). The conclusions of the review panel will be binding on all parties.
Adjudication. If agreement cannot be reached by the procedure above, the dispute can be referred to independent adjudication. Adjudication within the NYLRS will only be used if North Yorkshire Council and the Promoter(s) agree in relation to the matter under dispute, that;

- The decision of the adjudicator is deemed to be final; and
- The costs of adjudication will be borne equally unless the adjudicator considers that one party has presented a frivolous case, in which case costs may be awarded against them.

Where the adjudication route is followed, North Yorkshire Council and the Promoter(s) will apply to the joint chairs of HAUC (UK), who will select and appoint the independent adjudicator from a suitable recognised professional body.
Arbitration. Disputes relating to matters covered by the following sections of NRSWA may be settled by arbitration, as provided for in Section 99 of NRSWA:

- Section 74 (2) - charges for occupation of the highway where works are unreasonably prolonged;
- Section 74A (12) - charges determined by reference to duration of works;

SANCTIONS

Regulations 21 to 28 of the Traffic Management Act Permit Scheme (England) Regulations 2007 (and Schedules 1 & 2) authorise NYC as a Permit Authority to issue Fixed Penalty Notices in respect of criminal offences.

OFFENCES

Fixed Penalty Notices offer the offender an opportunity to discharge liability for an offence by paying a penalty amount.
These powers and any subsequently amended powers will continue to apply to all roads managed by NYC.
Similarly, any offences under NRSWA continue to be offences and NYC as a Permit Authority maintains the right to take such action, as is appropriate, including prosecution where such offences have been committed.

SECTION 74 OF NRSWA

North Yorkshire Council will continue to apply its powers under Section 74 of NRSWA.
Section 74 overrun charges will apply in accordance with the Section 74 Regulations following the end of the agreed reasonable period, in addition to the NYLRS charges. The charge will consist of a single payment of £100 in the circumstances set out in paragraph (8) of the Regulations.

IT SYSTEMS AND STREET GAZETTEER

IT SYSTEMS

As defined with the North Yorkshire Permit Scheme, all permit applications must comply with the definitive format and content of electronic permit applications.

NATIONAL STREET GAZETTEER

The National Street Gazetteer (NSG) and associated additional street data (ASD) will contain the related information for the NYLRS specified locations.
This data will be kept up to date by the Permit Authority, as NSG Custodian, and no variations to the NYLRS will come into effect without the relevant updates to the NSG and/or ASD, as required.

SCHEME VARIATIONS

Demands on the North Yorkshire highway network are always subject to change and therefore NYC will always seek to change the NYLRS in order to help manage that demand.
It is therefore expected that the NYLRS and scope may vary in order to ensure it is providing the necessary powers and tools required by the Permit Authority to meet their statutory duty. There may be a requirement to amend the waivers and/or charge reductions to ensure the incentives from the NYLRS charges are achieving the desired objectives.
In circumstances where NYC wants to change the NYLRS, subject to Regulation, any such changes will be formally consulted on including via NEHAUC. Where applicable, for example, in the amendment to locations or charge bands, associated evidence will be provided to justify the changes requested.
Any changes will not vary the total road length or number of streets or alter the overall ratio of charge bands covered by the NYLRS from the current number by more than +/- 3% (three per cent).
For more substantial changes to the NYLRS such as the scope and structure of the scheme, these cannot be made without the consent of the Secretary of State, in which case a new application and legal Order may be required. In this case a Lane Rental Scheme Joint Development Group will be established which will consider, review and comment on documentation prepared to support formal consultation with stakeholders by North Yorkshire Council for proposed changes to the NYLRS.
The Joint Lane Rental Development Group will be made up of Officers of the Council, Environmental Health officer(s), local Utility representatives who are members of the Joint Utilities Group (JUG), any consultants or support staff employed by the Council, National Highways, and neighbouring Local Authorities as appropriate.
Formal consultation will follow the most recent published DfT Guidance available at the time the consultation is undertaken.

EVALUATION AND GOVERNANCE

PARITY OBLIGATION

NYLRS will apply to North Yorkshire's own works in the same way as it applies to all Promoters activities. The principles applied to the application of the surplus revenues will be applied equally, without any consideration to the source of the revenue and in consistency to the parity treatment for all Promoters within the NYLRS.

LANE RENTAL SCHEME EVALUATION

North Yorkshire Council recognises the need to evaluate the operational performance of the NYLRS, both in terms of its efficiency and the effectiveness at meeting its objectives.
The NYLRS will be evaluated on an annual basis. The first evaluation report will cover a full year from the commencement date specified in the Statutory Instrument / Lane Rental Scheme Order.
See the North Yorkshire Lane Rental Scheme Evaluation Plan for further details.
Prior to the Governance Group coming into effect NYC will prepare a full cost-benefit analysis to demonstrate that the overall benefits are sufficient to justify the full costs involved in running the Governance Group.

The Permit Authority will collect data, prior to the NYLRS coming into effect, in order to provide a clear evaluation of the benefits achieved from operating the NYLRS.

SURPLUS REVENUE POLICY

In accordance with the Regulations, the North Yorkshire Council will retain revenues obtained from charges to meet the costs incurred for operating the NYLRS, including any subsequent costs required for NYLRS evaluation.

Any surplus revenues will be applied towards initiatives that are associated to the objectives of the NYLRS, within the areas shown below.

- Innovation – Techniques, research, and systems, including.
  - Innovation in responses to the Climate Emergency. Developing new disruption saving products, services, or techniques. Improvements in noise, pollution, or safety. Research and development.
- Disruption - Congestion Mitigation including.
  - Deploying new disruption saving products, services, or techniques. Measures to mitigate congestion and disruption caused by activities, particularly major projects.
- Transport - Transportation Development, including.
  - Sustainable Transport in response to the Climate Emergency. Transportation initiatives. Enabling infrastructure. Active Travel. Accessibility.
- Infrastructure – Infrastructure and Apparatus, including.
  - Projects in responses to the Climate Emergency. Installing infrastructure to enable apparatus to be accessed without disruption. Measures to improve systems and records. Schemes.

Surplus funds may be used for either capital or revenue projects.

To determine the use of any surplus revenue; the North Yorkshire Council or its agent will establish a NYLRS Governance Group. This Governance Group will comprise of representatives of:

- Representatives from the regional Joint Utilities Group (comprising water, gas, electricity and communications).
- Representatives from NYC.
- An independent Board Chair.
- Representatives from the team or body administering the process that evaluates opportunities or requests for funding and monitors and reports on the results.

Requests will be submitted with a business case setting out estimated costs, benefits; expected outcomes; and time scales.

If the person or organisation submitting the request for funding does not have the skills or resources to prepare business case, a request can be made to the team or body that administers the process for support. Details of relevant forms will be provided on the North Yorkshire Council web site and are available upon request from North Yorkshire Council.

The results of the initiatives undertaken will be published and an objective measurement will be recorded and also published to in order to identify the end benefit towards the network management and road users in North Yorkshire.

The management of the revenues from the Governance Group will be separate from other NYC revenues.

North Yorkshire Council or its agent will keep an account of the revenues and costs associated to the Governance Group, including a record of the application of surplus revenues. These accounts will be published on an annual basis.

LANE RENTAL CHARGES

The New Roads & Street Works Act 1991 (NRSWA), as amended by the Transport Act 2000 and the Traffic Management Act 2004 (TMA), contains provision for highway authorities to operate lane rental schemes that involve charging Promoters for the time their works occupy the highway.
The regulations are the Street Works (Charges for Occupation of the Highway) (England) Regulations 2012 ("the Regulations") made under Section 74A of NRSWA.
In accordance with the Scope of the North Yorkshire Lane Rental Scheme (NYLRS), North Yorkshire Council (NYC) will apply a daily rate of charge for the duration of the specified activities carried out by the undertaker of the activities for the Promoter of the activities at the specified location during the specified times and days.
Section 74 overrun charges will apply in accordance with the Section 74 Regulations following the end of the agreed reasonable period, in addition to the NYLRS charges. The charge will consist of a single payment of £100 in the circumstances set out in paragraph (8) of the Regulations.
To calculate the daily rate of charge, other than for immediate works, the duration of the activities shall begin on the date specified in the actual start of works notice and end on the date specified in the works clear, works closed or works stop notice, the date activities ended.
For all types of immediate works, the charges will apply after 48 hours of occupation – taking the works start as stated within the relevant permit application and ending on the date stated on the relevant Section 74 works stop notice.

LANE RENTAL CHARGES Policy

Charges will **not** be payable in the following circumstances:

i. Charges will not apply if the activities take place outside of the Traffic-Sensitive Streets specified times;

ii. Charges will be waived for a period of 48 hours from the start of immediate works beginning; after which time the normal lane rental rules for the location will apply.

iii. Charges will be waived for activities undertaken on Christmas Day or Boxing Day.

iv. Charges will be waived for activities which are confined to a verge or footway, footpath, bridleway, or byway.

v. Charges will be waived if works which do not reduce the number of lanes, or prescribed width, available to traffic or if normal traffic flows can be maintained.

If one of the above applies, the activity Promoter must record the circumstances along with the permit application and, if possible, works stop notice. Failure to do so may result in appropriate action being taken.

OptionS to waive or reduce CHARGES

NYC retains the option to waive or reduce lane rental charges at its discretion.

Consideration will be given to reducing charges for major works that deliver significant highway infrastructure improvements, substantially extend/renew the longevity of an asset, or future proof a highway to protect it from being excavated again.

Collaborative Working

Any opportunity for two or more Promoters to collaborate their activities to reduce the occupation of the highway is strongly encouraged.
Collaborative works that are carried out concurrently and / or consecutively by two or more works Promoters at the same location can apply to have charges reduced for the period of collaboration.
In such circumstances, where works are carried out at the same location by two or more Promoters concurrently, the daily charge rate will be split between the associated Promoters following confirmation and acceptance in writing by all parties.
This equates to a minimum of a 50% charge reduction for collaborative working for each Promoter.
In some instances, charges may be reduced for collaboration where the works originate from two distinctively different operational divisions of the same organisation.

Review of CHARGES

The NYLRS will be evaluated on an annual basis. The first evaluation report will cover a full year from the commencement date specified in the Statutory Instrument / Lane Rental Scheme Order.
Part of the assessment of the NYLRS is a review of the NYLRS lane rental streets list.
It is anticipated that, depending on the extent of changes and developments to the North Yorkshire Highway Network, the list of streets will be reviewed every, one (1) to three (3) years.
This is to ensure that the list is always appropriate and take account of changes to the highway network such as a bypass changing a congested high street into a quiet shopping area.
The methodology used to initially identify the list of lane rental streets will be repeated.
The NYLRS lane rental streets list review methodology is detailed in and part of the NYLRS Evaluation Plan even though it may not be undertaken every year.
The charges will not exceed the maximum charges as set by the DfT.

Lane Rental Charge Table

Identified Lane Rental Charge Streets (Bands)	Lane Rental Charge Discount Applied	Full Day Charge
Band 1 (Road Closure or Single Carriageway Road Occupancy)	0%	£2,500
Band 2 (All Carriageway Remedial Works)	0%	£2,500
Band 3 (Single Lane Occupancy of Multi Lane or Dual Carriageway)	20%	£2,000
Band 4 (Cycle Track)	40%	£1,500

If an activity footprint spans more than one Traffic Control Type at any time during the duration of the activities, then the higher daily rate of charge will apply for the days the activity footprint includes that Traffic Control Type.

North Yorkshire Council
Network Information and Compliance

The North Yorkshire Lane Rental Scheme Evaluation Plan

3rd DRAFT

August 2023

Document Control Sheet

Document prepared by: JSS

Record of Issue

Title:	North Yorkshire Lane Rental Scheme (NYLRS) Evaluation Plan

Issue	Status	Author	Date	Recipients
V1	1st Draft	JSS	23/08/23	Project Steering Group
V2	2nd Draft	JSS	04/09/2023	Joint Development Group
V3	3rd Draft	JSS	13/03/24	Project Steering Group

Table of Contents

INTRODUCTION

The New Roads & Street Works Act 1991 (NRSWA), as amended by the Transport Act 2000 and the Traffic Management Act 2004 (TMA), contains provision for Highway Authorities to operate Lane Rental Schemes that involve charging Promoters for the time their activities (road and street works) occupy the highway during Traffic-Sensitive times.
The North Yorkshire Lane Rental Scheme (NYLRS) has been introduced to enable North Yorkshire Council (NYC) to support their duty to co-ordinate and manage all activities on the highway in order to minimise disruption.
The NYLRS will be evaluated on an annual basis. The first evaluation report will cover a full year from the commencement date specified in the Statutory Instrument / Lane Rental Scheme Order.
The NYLRS Evaluation Report will be based on the original assumptions made within the NYLRS Cost Benefit Analysis (CBA), data collected by the North Yorkshire Permit Scheme and various NYLRS data and monitoring reports.
The NYLRS Evaluation Report will be circulated for review as part of the joint working arrangements before being published on the North Yorkshire Council Highways webpage.
This document provides details on the evaluation methodology, and the baseline data to be used for assessment and comparison purposes.
In the interests of parity and transparency, representatives of both NYC and Promoters will be actively involved in monitoring and the evaluation process.
The Regulations permit a portion of Lane Rental revenues to be applied for the purposes of Lane Rental Scheme evaluation.
The evaluation plan includes provision for independent evaluation of the NYLRS performance, including an assessment of the overall balance between costs and benefits arising from the NYLRS.

JOINT WORKING ARRANGEMENTS

The joint working arrangements for the NYLRS will be a group made up of Officers of North Yorkshire Council, local Utility representatives who are members of the Joint Utilities Group (JUG) and any consultants or support staff employed by North Yorkshire Council.
The Chair will be the Lead Officer from North Yorkshire Council.

NORTH YORKSHIRE LANE RENTAL SCHEME SCOPE

The NYLRS has been designed to ensure that charges are only applied when Promoters occupy Lane Rental Streets at Traffic-Sensitive times and to allow waivers or reduced charges at other times or for different ways of working to encourage Promoters to adopt less disruptive working practices.

BACKGROUND

The Government’s expectation is that a robust evaluation plan will be built into any proposed Lane Rental Scheme that is submitted for Secretary of State approval.
As the evaluation plan is an integral part of the NYLRS, there is a need to adhere to the plan in order to comply with the terms of any Secretary of State approval.
The NYLRS Evaluation Report will inform Central Government's overall assessment of the effectiveness of Lane Rental Schemes nationally.
The NYLRS Evaluation Plan is based on the principle that the original NYLRS Cost Benefit Analysis output is repeated using actual data produced over the initial and following years of operation.
Actual impacts and benefits are therefore calculated in a manner consistent with the original assumptions.

NORTH YORKSHIRE LANE RENTAL SCHEME EVALUATION PLAN OBJECTIVES

The principle objective of the NYLRS Evaluation Plan is to assess the extent to which the NYLRS objectives are being met and the ongoing appropriateness of key parameters, such as the list of Lane Rental streets and charge levels.
The NYLRS seeks to limit the amount of disruption to North Yorkshire’s roads by encouraging the undertaking of activities at the least disruptive time for road users, and for the early completion of activities.

The NYLRS is designed to limit the carrying out of activities at specified locations at specified times by applying a daily charge for any part(s) of the day that the highway is occupied by the activities during chargeable hours.
The daily charge will not apply if the activities take place outside of the specified times.
The NYLRS therefore provides a mechanism for providing all activity Promoters with an incentive to change behaviour and minimise their occupation of Lane Rental Streets at Traffic-Sensitive times which are the most critical parts of the North Yorkshire Highway Network.
The NYLRS applies the following guiding principles:

2 **The cost of disruption from activities on the highway network must be recognised.**

3 **Inconvenience to all people using a street must be minimised, but particularly to people with accessibility requirements, and other vulnerable road users such as people walking or cycling.**

The objectives of the NYLRS are to.

4 **Apply the scheme to all work Promoters on a consistent basis.**

5 **Promote behavioural change to minimise the duration of occupation of the highway at the busiest locations at Traffic-Sensitive times.**

6 **Minimise the number of activities taking place during the most Traffic-Sensitive times.**

7 **Contribute towards reducing disruption to all road users.**

North Yorkshire Council will measure against these objectives and evaluate whether they are being met.
The means by which that will be achieved are set out in the Evaluation and Governance section of the North Yorkshire Lane Rental Scheme Document, and this NYLRS Evaluation Plan.

IMPROVEMENTS EXPECTED

The expected improvements from the NYLRS are:

8 **Behavioural changes that minimise the duration of occupation of the highway at the busiest locations at Traffic-Sensitive times.**

9 **Reductions in the proportional number of activities taking place during Traffic-Sensitive times.**

10 **Contributions towards maintaining or improving journey time reliability on the highway network.**

EVALUATION PLAN ASSESSMENT PARAMETERS

The NYLRS Evaluation Plan sets out the evidence and data that will be collected to enable a proper evaluation to take place, and the pre–Lane Rental benchmarks against which the before and after comparison will be made. Therefore, the NYLRS Evaluation Plan defines;

11 **The success criteria by which it will be measured.**

12 **The information used for monitoring and assessment.**

13 **Surplus Revenue Allocation.**

14 **Base Innovation and Disruption Saving Assumptions.**

15 **Customer Satisfaction Monitoring.**

16 **Updating the Lane Rental Streets List.**

SUCCESS CRITERIA

The principal success criteria of the NYLRS is delivery of benefits arising from the NYLRS, which are defined as:

17 **Reductions in disruption and congestion delay for road users where activities are carried out in a less disruptive way, benefiting both business users and private individuals.**

18 **Improved journey time reliability for road users where activities are carried out in a less disruptive way, benefiting both business users and private individuals.**

19 **Revenue generated by NYLRS. The regulations require the revenue generated from lane rental to be applied to measures that will help to reduce the disruption caused by future activities. Such measures would be expected to deliver further benefits to Promoters, activities undertakers and road users.**

20 **Environmental benefits. By reducing the congestion arising at activity sites, the NYLRS has the potential to reduce road transport-related emissions – particularly local air quality pollution that is exacerbated by stationary or slow, stop-start traffic.**

TABLE 1 - SUMMARY MONITORING AND ASSESSMENT TABLE

Baseline Costs and Benefits Parameters	Year 1	Year 2 +	Net Present Value
COSTS			
Lane Rental Scheme charges paid by Promoters	£	£	£
Costs of any behavioural change incurred by undertakers	£	£	£
NYLRS administration costs	£	£	£
TOTAL COSTS	£	£	£
BENEFITS			£
Reduction in delay costs seen by society (CBA Assessment)	£	£	£
NYLRS surplus revenue allocation	£	£	£
TOTAL BENEFITS	£	£	£
NET BENEFITS TO SOCIETY	£	£	£

SURPLUS REVENUE ALLOCATION

An important element to the NYLRS Evaluation Plan is an assessment of the allocation and subsequent impacts of any surplus revenues generated.
Surplus revenues will be applied towards initiatives that are associated with, and aligned to, the objectives of the NYLRS, within the areas shown below;

21 **Investments in innovation and developing new disruption saving products, services or techniques.**

22 **Trials of new disruption saving products, services or techniques.**

23 **Transportation.**

24 **Installing infrastructure to enable apparatus to be accessed without disruption.**

25 **Measures to improve systems and records.**

26 **Measures to improve noise, pollution or safety relating to activities.**

27 **Measures to mitigate congestion and disruption caused by activities, particularly major projects.**

28 **Enabling infrastructure.**

29 **Industry practices and research and development.**

BASE INNOVATION AND DISRUPTION SAVING ASSUMPTIONS

It is assumed that;

30 **Significant progress will be made in developing and applying new, less-disruptive techniques by the third year of the NYLRS.**

31 **There will be increased scope to work in less disruptive ways in years three (3) to five (5) onwards, therefore; in following years Promoters and undertakers are able to reduce their exposure to lane rental charges by increasing their expenditure on, and use of, less disruptive working practices.**

32 **Lane rental charges will also provide an incentive for Promoters and undertakers to further invest in the development of less-disruptive techniques.**

33 **There will be an increased use of innovative traffic management.**

34 **There will be an increased use of innovative techniques.**

CUSTOMER SATISFACTION MONITORING

Another important element to the NYLRS Evaluation Plan is an assessment of changes to the public perception regarding activities on the highway network.
Wherever possible, monitoring of customer satisfaction, public perception and stakeholder communication will be undertaken and reported on.
Examples of surveys and monitoring could include;

35 **Frustrations associated with activities carried out at busy times.**

36 **Frustrations associated with repeated activities on the same stretch of road.**

37 **Streets partially closed, but no-one working on site.**

38 **Future activities communicated effectively.**

39 **Acknowledgement that the cost of activities to society are being recognised.**

40 Understanding that the cost of activities to society are being repaid through network and operational improvements.

UPDATING THE LANE RENTAL STREETS LIST

Part of the assessment of the NYLRS is a review of the Lane Rental Streets Lists.
It is anticipated that, depending on the extent of changes and developments to the North Yorkshire Highway Network, the list of Lane Rental streets will be reviewed every, one (1) to three (3) years. This is to ensure that the list is always appropriate and takes account of changes to the highway network such as a bypass changing a congested high street into a quiet shopping area.

LANE RENTAL CHARGES

In accordance with the Regulations and the Scope of the NYLRS, NYC will apply a daily rate of charge for the duration of the specified activities carried out by the promoter at the specified location during the specified times and days.

CALCULATING THE CHARGE

To calculate the daily rate of charge, other than for immediate works, the duration of the activities shall begin on the date specified in the actual start of works notice and end on the date specified in the works stop notice, the date of works ended.
For all types of immediate works, charges will be waived for a period of 48 hours after which time the normal lane rental rules for the location will apply – taking the works start as stated within the relevant permit application and ending on the date stated on the relevant Section 74 works clear or works stop notice.
Promoters are strongly encouraged to consider the carrying out of immediate works or urgent activities outside of specified days and times wherever possible.
When calculating the actual work start and finish dates for all activities, the Permit Authority or the promoter may provide additional information to prove a variation to the duration and activity type, if different to any submitted notice. In all circumstances any charge will be applied according to the actual occupation and activity.
Section 74 overrun charges will apply in accordance with the Section 74 Regulations following the end of the agreed reasonable period, in addition to the NYLRS charges.

IDENTIFYING LANE RENTAL CHARGE PERIODS

Within the CBA, a traffic model is used with an assumption being that activities are done outside Traffic-Sensitive times and / or with a shorter duration.
A comparison with normal behaviour is then possible, and this is done by simulation with normal activities creating reduced traffic flows using a traffic profile run in a Quadro model.
Lane Rental Guidance states:
‘An application must demonstrate how the scheme will deliver the benefits and it must also justify the details of the scheme, including which roads which are included in the scheme, the charging structure etc. The application must include a full cost benefit analysis of the scheme with all the underlying data used to create the assumptions in that analysis.
Benefits attributed to lane rental should not include those benefits that could reasonably be expected to arise in the absence of lane rental under other mechanisms already in place within the area of the proposed scheme.’
To support promoters in identifying the times Lane Rental Charges apply to Lane Rental Streets the journey time profile has been aligned to the Traffic-Sensitive Streets times so Lane Rental Charges apply during Traffic-Sensitive times on the identified streets.

LANE RENTAL CHARGE CATEGORIES

The Regulations allow for a prescribed daily rate of charge, which may be waived or reduced in particular cases.
In accordance with the Regulations and with consideration to the objectives of the NYLRS, there are a range of charge categories depending on the traffic control type, works type, location, times and days of work.

The NYLRS 'North Yorkshire Lane Rental Scheme Charges Policy and Table' sets out the traffic control type, works type, location, times and days of work and any applicable charge.
If an activity spans more than one traffic control type at any time during duration of the activities, then the daily rate of charge will apply for the days the different traffic control type is in place.
In instances where the activities have fully moved to a lower traffic control type, thereby changing the charging to be applied, the promoter must submit a timely permit variation. If the permit variation is solely for the purpose of notifying that the activities have transferred from one traffic control type to another then this permit variation would not be subject to a permit fee.
For the calculation of charges in such instances the Permit Authority will determine the timings for such changes based on the receipt of the associated permit variation.
In accordance with the Regulations 4(4) the Permit Authority reserves the right in exceptional and unavoidable circumstances, to apply a discretionary discount to the lane rental charge.

REFERENCE TO PREVIOUS LANE RENTAL TRIALS COST BENEFIT ANALYSIS

Prior to the introduction of the lane rental scheme a cost benefit analysis was carried out. This was based on a QUADRO programme.
A range of activities scenarios were modelled at selected locations across the network to establish representative values for the costs of the roadwork.
For each site, tests were carried out for lane closure and for full road closure, with and without the lane rental scheme in place, and for activities outside the time sensitive periods.
The QUADRO output was collated to determine average values for each charge band and network type.
These average values were used for the original cost benefit analysis and have been adopted for the post scheme monitoring of the trial schemes.
The cost benefit analysis, prior to the introduction of trial lane rental schemes, was based on the average values per activity and on assumptions about the potential behaviour change by Promoters.

AVERAGE COST OF ACTIVITIES ON THE HIGHWAY

The average costs of activities on the highway established for the trial cost benefit analysis were based on outputs from the QUADRO program.
The costs per day of activities include vehicle delay, diversion, consumer and business impacts, accident costs, fuel carbon emissions, fuel tax revenue etc.
In order to maintain a consistent approach, these average representative costs have been used for the original NYLRS Cost Benefit Analysis and any NYLRS Evaluation Reports unless more accurate data is identified.

EVALUATION PRINCIPLES

In the NYLRS CBA a traffic model is used with an assumption based on those activities being moved to outside Traffic-Sensitive times and a comparison made of the different impacts.
This is done by simulation with reduced traffic flows using a traffic profile run in a Quadro model.
These Lane Rental Charge periods can also be shown for weekday and weekend days.
The assumption is that a % of activities move to times outside Traffic-Sensitive Times.
This is shown as the total workdays that move from peak to off peak times.
Another factor considered is improved efficiency of work during peak hours or Lane Rental Charge Periods.
Analysis of whether activities are completed quicker will be evidence based and collected throughout the year.
The NYLRS Evaluation Plan is an examination of actual data regarding the behavioural change from introducing NYLRS with comparison to the original assumptions made in the pre-scheme Cost Benefit Analysis.

North Yorkshire County Council

Network Information and Compliance

The North Yorkshire Lane Rental Scheme Cost Benefit Analysis

2nd Draft Version

March 2024

Document prepared by: RP

Record of Issue

Title:	North Yorkshire Lane Rental Scheme (NYLRS) Cost Benefit Analysis

Issue	Status	Author	Date	Recipients
V1	1st Draft	RP	29/03/2024	Consultants Review
V2	2nd Draft	RP / JSS	16/04/2024	Client Review

Contents

Executive Summary

North Yorkshire County Council is a major investor of public resources and as such, should ensure that new developments or services make a positive contribution to the local economy and society.
Any new proposal should always answer these two basic questions:

- What are the specific outcomes sought?
- Will these outcomes deliver a positive benefit to the local economy and society?

A Cost Benefit Analysis (CBA) is a decision-making tool that helps provide assurance around these questions by quantifying all costs and benefits in monetary terms.
North Yorkshire County Council's Highways Team has been working on just such a new service and this CBA supports its introduction by demonstrating the positive financial outcome delivering its objectives will provide.
Minimising disruption is a key transport challenge for any Council and especially for a busy area like North Yorkshire.
The ability of people and goods to move freely around the highway network, meeting the needs of business, accessing essential services and for social and leisure purposes depends largely on the highway network operating effectively.
The proposed North Yorkshire Lane Rental Scheme tackles head-on one the major causes of disruption, developer, road and street works, collectively known as activities, in a robust and positive way and is a major opportunity to positively reduce disruption on the highway network.
The proposed North Yorkshire Lane Rental Scheme is designed to reduce the busy period volume and durations of activities and generally reduce the amount of activities undertaken at traffic-sensitive times by introducing a new Lane Rental Daily Charge.
The new Lane Rental Scheme is not intended to prevent activities necessary for the maintenance or improvement of the road network or the services running underneath it.
It is designed to introduce financial incentives to work at less disruptive times and more efficiently, completing works faster and delivering network operational effectiveness improvements.

Summary findings of the North Yorkshire Lane Rental Scheme Cost Benefit Analysis

Values based on 25 Year Operation of the proposed Scheme (2010 prices)	
Value of benefits to economy and society	£26,450,638
Set-up and operating costs	£8,362,908
Financial benefit to the local economy from introducing the Scheme	£18,087,730
Benefit to Cost Ratio	**3.16**

Introduction

Lane Rental Scheme objectives

Brighton Traffic Management and Swift Argent were commissioned by North Yorkshire County Council (NYCC) in late 2023 to develop a road works Lane Rental Scheme known as the North Yorkshire Lane Rental Scheme (NYLRS), part of which includes the development of a detailed Cost Benefit Analysis (CBA).
The primary objective of the North Yorkshire Lane Rental Scheme is to incentivise activities on the most critical roads to be undertaken outside of traffic-sensitive times or reduce the duration of works if they are carried out during traffic-sensitive times.
Under a lane rental scheme, work promoters must pay daily charges to access the road when carrying out activities on the busiest roads at the busiest times.
Lane rental encourages promoters of activities to:

- Reduce the length of time taken to carry out the activities
- Improve planning, co-ordination and working methods
- Carry out more activities outside of peak times, for example, making greater use of weekend and out of hours working where the local environmental impact is acceptable
- Complete activities to the required standard first time reducing the need for the promoters of activities to return to the site to carry out remedial work

Scope of work

The development of a detailed Cost Benefit Analysis is a requirement of the formal application to the Secretary of State for a Lane Rental Scheme.
The analysis assesses the impact of daily lane rental charges over the full range of required social and economic variables that have been specifically agreed in consultation with the UK Department for Transport (DfT).
An effective Cost Benefit Analysis is a mechanism to assess the benefits and costs of an investment both in terms of its overall viability and in relation to other options.
In this analysis, all benefits and costs are quantified in monetary terms and discounted over the length of the proposal to allow comparison on a common basis.
The output of the Cost Benefit Analysis is the presentation of a Benefit to Cost Ratio (BCR) with a scale of the Scheme benefits over costs and a Net Present Value (NPV) that is the sum total of the discounted benefits and costs.
The Government considers that schemes must focus specifically on those critical parts of the highway network where the costs of disruption caused by activities are greatest. This will ensure new schemes succeed in reducing disruption caused by activities whilst, at the same time, avoiding excessive costs being passed onto promotors. Authorities proposing lane rental schemes will need to show that they have taken an evidence-based approach to identify these critical parts of the network, which might include certain critical access points, critical routes such as bus routes and cycle lanes, junctions, pinch-points and heavily trafficked streets or parts of streets.
The DfT has said that it expects lane rental schemes to apply to between 5% and 10% of the highway authority's network. North Yorkshire County Council has identified and is proposing that 1,065 streets (7.27% of the network) are lane rental.
This report will identify the additional costs of operating the Scheme, which are to be met by the lane rental charges to Highway works, Utility works and Developers, against the value of the benefits it will deliver to the wider area of North Yorkshire.
It will identify the data used and the methodology undertaken to prepare the Cost Benefit Analysis and present the statutory outputs including the BCR and NPV of the Scheme.

Report Structure

After this introduction, the report is set out as follows:

- Section 3 Analysis and Context
- Section 4 Input Data
- Section 5 Delay Modelling
- Section 6 Lane Rental Scheme Operation

- Section 7 Financial Calculations
- Section 8 Statutory Outputs
- Section 8 North Yorkshire Lane Rental Scheme CBA Results

Analysis and Context

Introduction

This section presents the legislative and research context for the North Yorkshire Lane Rental Scheme Cost Benefit Analysis.

Legislative context

The legislative guidance used for this study is contained within:

- Guidance. Lane rental schemes: guidance for English highway authorities, Updated 17 March 2024
- Lane Rental Schemes Guidance for English Local Highway Authorities DfT July 2021
- WebTAG user and provider impacts (TAG Unit A1-3 May 2022)
- Department of Transport's (DfT) Halcrow study "Assessing the Extent of Streetworks and Monitoring Effectiveness of Section 74 in Reducing Disruption Volume 3 – Estimation of Cost of the Delay from Utilities' Street Works, June 2004"
- Chapter 8 of the Traffic Signs Manual DfT 2009
- Quadro User Manual July 2021
- Street Works (Charges for Occupation of the Highway) (England) Regulations 2012 ("the Regulations") made under Section 74A of NRSWA

Traffic Management Act 2004 and new roads and street works act 1991

The Traffic Management Act 2004 (TMA 2004) establishes the guidelines for street works. It has been in operation since April 2008 throughout the United Kingdom. The second edition states that any parties wishing to work on a road will require a Permit from the Highway Authority, who in turn will have additional powers to refuse or specify conditions associated with Permit permission for the overall efficiency of the operation of the road network.

The New Roads and Street Works Act 1991 (NRSWA) provides for financial incentives to reduce the disruption caused by street works. Authorities can levy "overrun charges" under section 74 of NRSWA where street works are not completed within an agreed, reasonable period. While these charges provide a strong incentive to avoid works overrunning beyond the end of the reasonable period, they do not provide a similar incentive to reduce durations or disruption to road users within the agreed reasonable period. NRSWA also provides the legal basis for lane rental charges to be applied to street works but does not require lane rental schemes to impose charges in relation to highway works. However, highway works typically account for around 20% to 30% of all works in the street, also cause disruption and road users do not distinguish between different types of works. Therefore, the Government has decided to implement a clear principle of parity and will require lane rental charges to be applied to highway works on the same terms as to street works to maximise the overall benefits. This approach will also help local highway authorities deliver their network management duty.

WebTAG

WebTAG was first issued by the UK Department for Transport in 2003. It is based upon the 'New Approach to Appraisal' developed in the late 1990s and is an internet based multimodal guidance on appraising transport projects. WebTAG was updated in May 2022 to take into account the latest evidence for use in the economic case and value for money assessment of transport business cases. A list of the changes are below:

- TAG data book updated to March 2021 OBR long-term growth for use in appraisal and annual values for use in modelling
- Updates to Transport Business Case guidance to be published subsequent to this update; further review of TAG units planned
- TAG Unit A1.1 to be updated alongside new OBR forecasts that fixes the growth rate used to uprate appraisal values linked to GDP to the OBR long-term rate
- TAG Unit A1.1 updated to provide guidance on how analysts may look beyond 60 years to provide

indicative analysis of potential impacts, for inclusion in business cases and value for money statements as sensitivity tests. Guidance is expanded to describe what uncertainties need to be taken into account

- Updated TAG data book with new OB values for use in appraisal at different stages in scheme development. The data set is also expanded in terms of dimensions to allow a more thorough analysis of costs
- Further research is mapped out on agglomeration, to be undertaken in 2021, leading to potential guidance changes thereafter
- Uncertainty toolkit published, allowing a more structured and thorough understanding of uncertainty presented in appraisal. This will continue to be developed through collaboration with stakeholders and TAG users
- Common analytical scenarios as part of a major update to the National Trip End Model (NTEM) data set, and its presentation in TEMPRO, is programmed for Autumn 2021. This will come with updated guidance in TAG Unit M4 on how scenario analysis, particularly using the common analytical scenarios, should be used to support appraisal
- Common analytical scenarios account for uncertainties brought about by COVID-19. Ahead of publication, sensitivity testing and explicit consideration of the impact of COVID-19 should continue to be reflected in appraisal
- Carbon values will be published in the TAG data book as a forthcoming change notification soon after these values are officially published
- Different fleet mix assumptions will be developed as part of the ongoing enhancements to environmental (carbon) appraisal in support of the Transport Decarbonisation Plan to be published soon after this route map documentation. They will be included in guidance through the common analytical scenarios

Research

Transport for London (TfL) and Kent County Council have been operating trial lane rental schemes successfully on parts of their road network since 2012 and 2013. Surrey County Council and West Sussex County Council have been operating lane rental schemes since 2021/22. Information on the trial schemes and the benefits they have delivered can be found here;
The Transport for London Lane Rental Scheme information web page.
https://tfl.gov.uk/info-for/urban-planning-and-construction/lane-rental-scheme#onthis-page-0
The Kent County Council Lane Rental Scheme information web page.
https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/kent-lane-rental-scheme

Halcrow Study

In July 2004, Halcrow produced a report for the DfT on the impact of road works. The results shown in Table 1 below estimate an overall cost of disruption caused by Utility works in England in 2002/03 at £4.36 billion.

Table 1 Halcrow study results summary

Impact of Roadworks	Electric	Gas	Telco	Water	Total
Number of Roadworks (000s)	234	223	244	499	1200
Average cost (£000) per Roadworks	£5.30	£5.40	£2.20	£2.80	£15.70
Annual Roadwork Disruption cost (£bn)	£1.24	£1.20	£0.54	£1.40	£4.36

Source: Halcrow Group, quoted in DfT draft Permit Schemes Regulatory Impact Assessment (RIA), July 2007

Implications for North Yorkshire Lane Rental Scheme

Using the DfT sanctioned report, it is possible to get an idea for the likely implication of the North Yorkshire Lane Rental Scheme either using a ‘top down’ approach from the overall saving or a ‘bottom up’ calculation based upon the implied rate per road works.
From a top down perspective, with an estimated 2.12% of utility road works occurring in North Yorkshire and a 5% reduction in durations of works on streets associated with the Lane Rental Scheme, it may be expected to produce annual savings of £0.72m in 2002 prices or £1.21 million in 2010 prices. Shown in Table 2 below.

Table 2 Forecast Benefits – Top Down approach

Halcrow Study	£
Annual UK cost of roadworks (£bn)	£ 4.36
Proportion of roadworks in North Yorkshire	2.72%
Annual North Yorkshire cost of roadworks (£m)	£ 118.62
Annual North Yorkshire cost of Lane Rental roadworks (£m)	£ 14.49
Roadwork Reduction from Lane Rental Scheme	25%
Estimated Lane Rental Scheme saving (2002 prices) (£m)	**£ 0.72**
Estimated Lane Rental Scheme saving (2010 prices) (£m)	**£ 1.21**

However, working up from the actual number of Works in North Yorkshire and using the 'rule of thumb' estimate from the DfT report of £600 per works per day and an average duration of 6 days, the projected annual savings would be £0.43m in 2002 prices or £0.71m in 2010 prices.

Table 3 Forecast Benefits – Bottom up approach

Annual Number of Road Works	Total
Pre-scheme Number of Road Works	32,649
Pre-scheme Number of Lane Rental Works	2,372
Lane Rental Road Works after 5% reduction	1,779
Average Days Duration from Halcrow Study	6
Number of road work days saved	712
Total Cost at £600 per works per day (£ m) (2002 prices)	**£ 0.43**
Total Cost at £600 per works per day (£ m) (2010 prices)	**£ 0.71**

The figures above give an estimate of the upper and lower expectations from the NYLRS of between £0.71m and £1.21m in 2010 prices. Both methods do have a degree of uncertainty as they are based on sample national data which may not be a correct representation at a local level as this is dependent on the level of congestion.

On a heavily congested network this can increase exponentially.

Since the study was carried out, INRIX, a leading international provider of real-time traffic information, transportation analytics and connected driver services estimated the level of congestion in the UK as £13.1bn in 2013 prices or £11.7bn in 2010 prices, giving a value in North Yorkshire of £2.56m at a 5% reduction in durations.

Input Data

Introduction

This section outlines the information sources and assumptions used in the North Yorkshire Lane Rental Scheme Cost Benefit Analysis. The Cost Benefit Analysis has been prepared with 2010 as the price base year for presentation values as set out in WebTAG.

Cost Benefit Assumption

The objective of the North Yorkshire Lane Rental Scheme is a reduction in the disruption caused by activities through reduced busy time working and/or reduced works durations.
The central assumptions of the analysis is that the introduction of the Lane Rental Scheme will encourage works to be undertaken in off-peak times where there is less disruption on the most congested 7.27% of the network in the first year. This is based on the number of streets within North Yorkshire and the number of traffic-sensitive streets and the number of road works, the top 7.27% of critical streets that have 26% of overall works undertaken on them. The various assumptions are based on the evaluation of other Lane Rental Schemes are detailed further in the CBA.

Data sources

The Cost Benefit Analysis has been produced from four sources of information:

- Government guidance
- A completed Cost Matrix in a format provided by the DfT
- Local data provided by North Yorkshire County Council
- DfT Traffic Flow Data

Standard Cost Benefit Analysis assumptions and sensitivity factors have been used in line with recommendations in DfT's Annex C of TMA 2004 Decision-making and development (2nd edition).
The Local data provided by North Yorkshire County Council contained both the number of permits by type, traffic sensitive streets and specific information on the proposed North Yorkshire Lane Rental Scheme operations and costs.

Discount and Risk Factors

The study uses the DfT recommended discount rate for assessment periods under 30 years of 3.5%.
The risk factors are applied to capital expenditure costs and are taken from standard values in Annex C of TMA 2004 Decision-making and development (2nd Edition) and shown in Table 4. An Optimism Bias of 30% has been applied to operational costs due to uncertainty.

Table 4 Discount and Risk Factors

CBA modelled variable	Rate
Discount Rate	3.5%
Risk Bias Factor	20%
Optimism Bias Factor	15%
Combined Risk-Optimism Bias Factor	38%

Statutory information associated with lane rental Schemes

This study uses the guidance outlined in the Lane Rental Schemes Guidance for English Local Highway Authorities. The maximum charge per Lane Rental at traffic sensitive times is shown in Table 5 below.

Table 5 Maximum Lane Rental Charge

Maximum Lane Rental Charge Section 74A New Roads and Streetworks Act	
Work Type	**Works on Traffic Sensitive Streets**
Maximum Lane Rental Charge	£2,500

North Yorkshire County Council data

North Yorkshire County Council supplied the following data and policy decisions:

- Policy data
- Road works Data

Policy data

The policy decisions related to Lane Rental Scheme operation outlined in Table 6 below were obtained from North Yorkshire County Council.

Table 6 Operational Variables

CBA modelled variable	Period
Number of months to establish Lane Rental Scheme	1
Number of months to implement Lane Rental Scheme	1
Debtor days	30

Road works Data

North Yorkshire County council provided the information on the number of road works and shown on Table 7 below.

Table 7 Roadwork Totals

North Yorkshire Estimated Lane Rental Volumes		
Work Type	**Number**	**%**
Major	179	8%
Standard	308	13%
Minor	984	41%
		38%
Urgent	901	93%
Totals	2,372	
Utility Works	2,206	
Highway Works	166	7%

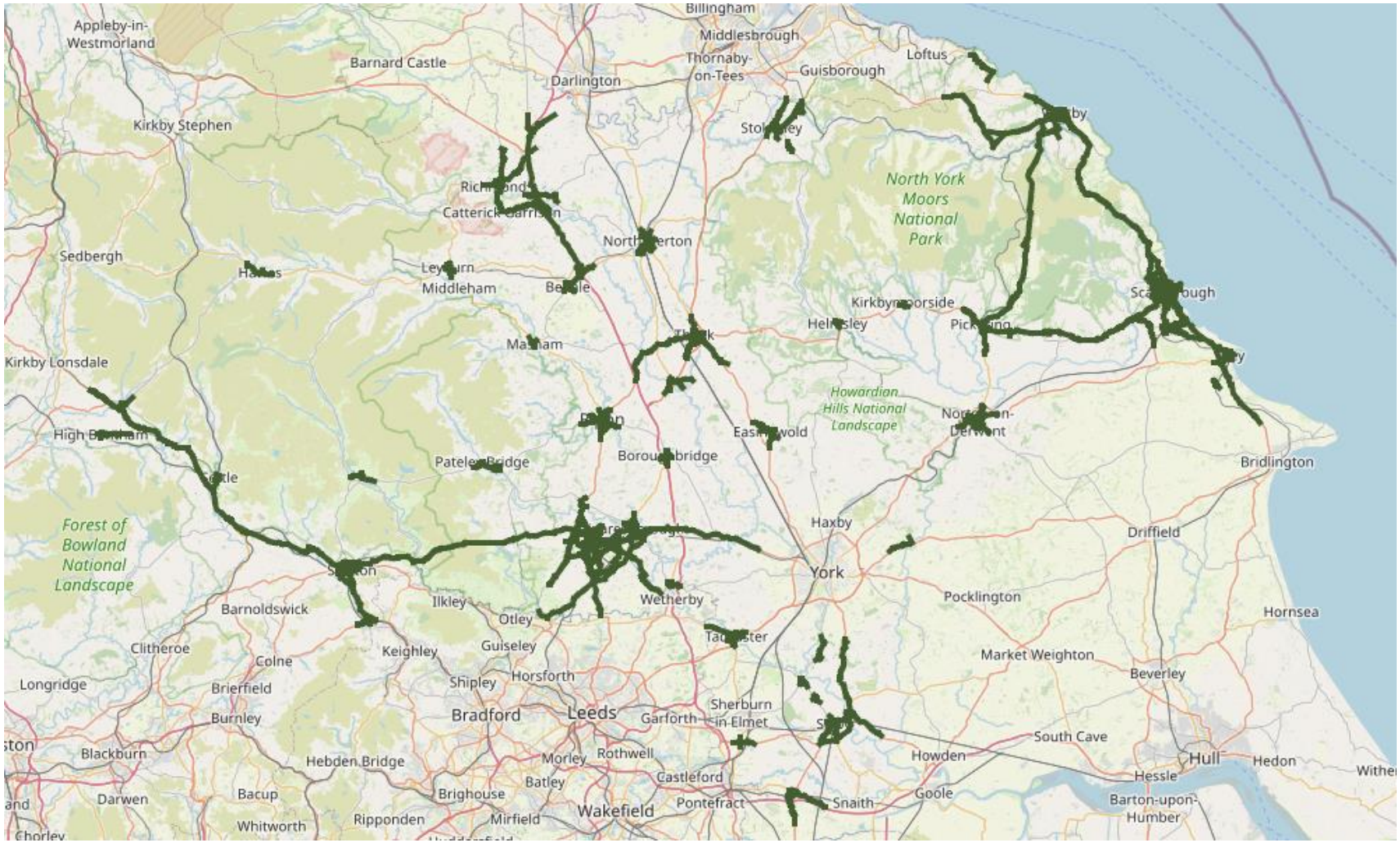
The table has been extracted from North Yorkshire Permit Scheme Evaluation reports prorated to the percentage of Lane Rental streets.
North Yorkshire County Council provided the information on the duration of works and shown on Table 8 below.

Table 8 North Yorkshire Average Duration of Works

North Yorkshire Year 3 Permit Evaluation Average duration of works by permit type by Promoter by Activity Type	
Work Type	**Total**
Major	17
Standard	9
Minor	3
Urgent	5

North Yorkshire County Council provided a list of Traffic Sensitive Streets, and a full list is attached in Appendix A.
A map of the North Yorkshire Traffic Sensitive streets is shown below on Figure 1 below.

Figure 1 North Yorkshire Traffic Sensitive Network



DfT data

The following data was obtained from the Halcrow Study, traffic management requirements and published traffic count data.

Works Data

The Halcrow Study found that the average size of carriageway works is 2 metres width by 20 metres length. Data was collected from 25 authorities across the whole of England on permit notices and the percentages of notices by reinstatement category and excavation length is summarised on Table 9 below.

Table 9 Percentage of Notices by Reinstatement Category and Excavation Length

DfT Study Table 2 - Percentages of Notices by RC and Excavation Length Vol 3: Extents of Works and Monitoring Disruption						
RC		**10m**	**30m**	**50m**	**100m**	**200m**
RC 0-2	% of all works	16.3%	0.1%	1.0%	0.8%	1.0%
	% of RC 0-2	85%	1%	5%	4%	5%
RC 3-4	% of all works	70.0%	4.2%	2.6%	2.1%	1.7%
	% of RC 3-4	87%	5%	3%	3%	2%

Works require traffic management to keep workers safe and the requirements are detailed in Chapter 8 of the Traffic Signs Manual 2009 and is summarised in Table 10 below for different road types.

Table 10 Traffic Management for Street works

Traffic Management for Street works Traffic Signs Manual Chapter 8							
Road Type	**Single 30mph or less (m)**	**Single 40mph (m)**	**Single 50mph or more (m)**	**Dual 40mph or less (m)**	**Dual 50mph or 60mph (m)**	**Dual NS (m)**	**Dual NS Congested (m)**
Taper	50	80	100	100	150	200	200
Approach signs	45	110	450	300	800	1609	3218
Min vis to sign	60	60	75	60	75	120	120
End of works sign from end	30	45	45	45	90	90	90
Totals excl works	185	295	670	505	1115	2019	3628

The Halcrow study reported the daily cost of street works by road type and excavation length and is summarised in Tables 11 and 12 below.

Table 11 Daily Cost of Rural Works

DfT Study Table 4					
Daily Cost of Rural Works (£) by Reinstatement Category and Length					
Reinstatement Category	**Typical AADT**	**10m**	**50m**	**100m**	**200m**
0	<32,000	2,500	3,000	3,300	4,000
1	16000	7,850	9,050	10,250	11,000
2	12000	1,610	2,100	2,600	3,530
3	8000	780	970	1,200	1,625
4	4000	335	415	515	700

Table 12 Daily Cost of Urban Works

DfT Study Table 5 Daily Cost of Urban Works (£) by Reinstatement Category and Length					
Reinstatement Category	**Typical AADT**	**10m**	**50m**	**100m**	**200m**
0	40000	25,000	25,000	25,000	25,000
1	24000	9,000	12,000	15,000	17,000

2	16000	3,450	5,150	7,000	8,800
3	10000	385	535	710	1,025
4	6000	200	280	375	550

Traffic Data

Travel time is estimated using GPS data. The current service provider is CTrack/Inrix.
This data is generated through in-vehicle GPS units as part of the satellite navigation and stolen vehicle tracking services. The specific raw data used to derive the Department's journey time statistics consists of 10-second GPS location reports for these vehicles for the period during which their ignition is on.
As part of the service provided to the Department, CTrack/Inrix map these GPS location reports to the Ordnance Survey Integrated Transport Network, now the OS MasterMap Highways Network, and they use this information to reconstruct the routes taken by their customers as they move through the road network.
These reconstructed journeys, combined with the time stamps on the associated GPS location reports, allow CTrack/Inrix to estimate the time taken by these vehicles to traverse each ITN link. The data also allows journey times to be associated with a particular link direction if the ITN link in question can be traversed in either direction. Where the 10-second GPS location reports don't fall exactly on the start and end of each link, interpolation is used to estimate the time taken by the vehicles to complete each link.
The complete network for England consists of around 3.4 million separate 'links' and gives an extremely accurate dataset. Due to the huge amount of data collected the data is aggregated to every 15 minutes AGPS (Aggregated Global Positioning System Data).
The DfT have made available mapped data on the highway network for A roads and this is shown in Figure 2 below for North Yorkshire. The data shows a number of hotspots within North Yorkshire including Whitby, Scarborough, Northallerton, Harrogate and Skipton and is consistent with Lane Rental Streets in Figure 1.
North Yorkshire County Council have used this data and local knowledge of traffic flow and produced a list of the most congested streets on the network that represents 1,065 streets (7.27%) to geographically cover the most congested routes on the network. A list of streets is attached in Appendix C.
Traffic data was obtained from the DfT who monitor annual traffic flows for all authorities in the UK, Local 'A' road traffic data representing the most congested streets in North Yorkshire has been used and is listed in Table 13 to 22 below.

Figure 2 North Yorkshire Local 'A' Road Delay

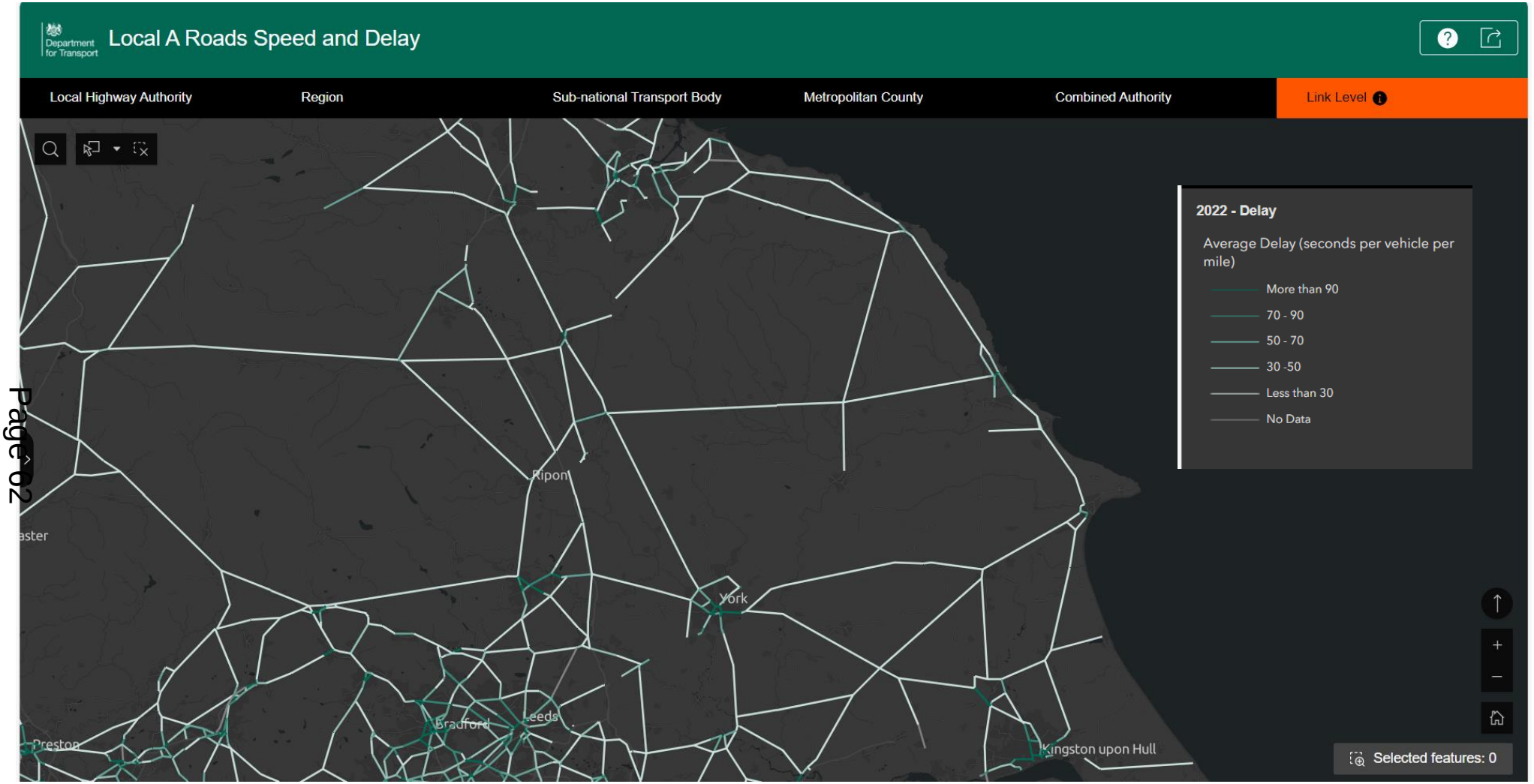


Table 13 DfT Traffic Flow Site Data 2022

North Yorkshire	DfT Traffic Flow Site Data 2022 (Sheet 1 of 8)													
Ref No	Road	Start Junction	End Junction		All Motor Vehicles	%Lights	%Heavy	% Car	% LGV	%OGV1	%OGV2	%PSV	Data Type
1	A6069	Gisburn St	A6131		8501	0.983	0.017	0.819	0.148	0.012	0.005	0.011	URBAN
2	A165	Field Lane, Scarborough	A64		8130	0.985	0.015	0.828	0.139	0.009	0.006	0.003	RURAL
3	A167	Junction with A61 and A167 (near Busby Stoop)	Junction where A167 Church Street and A167 Long Street meet (near Topcliffe, North Yorkshire)		2588	0.961	0.039	0.740	0.211	0.016	0.023	0.007	RURAL
4	A6108	King Street, Richmond	A6055		5352	0.971	0.029	0.819	0.127	0.024	0.005	0.017	RURAL
5	A172	A173	LA Boundary		6871	0.957	0.043	0.833	0.116	0.021	0.022	0.002	RURAL
6	A1041	LA Boundary	A645		7556	0.982	0.018	0.804	0.162	0.012	0.006	0.006	RURAL
7	A173	A172	LA Boundary	8145	0.985	0.015	0.820	0.154	0.010	0.005	0.007	RURAL	
8	A59	A658	A1(M)	24390	0.950	0.050	0.775	0.168	0.024	0.026	0.002	RURAL	
9	A167	Junction connecting A167 and Minor Road (SW of Hilltop Farm in Asenby, North Yorkshire)	Junction where A167 Church Street and A167 Long Street meet (near Topcliffe, North Yorkshire)		2737	0.980	0.020	0.812	0.156	0.015	0.005	0.004	RURAL
10	A162	A63(T)	A612 spur	11743	0.840	0.160	0.687	0.140	0.041	0.118	0.005	RURAL	
11	A6131	Roundabout A629/A6131	A6069		15989	0.975	0.025	0.819	0.147	0.017	0.008	0.005	URBAN
12	A629	A6068	A6131		26826	0.961	0.039	0.816	0.136	0.020	0.019	0.004	RURAL
13	A59	A6040	A6055		10512	0.977	0.023	0.778	0.172	0.018	0.005	0.019	URBAN
14	A6108	A684	A6136		1525	0.984	0.016	0.770	0.182	0.010	0.006	0.011	RURAL
15	A167	Junction with A168/A167	Junction connecting A167 and Minor Road (SW of Hilltop Farm in Asenby, North Yorkshire)		1215	0.905	0.095	0.714	0.187	0.019	0.077	0.001	RURAL
16	A59	A6069	A65(T)		13842	0.929	0.071	0.779	0.142	0.031	0.040	0.003	RURAL
17	A170	A169	Box Hill, Scarborough		5955	0.981	0.019	0.787	0.167	0.013	0.007	0.008	RURAL
18	A6068	A629(T)	Old Hall Road		5241	0.924	0.076	0.774	0.144	0.038	0.037	0.001	URBAN
19	A1238	A63	Sandhill Lane, Selby		3211	0.982	0.018	0.825	0.131	0.012	0.007	0.010	URBAN
20	A645	LA Boundary	A19		3954	0.886	0.114	0.695	0.180	0.044	0.070	0.002	RURAL
21	A171	A169	B1416 Staksby Rd, Whitby		16154	0.968	0.032	0.811	0.140	0.015	0.016	0.005	URBAN

22	A168	A61	St James Drive, Northallerton	8030	0.966	0.034	0.801	0.155	0.017	0.017	0.003	RURAL
23	A167	A684	B1333	13094	0.976	0.024	0.829	0.135	0.016	0.008	0.005	URBAN
24	A6131	The Avenue	A65	14027	0.988	0.012	0.838	0.130	0.011	0.002	0.011	URBAN
25	A659	LA Boundary	A659 High St	3985	0.991	0.009	0.828	0.146	0.006	0.003	0.005	RURAL
26	A6108	Little Studley Rd	A61	3187	0.968	0.032	0.809	0.124	0.017	0.015	0.009	URBAN
27	A170	Box Hill	A171	6610	0.980	0.020	0.787	0.167	0.013	0.007	0.008	URBAN
28	A682	LA Boundary	A65	4854	0.931	0.069	0.738	0.141	0.016	0.052	0.000	RURAL
29	A169	A170	A171	5771	0.962	0.038	0.757	0.184	0.015	0.023	0.005	URBAN
30	A59	A1M roundabout	A168	16665	0.946	0.054	0.797	0.138	0.020	0.034	0.004	RURAL
31	A659	A64	A162	4797	0.946	0.054	0.788	0.143	0.021	0.032	0.008	URBAN
32	A162	A1(T)	A63	5862	0.987	0.013	0.796	0.179	0.008	0.005	0.001	RURAL
33	A658	A61	A661	13726	0.969	0.031	0.816	0.147	0.016	0.015	0.001	RURAL
34	A63	A19	A1041	13415	0.910	0.090	0.723	0.180	0.028	0.062	0.002	RURAL
35	A59	A65(T)	Stonecrop Drive, Harrogate	9397	0.926	0.074	0.737	0.182	0.019	0.055	0.002	RURAL

Table 16 DfT Traffic Flow Site Data 2022 (Sheet 2 of 8)

North Yorkshire	DfT Traffic Flow Site Data 2022 (Sheet 2 of 8)								
Ref No	Road	Start Junction	End Junction	Type		2-way/1-way/bus lane	Speed Limit (mph)	Road Class	RC
1	A6069	Gisburn St	A6131		S2AP	2-WAY	30	8	3
2	A165	Field Lane, Scarborough	A64		S2AP	2-WAY	60	1	3
3	A167	Junction with A61 and A167 (near Busby Stoop)	Junction where A167 Church Street and A167 Long Street meet (near Topcliffe, North Yorkshire)		S2AP	2-WAY	60	1	4
4	A6108	King Street, Richmond	A6055		S2AP	2-WAY	60	1	4
5	A172	A173	LA Boundary		S2AP	2-WAY	60	1	3
6	A1041	LA Boundary	A645		S2AP	2-WAY	60	1	3
7	A173	A172	LA Boundary	S2AP	2-WAY	60	1	3	
8	A59	A658	A1(M)	S2AP	2-WAY	60	1	1	
9	A167	Junction connecting A167 and Minor Road (SW of Hilltop Farm in Asenby, North Yorkshire)	Junction where A167 Church Street and A167 Long Street meet (near Topcliffe, North Yorkshire)		S2AP	2-WAY	60	1	4
10	A162	A63(T)	A612 spur	S2AP	2-WAY	60	1	2	
11	A6131	Roundabout A629/A6131	A6069		S2AP	2-WAY	30	10	2
12	A629	A6068	A6131		S2AP	2-WAY	60	1	1

13	A59	A6040	A6055		S2AP	2-WAY	30	9	3
14	A6108	A684	A6136		S2AP	2-WAY	60	1	4
15	A167	Junction with A168/A167	Junction connecting A167 and Minor Road (SW of Hilltop Farm in Asenby, North Yorkshire)		S2AP	2-WAY	60	1	4
16	A59	A6069	A65(T)		S2AP	2-WAY	60	1	2
17	A170	A169	Box Hill, Scarborough		S2AP	2-WAY	60	1	4
18	A6068	A629(T)	Old Hall Road		S2AP	2-WAY	30	9	4
19	A1238	A63	Sandhill Lane, Selby		S2AP	2-WAY	60	10	4
20	A645	LA Boundary	A19		S2AP	2-WAY	60	1	4
21	A171	A169	B1416 Staksby Rd, Whitby	S2AP	2-WAY	30	10	2	
22	A168	A61	St James Drive, Northallerton		S2AP	2-WAY	60	1	3
23	A167	A684	B1333		S2AP	2-WAY	30	9	2
24	A6131	The Avenue	A65		S2AP	2-WAY	40	10	2
25	A659	LA Boundary	A659 High St		S2AP	2-WAY	60	1	4
26	A6108	Little Studley Rd	A61		S2AP	2-WAY	30	10	4
27	A170	Box Hill	A171		S2AP	2-WAY	30	7	4
28	A682	LA Boundary	A65		S2AP	2-WAY	60	1	4
29	A169	A170	A171		S2AP	2-WAY	30	10	4
30	A59	A1M roundabout	A168	S2AP	2-WAY	60	1	1	
31	A659	A64	A162	S2AP	2-WAY	30	9	4	
32	A162	A1(T)	A63		S2AP	2-WAY	60	1	4
33	A658	A61	A661		S2AP	2-WAY	60	1	2
34	A63	A19	A1041		S2AP	2-WAY	60	1	2
35	A59	A65(T)	Stonecrop Drive, Harrogate		S2AP	2-WAY	60	1	3

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Table 17 DfT Traffic Flow Site Data 2022 (Sheet 3 of 8)

North Yorkshire	**DfT Traffic Flow Site Data 2022 (Sheet 3 of 8)**											
				All Motor Vehicles								
Ref No	**Road**	**Start Junction**	**End Junction**		**%Lights**	**%Heavy**	**% Car**	**% LGV**	**%OGV1**	**%OGV2**	**%PSV**	**Data Type**
36	A65	A682	A59	7898	0.938	0.062	0.759	0.170	0.018	0.045	0.004	RURAL
37	A659	A162	A659 Kirkgate	9251	0.979	0.021	0.845	0.115	0.013	0.007	0.007	URBAN
38	A59	LA Boundary	A56	5423	0.932	0.068	0.767	0.145	0.019	0.049	0.002	RURAL
39	A167	A684	B6271 Yafforth Rd	7474	0.961	0.039	0.819	0.133	0.025	0.014	0.003	URBAN
40	A171	B1416 Stakesby Rd	A174	17930	0.968	0.032	0.811	0.140	0.015	0.016	0.005	URBAN
41	A165	LA Boundary	A1039	9738	0.950	0.050	0.781	0.153	0.032	0.019	0.007	RURAL
42	A6055	Off ramps	A6136 Catterick	3522	0.928	0.072	0.767	0.153	0.054	0.017	0.006	RURAL
43	A1041	Abbot's Rd	A63	16917	0.986	0.014	0.848	0.131	0.009	0.005	0.001	RURAL
44	A6055	Knaresborough	A1(M) J48	5552	0.962	0.038	0.789	0.162	0.017	0.021	0.002	RURAL
45	A168	St James Drive	A167	10735	0.972	0.028	0.807	0.158	0.012	0.016	0.002	URBAN
46	A59	A168	LA Boundary	15642	0.942	0.058	0.775	0.161	0.026	0.032	0.002	RURAL
47	A171	Eskdale Rd	A174	14844	0.973	0.027	0.804	0.150	0.014	0.013	0.011	URBAN
48	A684	LA Boundary	A6108	1162	0.985	0.015	0.742	0.169	0.013	0.002	0.007	RURAL
49	A165	A1039 Scarborough Road	Near Scarborough Rail Station	13168	0.982	0.018	0.812	0.151	0.012	0.006	0.015	URBAN
50	A684	A6108	A1 spur	3454	0.944	0.056	0.727	0.211	0.022	0.035	0.003	RURAL

51	A1039	A165	A165	8435	0.991	0.009	0.849	0.127	0.007	0.002	0.008	URBAN
52	A171	A165	Eskdale Rd, Whitby	7457	0.964	0.036	0.754	0.182	0.017	0.020	0.009	RURAL
53	A661	A658	A59	19902	0.963	0.037	0.851	0.100	0.021	0.015	0.006	URBAN
54	A61	A59	A6108	13092	0.931	0.069	0.721	0.194	0.028	0.041	0.005	RURAL
55	A6055	Catterick Bridge	Roundabout at A6108 and A6055 (near Bertham House, North Yorkshire)	4104	0.858	0.142	0.639	0.211	0.046	0.096	0.005	RURAL
56	A6055	A684	Roundabout	7155	0.931	0.069	0.779	0.142	0.026	0.044	0.002	RURAL
57	A171	A170	A64	18970	0.987	0.013	0.839	0.131	0.007	0.006	0.010	URBAN
58	A63	A1(M)	A162	19254	0.819	0.181	0.628	0.188	0.047	0.134	0.001	RURAL
59	A684	A167	Mowbray Rd	12080	0.964	0.036	0.816	0.141	0.019	0.017	0.002	URBAN
60	A174	B1416 Love Lane	A171	7173	0.991	0.009	0.839	0.130	0.009	0.000	0.010	URBAN
61	A59	A6055	A658	7854	0.971	0.029	0.810	0.150	0.018	0.011	0.006	URBAN
62	A61	A61 Stammergate	A170	9280	0.981	0.019	0.790	0.176	0.013	0.007	0.002	URBAN
63	A174	LA Boundary	B1416 Love Lane, Whitby	2960	0.989	0.011	0.833	0.144	0.008	0.003	0.001	RURAL
64	A167	Junction where A168 slip road meets A167 Long Street (just before the A168 Dual Carriageway passes over A167)	Junction where A167 Church Street and A167 Long Street meet (near Topcliffe, North Yorkshire)	3966	0.957	0.043	0.747	0.200	0.031	0.012	0.004	RURAL
65	A63	A1041	A19	15318	0.940	0.060	0.759	0.171	0.019	0.041	0.001	RURAL
66	A6108	Little Studley Rd, Ripon	A684	2871	0.968	0.032	0.809	0.124	0.017	0.015	0.009	RURAL
67	A684	A1 spur	A167	11010	0.953	0.047	0.780	0.160	0.024	0.023	0.008	RURAL
68	A61	A6108	A1	11539	0.915	0.085	0.751	0.151	0.030	0.056	0.005	RURAL
69	A658	A661	A59	18658	0.935	0.065	0.764	0.163	0.029	0.036	0.003	RURAL
70	A6069	A6131	Kingsway	5637	0.985	0.015	0.814	0.167	0.014	0.002	0.001	URBAN

Table 18 DfT Traffic Flow Site Data 2022 (Sheet 4 of 8)

North Yorkshire	DfT Traffic Flow Site Data 2022 (Sheet 4 of 8)							
Ref No	**Road**	**Start Junction**	**End Junction**	**Type**	**2-way/1-way/bus lane**	**Speed Limit (mph)**	**Road Class**	**RC**
36	A65	A682	A59	S2AP	2-WAY	30	1	3
37	A659	A162	A659 Kirkgate	S2AP	2-WAY	30	9	3
38	A59	LA Boundary	A56	S2AP	2-WAY	60	1	4
39	A167	A684	B6271 Yafforth Rd	S2AP	2-WAY	30	8	4
40	A171	B1416 Stakesby Rd	A174	S2AP	2-WAY	30	7	2
41	A165	LA Boundary	A1039	S2AP	2-WAY	60	1	3
42	A6055	Off ramps	A6136 Catterick	S2AP	2-WAY	60	1	4
43	A1041	Abbot's Rd	A63	S2AP	2-WAY	40	1	1
44	A6055	Knaresborough	A1(M) J48	S2AP	2-WAY	60	1	4
45	A168	St James Drive	A167	S2AP	2-WAY	30	9	3
46	A59	A168	LA Boundary	S2AP	2-WAY	40	1	1
47	A171	Eskdale Rd	A174	S2AP	2-WAY	40	9	2
48	A684	LA Boundary	A6108	S2AP	2-WAY	60	1	4
49	A165	A1039 Scarborough Road	Near Scarborough Rail Station	S2AP	2-WAY	30	10	2
50	A684	A6108	A1 spur	S2AP	2-WAY	30	1	4
51	A1039	A165	A165	S2AP	2-WAY	30	9	3

52	A171	A165	Eskdale Rd, Whitby	S2AP	2-WAY	60	1	3
53	A661	A658	A59	S2AP	2-WAY	30	9	2
54	A61	A59	A6108	S2AP	2-WAY	60	1	2
55	A6055	Catterick Bridge	Roundabout at A6108 and A6055 (near Bertham House, North Yorkshire)	S2AP	2-WAY	40	1	4
56	A6055	A684	Roundabout	S2AP	2-WAY	60	1	3
57	A171	A170	A64	WS2+1	2-WAY	30	8	2
58	A63	A1(M)	A162	S2AP	2-WAY	60	1	1
59	A684	A167	Mowbray Rd	S2AP	2-WAY	30	9	3
60	A174	B1416 Love Lane	A171	S2AP	2-WAY	30	9	4
61	A59	A6055	A658	S2AP	2-WAY	30	9	4
62	A61	A61 Stammergate	A170	S2AP	2-WAY	30	9	3
63	A174	LA Boundary	B1416 Love Lane, Whitby	S2AP	2-WAY	60	1	4
64	A167	Junction where A168 slip road meets A167 Long Street (just before the A168 Dual Carriageway passes over A167)	Junction where A167 Church Street and A167 Long Street meet (near Topcliffe, North Yorkshire)	S2AP	2-WAY	30	1	4
65	A63	A1041	A19	S2AP	2-WAY	60	1	1
66	A6108	Little Studley Rd, Ripon	A684	S2AP	2-WAY	60	1	4
67	A684	A1 spur	A167	S2AP	2-WAY	30	1	2
68	A61	A6108	A1	S2AP	2-WAY	60	1	2
69	A658	A661	A59	S2AP	2-WAY	60	1	1
70	A6069	A6131	Kingsway	S2AP	2-WAY	30	9	4

Table 19 DfT Traffic Flow Site Data 2022 (Sheet 5 of 8)

North Yorkshire	DfT Traffic Flow Site Data 2022 (Sheet 5 of 8)											
Ref No	**Road**	**Start Junction**	**End Junction**	**All Motor Vehicles**	**%Lights**	**%Heavy**	**% Car**	**% LGV**	**%OGV1**	**%OGV2**	**%PSV**	**Data Type**
71	A170	A61, Thirsk	A169, Pickering	8486	0.965	0.035	0.786	0.159	0.019	0.016	0.005	RURAL
72	A162	A162 spur	A659	6834	0.954	0.046	0.813	0.121	0.016	0.030	0.004	RURAL
73	A63	A162	A1238	10604	0.948	0.052	0.787	0.148	0.021	0.031	0.001	RURAL
74	A171	Barmoor Lane	A165	6448	0.962	0.038	0.732	0.205	0.017	0.021	0.008	RURAL
75	A1041	A63	Abbot's Rd, Selby	18092	0.981	0.019	0.828	0.143	0.012	0.007	0.005	URBAN
76	A59	Stonecrop Drive, Harrogate	A61	12775	0.942	0.058	0.785	0.144	0.020	0.038	0.005	URBAN
77	A645	A1041(T)	LA Boundary	7444	0.917	0.083	0.725	0.184	0.018	0.065	0.002	RURAL
78	A61	A658	Fulwith Rd, Harrogate	12821	0.971	0.029	0.836	0.117	0.021	0.008	0.014	RURAL
79	A168	A168 spur	A6055	3075	0.934	0.066	0.775	0.146	0.033	0.033	0.004	RURAL
80	A684	Mowbray Rd, Northallerton	A19	10883	0.964	0.036	0.816	0.141	0.019	0.017	0.002	RURAL
81	A65	A6131	A59	14837	0.932	0.068	0.797	0.119	0.027	0.041	0.001	RURAL
82	A167	A61	A684	3202	0.975	0.025	0.790	0.175	0.016	0.009	0.002	RURAL
83	A645	A19	LA Boundary	4563	0.796	0.204	0.638	0.151	0.023	0.181	0.002	RURAL
84	A6055	Silver Street, Richmond	Barracks Bank, Richmond	1636	0.964	0.036	0.798	0.123	0.019	0.018	0.031	RURAL
85	A6131	A6069	The Avenue	12752	0.988	0.012	0.838	0.130	0.011	0.002	0.011	URBAN
86	A165	A1039W	A1039 SE	9459	0.970	0.030	0.794	0.160	0.017	0.013	0.003	RURAL
87	A659	A659 Kirkgate	A64	6257	0.975	0.025	0.830	0.123	0.020	0.005	0.009	URBAN

88	A61	A61 Kings Rd	A59	18037	0.985	0.015	0.848	0.123	0.007	0.008	0.008	URBAN
89	A63	A19(T)	Sand Lane	10327	0.943	0.057	0.758	0.175	0.016	0.041	0.003	URBAN
90	A65	A59(T)	A6131	10423	0.900	0.100	0.754	0.132	0.035	0.065	0.000	RURAL
91	A63	Sand Lane, Selby	LA Boundary	9303	0.943	0.057	0.758	0.175	0.016	0.041	0.003	RURAL
92	A1238	Sandhill Lane	A19	3966	0.989	0.011	0.853	0.122	0.010	0.002	0.009	URBAN
93	A167	A168	A684	13313	0.974	0.026	0.861	0.110	0.013	0.014	0.002	URBAN
94	A6040	A61	A61	21928	0.986	0.014	0.853	0.125	0.010	0.005	0.005	URBAN
95	A169	A64(T)	A170	11733	0.959	0.041	0.790	0.157	0.019	0.021	0.006	RURAL
96	A61	A61 Parliament St	A6040	12174	0.985	0.015	0.890	0.084	0.012	0.003	0.009	URBAN
97	A165	A171	Cleveland Avenue	12272	0.992	0.008	0.834	0.144	0.007	0.001	0.004	URBAN
98	A65	A59	A6069	6812	0.936	0.064	0.797	0.123	0.028	0.036	0.007	RURAL
99	A61	Fulwith Rd	A6040	16322	0.972	0.028	0.828	0.134	0.018	0.010	0.007	URBAN
100	A6069	Kingsway, Skipton	A65	4437	0.964	0.036	0.819	0.143	0.030	0.005	0.000	RURAL
101	A1246	A1 spur Dish Hill Flyover	A63 Pollums House Farm	4654	0.980	0.020	0.761	0.189	0.011	0.009	0.003	RURAL
102	A167	B6271 Yafforth Rd, Northallerton	LA Boundary	6733	0.961	0.039	0.819	0.133	0.025	0.014	0.003	RURAL
103	A65	A6069	LA Boundary	8456	0.953	0.047	0.793	0.149	0.021	0.026	0.003	RURAL
104	A171	A169	LA Boundary	5964	0.922	0.078	0.706	0.205	0.032	0.046	0.006	RURAL
105	A61	A1	A167	6416	0.936	0.064	0.735	0.185	0.019	0.044	0.002	RURAL
106	A65	A687	A682	8947	0.948	0.052	0.770	0.160	0.020	0.033	0.003	RURAL
107	A171	A170	Barmoor Lane	12946	0.975	0.025	0.812	0.149	0.014	0.011	0.009	URBAN
108	A661	LA Boundary	A658	10144	0.987	0.013	0.815	0.160	0.008	0.004	0.007	RURAL

Table 20 DfT Traffic Flow Site Data 2022 (Sheet 6 of 8)

North Yorkshire	**DfT Traffic Flow Site Data 2022 (Sheet 6 of 8)**							
Ref No	**Road**	**Start Junction**	**End Junction**	**Type**	**2-way/1-way/bus lane**	**Speed Limit (mph)**	**Road Class**	**RC**
71	A170	A61, Thirsk	A169, Pickering	S2AP	2-WAY	60	1	3
72	A162	A162 spur	A659	S2AP	2-WAY	40	1	3
73	A63	A162	A1238	S2AP	2-WAY	60	1	2
74	A171	Barmoor Lane	A165	S2AP	2-WAY	60	1	3
75	A1041	A63	Abbot's Rd, Selby	S2AP	2-WAY	30	9	2
76	A59	Stonecrop Drive, Harrogate	A61	S2AP	2-WAY	40	10	3
77	A645	A1041(T)	LA Boundary	S2AP	2-WAY	60	1	3
78	A61	A658	Fulwith Rd, Harrogate	S2AP	2-WAY	60	1	2
79	A168	A168 spur	A6055	S2AP	2-WAY	60	1	4
80	A684	Mowbray Rd, Northallerton	A19	S2AP	2-WAY	60	1	2
81	A65	A6131	A59	S2AP	2-WAY	60	1	1
82	A167	A61	A684	S2AP	2-WAY	60	1	4
83	A645	A19	LA Boundary	S2AP	2-WAY	60	1	4
84	A6055	Silver Street, Richmond	Barracks Bank, Richmond	S2AP	2-WAY	60	1	4
85	A6131	A6069	The Avenue	S2AP	2-WAY	30	9	3
86	A165	A1039W	A1039 SE	S2AP	2-WAY	60	1	3
87	A659	A659 Kirkgate	A64	S2AP	2-WAY	30	9	4

88	A61	A61 Kings Rd	A59	S2AP	2-WAY	30	8	2
89	A63	A19(T)	Sand Lane	S2AP	2-WAY	30	10	3
90	A65	A59(T)	A6131	S2AP	2-WAY	60	1	2
91	A63	Sand Lane, Selby	LA Boundary	S2AP	2-WAY	40	1	3
92	A1238	Sandhill Lane	A19	S2AP	2-WAY	30	10	4
93	A167	A168	A684	S2AP	2-WAY	30	9	2
94	A6040	A61	A61	WS2+1	2-WAY	30	8	1
95	A169	A64(T)	A170	S2AP	2-WAY	60	1	2
96	A61	A61 Parliament St	A6040	S2AP	1-WAY	30	8	3
97	A165	A171	Cleveland Avenue	S2AP	2-WAY	30	7	3
98	A65	A59	A6069	S2AP	2-WAY	60	1	3
99	A61	Fulwith Rd	A6040	S2AP	2-WAY	30	7	2
100	A6069	Kingsway, Skipton	A65	S2AP	2-WAY	60	1	4
101	A1246	A1 spur Dish Hill Flyover	A63 Pollums House Farm	S2AP	2-WAY	60	1	4
102	A167	B6271 Yafforth Rd, Northallerton	LA Boundary	S2AP	2-WAY	60	1	3
103	A65	A6069	LA Boundary	S2AP	2-WAY	60	1	3
104	A171	A169	LA Boundary	S2AP	2-WAY	60	1	4
105	A61	A1	A167	S2AP	2-WAY	60	1	3
106	A65	A687	A682	S2AP	2-WAY	60	1	3
107	A171	A170	Barmoor Lane	S2AP	2-WAY	30	7	3
108	A661	LA Boundary	A658	S2AP	2-WAY	60	1	2

Table 21 DfT Traffic Flow Site Data 2022 (Sheet 7 of 8)

North Yorkshire	DfT Traffic Flow Site Data 2022 (Sheet 7 of 8)											
Ref No	**Road**	**Start Junction**	**End Junction**	**All Motor Vehicles**	**%Lights**	**%Heavy**	**% Car**	**% LGV**	**%OGV1**	**%OGV2**	**%PSV**	**Data Type**
109	A162	LA Boundary	A1 spur Dish Hill Flyover	16066	0.929	0.071	0.736	0.168	0.014	0.056	0.001	RURAL
110	A684	A6108	A6108	8396	0.969	0.031	0.783	0.167	0.014	0.017	0.004	URBAN
111	A59	A56	A6069	16337	0.946	0.054	0.793	0.136	0.017	0.037	0.003	RURAL
112	A61	A167	A61 Millgate	14287	0.988	0.012	0.833	0.143	0.010	0.002	0.002	URBAN
113	A61	A61 Market Place	A61 Long St	6840	0.985	0.015	0.794	0.181	0.012	0.003	0.002	URBAN
114	A61	A61 Millgate	A170	7183	0.988	0.012	0.793	0.182	0.010	0.002	0.003	URBAN
115	A687	LA Boundary	A65	1588	0.948	0.052	0.735	0.188	0.023	0.030	0.002	RURAL
116	A170	A19(T)	A61	9212	0.959	0.041	0.736	0.212	0.023	0.018	0.002	URBAN
117	A6040	A61	A59	14865	0.986	0.014	0.844	0.135	0.010	0.003	0.003	URBAN
118	A6068	LA Boundary	Old Hall Road	7887	0.946	0.054	0.754	0.182	0.028	0.027	0.005	RURAL
119	A629	A6131	A65	13389	0.930	0.070	0.745	0.178	0.029	0.041	0.002	RURAL
120	A658	A659	A61	13592	0.968	0.032	0.824	0.134	0.022	0.010	0.005	RURAL
121	A63	A1238	A19	6828	0.924	0.076	0.746	0.169	0.036	0.040	0.002	RURAL
122	A61	A6040	A61 Kings Rd	11289	0.990	0.010	0.862	0.115	0.007	0.003	0.007	URBAN
123	A6136	A6108	A6055 Catterick Road	10645	0.960	0.040	0.808	0.138	0.018	0.022	0.007	URBAN
124	A6055	A6055 Catterick Road	A6055 Leeming Lane	6912	0.925	0.075	0.745	0.173	0.039	0.036	0.002	RURAL
125	A172	A19(T)	A173	7076	0.958	0.042	0.779	0.170	0.019	0.023	0.003	RURAL
126	A65	LA Boundary	A687	8669	0.953	0.047	0.740	0.186	0.020	0.028	0.005	RURAL
127	A6069	A59	Gisburn St, Skipton	4959	0.981	0.019	0.840	0.129	0.011	0.007	0.009	RURAL

128	A59	A61	A6040	16514	0.977	0.023	0.833	0.137	0.012	0.011	0.003	URBAN
129	A165	A1039	A1039	12119	0.966	0.034	0.813	0.141	0.022	0.012	0.005	RURAL
130	A1039	A165 Muston	A64 Staxton	5748	0.965	0.035	0.792	0.155	0.020	0.015	0.008	RURAL
131	A56	LA Boundary	A59	10642	0.953	0.047	0.781	0.160	0.019	0.028	0.007	RURAL
132	A61	LA Boundary	A658	13912	0.978	0.022	0.863	0.104	0.015	0.008	0.006	RURAL
133	A61	A61 Stammergate	A168	5542	0.965	0.035	0.788	0.162	0.026	0.009	0.003	URBAN
134	A629	LA Boundary	A6068	27268	0.941	0.059	0.783	0.153	0.032	0.027	0.002	RURAL
135	A163	A19	LA Boundary	3146	0.936	0.064	0.718	0.197	0.027	0.037	0.010	RURAL
136	A166	LA Boundary	LA Boundary	10233	0.943	0.057	0.749	0.171	0.021	0.035	0.005	RURAL
137	A162	A1 main route	A162	5862	0.987	0.013	0.796	0.179	0.008	0.005	0.001	RURAL

Table 22 DfT Traffic Flow Site Data 2022 (Sheet 8 of 8)

North Yorkshire	DfT Traffic Flow Site Data 2022 (Sheet 8 of 8)							
Ref No	**Road**	**Start Junction**	**End Junction**	**Type**	**2-way/1-way/bus lane**	**Speed Limit (mph)**	**Road Class**	**RC**
109	A162	LA Boundary	A1 spur Dish Hill Flyover	D2AP	2-WAY	70	2	1
110	A684	A6108	A6108	S2AP	2-WAY	30	9	3
111	A59	A56	A6069	S2AP	2-WAY	60	1	1
112	A61	A167	A61 Millgate	S2AP	2-WAY	30	9	2
113	A61	A61 Market Place	A61 Long St	S2AP	2-WAY	30	9	4
114	A61	A61 Millgate	A170	S2AP	1-WAY	20	8	4
115	A687	LA Boundary	A65	S2AP	2-WAY	20	1	4
116	A170	A19(T)	A61	S2AP	2-WAY	40	9	3
117	A6040	A61	A59	S2AP	2-WAY	30	8	2
118	A6068	LA Boundary	Old Hall Road	S2AP	2-WAY	30	1	3
119	A629	A6131	A65	S2AP	2-WAY	60	1	2
120	A658	A659	A61	S2AP	2-WAY	40	1	2
121	A63	A1238	A19	S2AP	2-WAY	60	1	3
122	A61	A6040	A61 Kings Rd	S2AP	2-WAY	30	8	3
123	A6136	A6108	A6055 Catterick Road	S2AP	2-WAY	30	10	3
124	A6055	A6055 Catterick Road	A6055 Leeming Lane	S2AP	2-WAY	40	1	3
125	A172	A19(T)	A173	S2AP	2-WAY	60	1	3
126	A65	LA Boundary	A687	S2AP	2-WAY	60	1	3
127	A6069	A59	Gisburn St, Skipton	S2AP	2-WAY	60	1	4
128	A59	A61	A6040	S2AP	2-WAY	30	7	2
129	A165	A1039	A1039	S2AP	2-WAY	40	1	2
130	A1039	A165 Muston	A64 Staxton	S2AP	2-WAY	30	1	4
131	A56	LA Boundary	A59	S2AP	2-WAY	60	1	2
132	A61	LA Boundary	A658	S2AP	2-WAY	60	1	2
133	A61	A61 Stammergate	A168	S2AP	2-WAY	30	9	4
134	A629	LA Boundary	A6068	D2AP	2-WAY	70	2	1
135	A163	A19	LA Boundary	S2AP	2-WAY	60	1	4
136	A166	LA Boundary	LA Boundary	S2AP	2-WAY	60	1	2
137	A162	A1 main route	A162	S2AP	2-WAY	30	1	4

Input Data

Delay Modelling Methodology

The estimation of delay is detailed in the Halcrow study. Two methods of measurement are listed

- (a) live site measured method
- (b) modelling techniques to replicate works on the ground

The measured method is described as a restricted illustrative example of the impact at works and a general model is more industry recognised as the more robust technique that can be audited and validated.
There are three types of modelling software that can be used to model delay at works namely;

- QUADRO – models queues and delays at road works
- SATURN – macro assignment
- VISSIM – micro simulation

The Halcrow study stated in Section 2.1 that on evaluation there were inconsistencies with the latter two types and that QUADRO would give the most consistent results although it is suited more to rural locations with little diversion routes but it is able to model the additional delay on diversion routes when the maximum queuing delay on the main route is exceeded.
QUADRO is able to appraise individual works that are planned in the future on different types of road by modelling the delay experienced by road users, quantify the delay and estimate the cost of the delay. The software is able to calculate and convert delays into monetary figures as detailed in WebTAG Unit 3.5.6. with assumptions in regard to valuation of time, operating costs and accidents.
Users are required to input base link specific details including network classification, traffic flows, road type characteristics and any diversion routes. Works details including site length, works type such as lane closures and shuttle working. The latest version QUADRO 2021 version 4 release July 2021 has been used for this CBA.

The valuation of costs in quadro

The Valuation of Time

QUADRO calculates the delays at works and translates these into monetary figures using standard values of time.
The latest values are provided in WebTAG Unit A1.3 and is shown in Table 23 and 24 below. QUADRO converts the resource cost to market price to be consistent with the Economic Efficiency of the Transport System (TEE) table. The market price is calculated by multiplying the resource value by (1 + *t*) where *t* is the average rate of indirect taxation in the economy.

Table 23 WebTAG - Value of Time by Mode and Trip Purpose

Table A 1.3.1: Values of Working (Employers' Business) Time by Mode (£ per hour, 2010 prices, 2010 values)			
Mode	**Resource Cost**	**Perceived Cost**	**Market Price**
Car driver	14.86	14.86	17.69
Car passenger	14.86	14.86	17.69
LGV (driver or passenger)	10.52	10.52	12.52
OGV (driver or passenger)	12.13	12.13	14.43
PSV driver	11.94	11.94	14.21
PSV passenger	8.42	8.42	10.02
Taxi driver	11.50	11.50	13.68
Taxi / Minicab passenger	14.86	14.86	17.69
Rail passenger	24.52	24.52	29.18
Underground passenger	8.42	8.42	10.02
Walker	8.42	8.42	10.02
Cyclist	8.42	8.42	10.02
Motorcyclist	14.86	14.86	17.69
Average of all working persons	16.19	16.19	19.27
Values of Non-Working Time by Trip Purpose (£ per hour, 2010 prices, 2010 values)			
Trip Purpose	**Resource Cost**	**Perceived Cost**	**Market Price**
Commuting	8.36	9.95	9.95
Other	3.82	4.54	4.54

Table 24 WebTAG - Value of Time per Vehicle per hour

Table A 1.3.5: Market Price Values of Time per Vehicle based on distance travelled (£ per hour, 2010 prices and 2010 values)								
Vehicle Type		**Weekday**					**Weekend**	**All Week**
	Journey Purpose	**7am – 10am**	**10am – 4pm**	**4pm – 7pm**	**7pm – 7am**	**Average**		
Car	Work	20.00	20.49	20.29	20.67	20.32	23.23	20.53
	Commuting	11.27	11.45	11.31	11.48	11.35	12.01	11.40
	Other	7.78	8.28	8.14	8.11	8.13	9.63	8.66
	Average Car	11.33	10.67	10.88	11.03	10.95	10.29	10.79
LGV	Work (freight)	15.02	15.02	15.02	15.02	15.02	15.77	15.02
	Commuting & Other	8.92	8.92	8.92	8.92	8.92	12.41	9.72
	Average LGV	14.29	14.29	14.29	14.29	14.29	15.37	14.39
OGV1	Working	14.43	14.43	14.43	14.43	14.43	14.43	14.43
OGV2	Working	14.43	14.43	14.43	14.43	14.43	14.43	14.43
PSV (Occupants)	Work	15.90	16.23	17.01	16.99	16.37	14.87	16.00
	Commuting	22.39	7.85	31.48	43.04	19.43	7.36	16.45
	Other	44.44	50.92	39.78	34.52	45.58	51.76	47.10
	Total	82.72	75.00	88.27	94.55	81.37	73.99	79.55

The Valuation of Vehicle Operating Costs

QUADRO calculates the vehicle operating costs (VOC) incurred by traffic with and without works. VOC may increase during works if speeds are reduced or a long diversion route. The effects of temporary blockages caused by accidents are solely assessed on journey time and operating costs are not calculated. As the resource cost of fuel, fuel efficiency and fleet composition change independently, the relationship of resource cost (per kilometre) to market prices changes annually.
The programme is informed of changes in tax rates over time and are shown in Tables 25 to 27 below.
Values for 2010 VOC are shown in Table 28 below.
Carbon emissions are considered in terms of the change in the equivalent tonnes of carbon Table 29 and estimated from fuel consumption Table 30 below.

Table 25 Taxation Rates Base

TAXATION RATES (%)					
FUEL	AVERAGE	FUEL		NON-FUEL	
TYPE	FINAL	FINAL	INTER	FINAL	INTER
PETROL	19	339.7	274.2	20	0
DIESEL	19	310.1	249.1	20	0

Table 26 Changes to Taxation Rates % Petrol

CHANGES TO TAXATION RATES (%) PETROL						
AVERAGE	FUEL		NON-FUEL		FROM	TO
FINAL	FINAL	INTER	FINAL	INTER	YEAR	YEAR
0	-9.87	-10.41	0	0	2002	2003
0	-9.73	-10.32	0	0	2003	2004
0	-19.56	-20.88	0	0	2004	2005
0	-11	-11.94	0	0	2005	2006
0	0.63	0.69	0	0	2006	2007
0	-18.64	-20.19	0	0	2007	2008
0	29.04	36.78	0	0	2008	2009
0	-16.11	-20.38	0	0	2009	2010
0	-13.72	-18.56	0	0	2009	2010
0	-3.34	-3.85	0	0	2010	2011
0	-1.94	-2.24	0	0	2011	2012
0	-1.6	-1.85	0	0	2012	2013
0	0.53	0.62	0	0	2013	2014
0	0.81	0.95	0	0	2014	2015
0	1.19	1.39	0	0	2015	2016
0	0.98	1.14	0	0	2016	2017
0	0.79	0.92	0	0	2017	2018
0	0.61	0.71	0	0	2018	2019
0	0.43	0.49	0	0	2019	2020
0	0.25	0.29	0	0	2020	2021
0	0.25	0.28	0	0	2021	2022
0	0.29	0.34	0	0	2022	2023
0	0.35	0.4	0	0	2023	2024
0	0.31	0.36	0	0	2024	2025
0	0.36	0.42	0	0	2025	2026
0	0.31	0.35	0	0	2026	2027
0	0.32	0.36	0	0	2027	2028
0	0.32	0.37	0	0	2028	2029
0	0	0	0	0	2030	2099

Table 27 Changes to Taxation Rates % Diesel

CHANGES TO TAXATION RATES (%) DIESEL						
AVERAGE FINAL	FUEL		NON-FUEL		FROM YEAR	TO YEAR
	FINAL	INTER	FINAL	INTER		
0	-7.7	-8.16	0	0	2002	2003
0	-8.4	-8.95	0	0	2003	2004
0	-23.5	-25.18	0	0	2004	2005
0	-9.53	-10.44	0	0	2005	2006
0	3.85	4.26	0	0	2006	2007
0	-27.29	-29.85	0	0	2007	2008
0	37.84	48.13	0	0	2008	2009
0	-10.45	-14.64	0	0	2009	2010
0	-16.24	-21.43	0	0	2009	2010
0	-4.42	-5.14	0	0	2010	2011
0	-3.49	-4.09	0	0	2011	2012
0	-1.56	-1.84	0	0	2012	2013
0	0.54	0.64	0	0	2013	2014
0	0.81	0.96	0	0	2014	2015
0	1.2	1.41	0	0	2015	2016
0	0.98	1.15	0	0	2016	2017
0	0.79	0.93	0	0	2017	2018
0	0.62	0.73	0	0	2018	2019
0	0.45	0.53	0	0	2019	2020
0	0.26	0.3	0	0	2020	2021
0	0.26	0.3	0	0	2021	2022
0	0.31	0.36	0	0	2022	2023
0	0.35	0.41	0	0	2023	2024
0	0.32	0.38	0	0	2024	2025
0	0.35	0.41	0	0	2025	2026
0	0.34	0.39	0	0	2026	2027
0	0.32	0.37	0	0	2027	2028
0	0.32	0.38	0	0	2028	2029
0	0	0	0	0	2030	2099

Table 28 WebTAG – Non-Fuel Resource Vehicle Operating Costs

Table A 1.3.14: Non-Fuel Resource Vehicle Operating Costs (2010 prices and 2010 values)			
Vehicle Category		Parameter Values	
		a1 p / km	b1 p / hr
Car	Work Petrol	4.966	135.946
	Work Diesel	4.966	135.946
	Work Electric	1.157	135.946
	Non-Work Petrol	3.846	0.000
	Non-Work Diesel	3.846	0.000
	Non-Work Electric	1.157	0.000
LGV	Work	7.213	47.113
	Work Electric	2.170	47.113
	Non-Work	7.213	0.000
	Non-Work Electric	2.170	0.000
OGV1	Work	6.714	263.817
OGV2	Work	13.061	508.525
PSV	Work	30.461	694.547

Table 29 WebTAG – Carbon dioxide emissions per litre of fuel burnt / kWh used

Table A 3.4: Carbon Values, £ per Tonne of CO2e (2010 prices)			
Year	**Low**	**Central**	**High**
2010	83.64	167.28	250.92
2011	84.91	169.83	254.74
2012	86.21	172.41	258.62
2013	87.52	175.04	262.56
2014	88.85	177.71	266.56
2015	90.21	180.41	270.62
2016	91.58	183.16	274.74
2017	92.97	185.95	278.92
2018	94.39	188.78	283.17
2019	95.83	191.65	287.48
2020	97.29	194.57	291.86
2021	99.11	198.22	297.33
2022	100.62	201.24	301.86
2023	102.15	204.30	306.46
2024	103.71	207.41	311.12
2025	105.29	210.57	315.86
2026	106.89	213.78	320.67
2027	108.52	217.04	325.55
2028	110.17	220.34	330.51
2029	111.85	223.70	335.54
2030	113.55	227.10	340.65
2031	115.28	230.56	345.84
2032	117.04	234.07	351.11
2033	118.82	237.64	356.46
2034	120.63	241.26	361.88
2035	122.46	244.93	367.39
2036	124.33	248.66	372.99
2037	126.22	252.45	378.67
2038	128.15	256.29	384.44
2039	130.10	260.19	390.29
2040	132.08	264.16	396.23
2041	134.06	268.12	402.18
2042	136.07	272.14	408.21
2043	138.11	276.22	414.33
2044	140.18	280.37	420.55
2045	142.29	284.57	426.86
2046	144.42	288.84	433.26

Table 30 WebTAG – Fuel consumption parameter values

Table A 1.3.8: Fuel consumption parameter values (litres per km, 2015)				
	Parameters			
Vehicle Category	**a**	**b**	**c**	**d**
Petrol Car	0.45195	0.09605	-0.00109	7.24599E-06
Diesel Car	0.48191	0.06909	-0.00066	5.23793E-06
Petrol LGV	0.34435	0.19309	-0.00303	1.95736E-05
Diesel LGV	0.46348	0.11328	-0.00163	1.38355E-05
OGV1	2.69628	0.14306	-0.00103	1.12932E-05
OGV2	5.66560	0.29422	-0.00195	1.16192E-05
PSV	3.36019	0.29525	-0.00321	2.35400E-05
	Energy consumption parameter values (kWh per km, 2015)			
Electric Car	0.219			
Electric LGV	0.233			
Electric OGV1				
Electric OGV2				
Electric PSV				

The Valuation of Accidents

Additional accidents may be expected in works and there are two types of cost incurred the cost of delay and the direct cost.
The direct cost includes the casualty, damage to property, insurance administration, police time and an allowance to damage only accidents. QUADRO calculates these values on the network using DfT standard values for average personal injury accidents on various types of road.
Values of most elements are proportional to national income and for 2010 are shown in Table 31 and 32 below. Accident values increase in line with GDP as shown in Table 33 below. Accident rates are calculated with and without works, combined link and junction rates are used in QUADRO,
Table 34 shows accident rates for 15 road types without works. Local data can be used only if available for both the without and with works in this CBA these default values are used.
Table 35 shows the number of casualties per accident.

Table 31 WebTAG – Cost per Casualty

Cost per Casualty	
Severity	**Cost £**
Fatal	1,647,558
Serious	184,053
Slight	14,160

Table 32 WebTAG – Cost per Accident

Cost per Accident							
Severity	Insurance Admin	Damage to Property			Police Cost		
		Urban	Rural	Motorway	Urban	Rural	Motorway
Fatal	288	7,519	12,753	16,222	16,762	17,213	17,414
Serious	179	4,030	5,814	13,842	1,851	2,311	2,440
Slight	109	2,377	3,854	7,003	479	656	547
Damage	52	1,700	2,541	2,442	35	20	17

Table 33 WebTAG – Accident Growth Rates

Annual Rates of Growth of Accident Values	
Range of Years	Growth Rate (% p.a.)
2010 - 2011	0.61
2011 - 2012	0.80
2012 - 2013	1.25
2013 - 2014	2.21
2014 - 2015	1.81
2015 - 2016	1.43
2016 - 2017	1.53
2017 - 2018	1.05
2018 - 2019	1.12
2019 - 2020	0.11
2020 - 2021	0.11
2021 - 2022	1.50
2022 - 2023	1.50
2023 - 2024	1.50
2024 - 2025	1.50
2025 - 2026	1.50
2026 - 2027	1.50
2027 - 2028	1.50
2028 - 2029	1.50
2029 - 2030	1.50
2030 - 2031	1.50
2031 - 2032	1.50
2032 - 2033	1.50
2033 - 2034	1.50
2034 - 2035	1.50
2035 - 2036	1.50
2036 - 2037	1.50
2037 - 2038	1.50
2038 - 2039	1.50
2039 - 2040	1.50
2040 - 2041	1.50
2041 - 2042	1.50
2042 - 2043	1.50
2043 - 2044	1.50
2044 - 2045	1.50
2045 - 2046	1.50
2046 - 2047	1.50

Table 34 WebTAG – Accident Without Works

Combined Link / Junction: Accident Rates and Change Factors 2009 Base				
Road Type	**Speed Limit (mph)**	**Accident Rate**	**Beta Factor**	**Road Description**
1	50/60/70	0.08	0.956	Motorways
2	50/60/70	0.067	0.956	Motorways
3	50/60/70	0.079	0.956	Motorways
4	30/40	0.532	0.959	Modern S2 Roads
4	>40	0.244	0.955	Modern S2 Roads
5	30/40	0.532	0.959	Modern S2 Roads with HS
5	>40	0.244	0.955	Modern S2 Roads with HS
6	30/40	0.863	0.959	Modern WS2 Roads
6	>40	0.163	0.955	Modern WS2 Roads
7	30/40	0.863	0.959	Modern WS2 Roads w. HS
7	>40	0.163	0.955	Modern WS2 Roads w. HS
8	30/40	0.863	0.959	Older S2 A Roads
8	>40	0.244	0.955	Older S2 A Roads
9	30/40	0.559	0.951	Other S2 Roads
9	>40	0.233	0.933	Other S2 Roads
10	30/40	0.553	0.967	Modern D2 Roads
10	>40	0.107	0.956	Modern D2 Roads
11	30/40	0.599	0.967	Modern D2 Roads with HS
11	>40	0.072	0.956	Modern D2 Roads with HS
12	30/40	0.599	0.967	Older D2 Roads
12	>40	0.107	0.956	Older D2 Roads
13	30/40	0.62	0.951	Modern D3+ Roads
13	>40	0.123	0.946	Modern D3+ Roads
14	30/40	0.62	0.951	Modern D3+ Roads w. HS
14	>40	0.123	0.946	Modern D3+ Roads w. HS
15	30/40	0.62	0.951	Older D3+ Roads
15	>40	0.123	0.946	Older D3+ Roads

Table 35 WebTAG – Casualties per Personal Injury Accident (PIA)

Combined Link / Junction: Casualty Rates					
Road Type	**Speed Limit (mph)**	**Casualties per PIA**			**Road Description**
		Fatal	**Serious**	**Slight**	
1 – 3	50 / 60 / 70	0.020	0.1230	1.455	Motorways
4 – 8	30 / 40	0.009	0.132	1.176	S2 A Roads
4 – 8	>40	0.038	0.238	1.3	S2 A Roads
9	30 / 40	0.007	0.134	1.132	Other S2 Roads
9	>40	0.026	0.222	1.218	Other S2 Roads
10 – 15	30 / 40	0.009	0.112	1.238	Dual Carriageways
10 – 15	>40	0.025	0.151	1.297	Dual Carriageways

DELAY MODELLING IN QUADRO

Elements of Delay

The delay at works are made up of a number of elements that include the reduce running speeds through the site, traffic signal control for shuttle working, insufficient capacity causing queuing and diversion and are calculated by the General Delay Sub-Model.
Accidents and breakdowns can cause further delay and will depend on location, amount of width and time of day and if alternative routes are available and are calculated by the Incident Delay Sub-Model.

The General Delay Sub-Model

This model is run in each direction and for the four day types Monday to Thursday, Friday, Saturday and Sunday for each hour, the remaining queue is added to the following hour.

The assumption is that regular drivers would travel on the route that minimises the journey time. A driver may minimise journey time by diverting to an alternative before the work site and re-join past the site or divert the route completely.

If traffic is not expected to divert at a particular site and instead queue this implies there are unattractive routes. It can be found that a specification of a diversion route can be particularly difficult and QUADRO is able to be run with a maximum queuing delay.

For the purpose of the CBA this has been used, sample run data is included in the QUADRO manual for different types of road for maximum queuing delay and shown on Table 36 below. Once the maximum queue time is exceeded drivers will divert to a route and assumed that this would equal the journey time through the work site.

Table 36 Max-Q-Delay

Typical Max-Q-Delay QUADRO	
Type of Road	**Max-Q-Delay (mins)**
S2	5
WS2	5
D2AP	10
D3AP	15

The Incident Delay Sub-Model

If a breakdown or accident occurs within the site length this will restrict the capacity further.

Unlike the General Model drivers will not divert as this would not be a common event. This model is not run for shuttle working sites as it is assumed that the obstruction would be speedily removed.

This sub model is run twice once for breakdown and once for accidents. The sub model assumes that breakdowns occur at a rate shown in Table 37 below. Accident Rates were tabled earlier in Section 4.2.

Table 37 Breakdown Rates

Default Breakdown Rates QUADRO	
Vehicle Type	**Rate (vkm)**
Light	10 per 10^6
Heavy	5 per 10^6

TRAFFIC INPUT

Network and Route Type Description

For each of the work sites certain characteristics are required by QUADRO including the length of the works site, adjoining sections up and downstream of the site (both directions) and the diversion route. For the purpose of this CBA the diversion length is not modelled as the maximum queue delay method has been used.

The main route is considered to be consistent along its length and no flow variations. A road class is specified as shown on Table 38 below to calculate a speed/flow relationship with default values shown on Table 39 and 40.

For each road class the user is able to input geometric parameters such as road width, hilliness, accesses along route, visibility, for the purpose of this CBA, typical values have been applied as set out in Table 41 below. The work site type is defined by the number of lanes open or shuttle working as shown on Table 42 below that selects a default capacity.

QUADRO contains values for average duration of incidents and are shown on Table 43 below.

Table 38 Road Classes

QUADRO Road Classes	
Road Class	**Description**
Class 1	Rural single carriageway
Class 2	Rural all-purpose dual 2 lane carriageway
Class 3	Rural all-purpose dual 3 or more lane carriageway
Class 4	Motorway (urban or rural), dual 2 lanes
Class 5	Motorway (urban or rural), dual 4 or more lanes
Class 6	Motorway (urban or rural), dual 3 lanes
Class 7	Urban road, Central, single or dual carriageway
Class 8	Urban road, Non-central, single or dual carriageway

Class 9	Small town road, single or dual carriageway
Class 10	Suburban Main Road, single carriageway
Class 11	Suburban Main Road, dual carriageway

Table 39 Default minimum speeds QUADRO

Road Class	Minimum speed (kph)
Classes 1 to 6	45
Class 7	25
Class 8	15
Class 9	30
Class 10	25
Class 11	35

Table 40 Default Speed/flow Parameters QUADRO

CLASS	LIGHT-V kph	GRAD-A reduction (kph) per 1000 veh	GRAD-B reduction (kph) per 1000 veh	HEAVY-V kph	GRAD-A reduction (kph) per 1000 veh	GRAD-B reduction (kph) per 1000 veh	CHANGE Factor or vph per lane	MINS Kph	Qc vph per lane
1	72.1	15	50	78.2	5.2	5.2	1920	45	2400
2	108	6	33	86	0	0	1080	45	2100
3	115	6	33	86	0	0	1080	45	2100
7	64.5	30	30	64.5	30	30		25	800
8	39.5	30	30	39.5	30	30		15	800
10	70	10	45	64	10	45	1200	25	1500
11	80	10	45	74	10	45	1200	35	1500

Table 41 Default Geometric Parameters QUADRO

CLASS	TYPE	DESCRIPTION	CWID	HILLS	DEVEL	INT	BEND	MAXS	SWID	VWID	JUNC	VIS	AXS
1	RURAL	Single Carriageway	7.3	15			75	96	0	1	0.6	200	
2	RURAL	Dual 2 lanes	14.6	15			30	113					
3	RURAL	Dual 3 lanes	22	15			30	113					
7	URBAN	Non-central	10	15	70								
8	URBAN	Central	11	15		4.5							
10	URBAN	Suburban Single	10	15		0.8		64					30
11	URBAN	Suburban Dual	14.6	15		0.8		64					30

Table 42 Work Types

QUADRO Work Types	
Works Type	**Description**
0	No lanes open in this direction
1	One lane open in this direction
2	Two lanes open in this direction
3	Three lanes open in this direction
4	Four lanes open in this direction
5	Five lanes open in this direction
9	Shuttle working
10	If layout features contra-flow working

Table 43 Incident Duration

Default Breakdown and Accident Durations in QUADRO		
Type of Road	**Breakdown Duration (mins)**	**Accident Duration (mins)**
Motorway	25	30
Single and Dual AP	40	45

Variation in Traffic Flow

Traffic flows vary by hour, day, week and month and different type of vehicles.
QUADRO calculates user costs daily and normally for a 7-day week using the four day types. For the purpose of this CBA, AADT flows have been used and QUADRO converts this to Annual Average Hourly Traffic (AAHT) to generate an hourly flow profile.
The QUADRO model uses directional flow as each direction is modelled separately.
Two-way input flows are split by tidal behaviour for example the direction into town in the morning peak and the direction is specified by the user.

Vehicles in Work Time and Vehicle Occupancies

QUADRO considers the disaggregation of time spent in work and non-work mode for each vehicle type. The National Travel Survey (NTS) showed the average car mileage in work mode, commuting mode and non-working mode and are further disaggregated by average hourly percentages.
Averages for weekdays and weekends, vehicles and journey types are shown on Table 44 below.

Table 44 WebTAG – Trip Proportions

Table A 1.3.4:		Proportion of travel in work and non-work time						
Mode / Vehicle Type & Journey Purpose		Weekday					Weekend	All Week
		7am – 10am	10am – 4pm	4pm – 7pm	7pm – 7am	Average	Average	Average
		Percentage of Distance Travelled by Vehicles						
Car	Work	16.5	16.5	11.8	12.9	14.8	3.5	12.1
	Commuting	44.1	11.8	41.3	38.5	31.2	7.9	25.5
	Other	39.5	71.7	46.9	48.6	53.9	88.6	62.5
LGV	Work (freight)	88	88	88	88	88	88	88
	Non – Work	12	12	12	12	12	12	12
OGV1	Work	100	100	100	100	100	100	100
OGV2	Work	100	100	100	100	100	100	100
		Percentage of Distance Travelled by Occupants						
Car	Work	13.7	11.7	9.4	10.4	11.5	2.2	8.6
	Commuting	36.1	8.1	32.1	30.1	23.5	4.4	17.7
	Other	50.2	80.2	58.5	59.5	65	93.4	73.7
PSV	Work	1.4	1.7	2.3	2.3	1.8	0.5	1.5
	Commuting	18.4	6.5	25.9	35.4	16	6.1	13.5
	Other	80.2	91.9	71.8	62.3	82.2	93.4	85

Table A 1.3.4:		Proportion of trips made in work and non-work time						
Mode / Vehicle Type & Journey Purpose		Weekday					Weekend	All Week
		7am – 10am	10am – 4pm	4pm – 7pm	7pm – 7am	Average	Average	Average
		Percentage of Vehicle Trips						
Car	Work	7	7.2	5.1	4.3	6.2	2	5.3
	Commuting	38.3	11.3	32.6	28.8	25.2	8.4	21.3
	Other	54.7	81.5	62.3	66.9	68.6	89.6	73.4
LGV	Work (freight)	88	88	88	88	88	88	88
	Non – Work	12	12	12	12	12	12	12
OGV1	Work	100	100	100	100	100	100	100
OGV2	Work	100	100	100	100	100	100	100
		Percentage of Person Trips						
Car	Work	5.3	5.1	3.9	3.4	4.7	1.3	3.8
	Commuting	31	8.4	25.8	23.7	19.7	6	16.1
	Other	63.6	86.5	70.3	72.8	75.6	92.7	80.1
PSV	Work	2.1	1.7	2.6	3.1	2	1	1.9
	Commuting	25.6	7.2	33.5	46.3	19.6	10.6	18
	Other	72.3	91.1	64	50.6	78.4	88.4	80.1

Site specific quadro input data

Sample Site Data

From the North Yorkshire DfT traffic count data 128 sites were selected as locations that represent lane rental site traffic flows. Some DfT sites represent a number of lane rental streets, traffic data for each of the 1,065 (7.27%) lane rental streets is shown on Tables 13 to 22.
For each site, data files were created, and works were run for the site lengths carried out with the Halcrow Study 10, 30, 50, 100 and 200 metres.
Data for hourly traffic flows was obtained from North Yorkshire with 115 sites identified with daily flows in neutral months that were summarised for peak and off peak hours.
In total 2,055 outputs were created and are provided in Appendix C. The Daily Cost of all sites was averaged for Rural and Urban roads by RC and excavation length and is shown on Table 44 below.
The number of samples used for the CBA is required to be proportioned to the actual number of works and statistically confident in the data.
The number of samples used for each work type are shown on Table 45 below with the percentages matching the proportions of actual works shown in Table 7. This has been statistically verified at a 95% confidence level with a confidence interval of 5%. A confidence interval within +/- 5% is considered to be reliable.
The samples used for the CBA were selected by ranking the sites by impact and making the average cost of sites selected close to the mean. The sample sites were also proportioned by excavation length so that the percentages match the Halcrow study and are shown on Table 46 below.
The sample sites average duration for each work type was matched to the North Yorkshire predicted behavioural change in duration discussed later in the report. High and Low cost forecasts were derived, for High the highest duration of days was applied to the highest ranking site by impact, for Low the highest duration of days was applied to the lowest ranking site by impact. The average of the two forecasts was used to obtain the Total Delay of Works. Summarised impacts are provided in Appendix D.

Table 45 North Yorkshire Delay Modelling Daily Cost of Works

North Yorkshire							
Daily Cost of Lane Rental Street Works (£) by Data Type and Length							
Data Type	**Typical AADT**	**Average AADT**	**10m**	**30m**	**50m**	**100m**	**200m**
Rural	20,000	8,830	3,224	3,224	4,818	5,052	6,478
Urban	26,667	11,300	728	1,268	2,237	4,435	7,248
Average	23,334	10,065	1,976	2,246	3,528	4,744	6,863

Table 46 North Yorkshire Work Samples

North Yorkshire	Street Work Samples	
Work Type	**Sample Size**	**%**
Major	25	8%
Standard	43	13%
Minor with Excavation	137	41%
Urgent	126	38%
Totals	**331**	

Table 47 North Yorkshire Delay Modelling Percentage of Works by RC and Excavation Length

North Yorkshire	CBA Percentages of Works by RC and Excavation Length					
	10m	30m	50m	100m	200m	Total Samples
Sample Nos	281	2	17	13	16	331
Sample %	84.9%	0.6%	5.1%	3.9%	4.8%	
Halcrow Study %	84.7%	0.7%	5.2%	4.2%	5.2%	

Monetized Costs and Benefits

The socio-economic benefits shown for the opening year in summary on Table 48.
The statutory guidance on reliability benefits achieved from a reduction in the variability in travel times for road users is provided by WebTAG Unit 3.5.7, which recommends a mark-up on travel time-savings for urban roads of between 10% to 20%.
Recent research from Transport for London (TfL) GPS data for inner and central London estimated an uplift figure of 22% for changes in the mean journey time (Modelling journey time variability to assist in designing a journey time variability performance indicator for the transport for London Road Network, Jonathan Turner 2008). This supports the use of the upper end value of 20% for this study and is included as a reliability adjustment in the monetized costs and benefits.
The User Benefits are proportioned between consumer and business users for Vehicle Operating Cost and Travel Time Cost.
The QUADRO rates demonstrate much higher incidents of accidents within road works. With a slight increase in durations with shorter days at off-peak times there is a minor increase in accidents but this is a very low level and will not impact on casualties.

Table 48 North Yorkshire Monetized Costs and Benefits

North Yorkshire Sample Sites QUADRO Results Summary			
Delay Modelling Totals			
	Total Impact	**Consumer Vehicle Operating Cost**	**Consumer Travel Time Cost**
High	£ 1,935,687	£ 97,132	£ 927,466
Low	£ 1,197,471	£ 62,225	£ 566,182
Average	£ 1,566,579	£ 79,678	£ 746,824
	Business Vehicle Operating Cost	**Business Travel Time Total**	**PSP Bus & Coach Operating Cost**
High	£ 78,177	£ 597,984	£ 61,113
Low	£ 46,296	£ 358,742	£ 41,094
Average	£ 62,237	£ 478,363	£ 51,103
	Total Business	**Accident Cost**	**Carbon**
High	£ 815,004	-£ 257	£ 136,723
Low	£ 499,469	-£ 153	£ 93,725
Average	£ 657,236	-£ 205	£ 115,224

LANE RENTAL Scheme Operation

Introduction

This section assesses the process tasks required to establish and operate the North Yorkshire Lane Rental Scheme. It will consist of the following sections:

- Volumes and Charges, presentation of anticipated Lane Rental applications by work type
- Scheme Costs, presentation of staff costs associated with the Lane Rental Scheme

Volumes and Charges

The estimated number of works for Lane Rental by type was extracted from North Yorkshire Permit Scheme Evaluation Reports. Total Permits prorated to the percentage of Lane Rental streets and is shown on Table 49 below.

Table 49 Lane Rental Work Volumes

North Yorkshire Lane Rental Work Volumes		
Work Type	**Number**	**%**
Major	179	8%
Standard	308	13%
Minor with Excavation	984	41%
Urgent	901	38%
Totals	2,372	100%
Utility Works	2,206	93%
Highway Works	166	7%

The volumes with costings are based upon statutory maximum charges outlined in Table 5.
Lane Rental Charges are excluded from Public Accounts reporting in line with the DfT guidance.

Scheme Costs

There are two elements to the Lane Rental Scheme costs:

- Start-up costs
- Ongoing costs

Start-up costs

There are no one-off costs required to establish the Lane Rental Scheme.

Ongoing costs

The ongoing costs throughout the Lane Rental Scheme duration are set out on Table 50 below.

Table 50 Scheme Ongoing costs

Ongoing Costs	
Start-up Cost Centre	**Year 1 +**
Totals	**£150,000**

The operational policy outlined in Table 6 that proposed that no costs associated with the implementation of the Scheme will be carried on to future years and that that all set up costs are incurred in the month before the Lane Rental Scheme becomes operational.

Operational costs

The activities and functions of the North Yorkshire Permit Scheme staff will continue to be applied to the activities undertaken on lane rental streets, such as coordination and application assessments.
The DfT state that 'The permit scheme will continue to play a crucial role alongside lane rental charges, not least because of the need to ensure that activities taking place on the busiest streets and properly co-ordinated.'
However, the cost of the staff time will be met from lane rental charges instead of permit fees.
There will also be a slight increase as Section 50 works are included in the Lane Rental Scheme.
Section 50 works not Utility or Highway works but usually housing or industrial developer works.
To ensure consistency of approach the cost of staff time relative to the anticipated volume of activities on lane rental streets has been identified using the same DfT methodology employed by the North Yorkshire Permit Scheme.
The overall staffing costs of Lane Rental Scheme operation are based on information from North Yorkshire County Council and statutory rates and are outlined in Table 51.

Table 51 Staff Costing

Staff Costing			
Personnel Type	**Annual Salary**	**Final Hourly Rate**	**Total Annual Cost**
Street Works Officer	£24,000	£34.06	£55,728
Street Works Coordinator	£35,000	£49.68	£81,270.00
Traffic Manager	£55,000	£80.48	£131,670.00

National Insurance (%)	10
Pension (superannuation) (%)	19
Working hours/annum	1636
Employee Overhead Rate	1.8

The breakdown of costing per task for each of the three grades of Lane Rental Scheme workers is shown in Table 52 below.

Table 52 Breakdown of Employer Costing per Lane Rental Task

Employee Costing per Permit Task						
Street Works Officers						
	PAA	**Major**	**Standard**	**Minor**	**Immediate**	**TOTAL**
Hours per Permit	1.23	1.65	0.91	0.52	0.46	4.78
Total Permits	179.23	179.23	307.68	984.07	901.03	2551.23
Total Hours	221.05	295.73	281.01	513.35	415.07	12192.35
No. of Posts Required	0.14	0.18	0.17	0.31	0.25	1.06
Employee Costs	£ 7,530	£ 10,074	£ 9,572	£ 17,487	£ 14,139	£ 58,801
Street Works Coordinators						
	PAA	**Major**	**Standard**	**Minor**	**Immediate**	**TOTAL**
Hours per Permit	3.15	0.95	1.98	0.65	0.17	3.71
Total Permits	179.23	179.23	307.68	984.07	901.03	2551.23
Total Hours	565.18	170.27	608.69	634.72	150.17	9469.33
No. of Posts Required	0.35	0.10	0.37	0.39	0.09	0.82
Employee Costs	£ 28,076	£ 32,409	£ 30,237	£ 31,531	£ 28,870	£ 108,251
Traffic Managers						
	PAA	**Major**	**Standard**	**Minor**	**Immediate**	**TOTAL**
Hours per Permit	1.49	0.95	0.49	0.62	0.17	3.71
Total Permits	179.23	179.23	307.68	984.07	901.03	2551.23
Total Hours	266.46	170.27	151.28	606.84	150.17	9469.33
No. of Posts Required	0.16	0.10	0.09	0.37	0.09	0.82
Employee Costs	£ 21,445	£ 13,704	£ 12,175	£ 48,840	£ 12,086	£ 108,251

The overall costs associated with the operation of the Lane Rental Scheme are summarised in Table 53 below.

Table 53 Staff costing summary

Total Number of Employees and Costs		
Personnel Type	**No.**	**Salaries**
Street Works Officers	1.06	£58,801
Street Works Co-ordinators	1.86	£151,122
Traffic Managers	0.82	£108,251
TOTAL	**3.74**	**£318,174**

The final Lane Rental Scheme cost is shown in Table 54.

Table 54 Lane Rental Scheme costing summary

Lane Rental Scheme Cost Breakdown	
Cost Type	**Cost**
LR Application Employee Costs	£318,174
LR Application Operational Factor Costs	£150,000
Total LR Application Costs	£468,174

Financial Calculations

Introduction

This section will present the calculation of financial benefits for the statutory outputs:

- Public Accounts - Local Government Funding
- Public Accounts - Central Government Funding
- Transport Economic Efficiency
- Monetized Costs and Benefits

The calculations will be presented for the opening year and for the 25-year Scheme horizon and will be discounted where required.

Public Accounts - Local Government Funding

The Local Government public account reporting has the following categories:

- Revenue
- Operating Costs
- Investment Costs
- Developer and other contributions
- Grant / subsidy payments

Revenue

For the purposes of this Cost Benefit Analysis, the Lane Rental charge income is calculated by the multiplication of the estimated Lane Rental works volume and the maximum charge as shown on Table 6.

Operating costs

The operating costs for the Scheme are comprised of:

- Staff and operation costs
- Asset maintenance costs
- Unrecoverable fees
- Income

No provision has been made for on-going asset maintenance of the Lane Rental Scheme.
Estimated Volumes and Charges is shown below on Tables 55 and potential behavioural changes in Table 56 below. Table 55 calculates the number of chargeable days based on the assumption of the increase in duration of works due to reduced efficiency for Major, Standard and Minor work categories and the assumption of a decrease in duration of works to avoid charge periods for Immediate works.
A calculation is then made on the revenue generated from the daily lane rental charge and with assumptions of waivers and discounts to give a final anticipated annual revenue of the Lane Rental Scheme. The Lane Rental Implementation Outputs are shown on Table 57 below.
The Operational Costs for Year 1-10 are shown on Table 58 below.
Financial calculations for year 2 to 25 are shown on Table 60 to 63 below.

Table 55 North Yorkshire Lane Rental Scheme Anticipated Volumes, Impacts and Revenue

Current Permit Regime Volumes (7.27% of Network)		Estimated Lane Rental Volumes per Year						
Works Category	**Volume of Works Anticipated to be on Lane Rental Streets**	**Proposed Charge per day**	**Ave Durations of Works Before Lane Rental**	**Total Pre Lane Rental Works Days**	**Anticipated additional days due to reduced efficiency. Extra out of hours working**	**Total Immediate + Urgent Work Days Completed without Charge**	**Total Immediate + Urgent Work Days Charged**	**Total Work Days Moved Outside Charge Periods**
Major	179	2,500	17	3,047	305	-	-	1,523
Standard	308	2,500	9	2,769	277	-	-	1,385
Minor	984	2,500	3	2,952	295	-	-	1,476
Urgent	901	2,500	5	4,505	-	3,829	676	-
Sub Total	**2372**			**13,273**		**3,829**	**676**	**4,384**

Works Category	Estimated Lane Rental Revenue per Year						
	Total Work Days Potentially Charged	**Total Days Triggering a Waiver**	**Revenue cost of waivers**	**Total Work Days triggering a discount (min 50%)**	**Revenue cost of discounts**	**Final Anticipated Chargeable Days**	**Final Anticipated Revenue**
Major	1,523	762	£ 1,904,335	305	£ 380,867	457	£ 1,142,601
Standard	1,385	692	£ 1,730,698	277	£ 346,140	415	£ 1,038,419
Minor	1,476	738	£ 1,845,124	295	£ 369,025	443	£ 1,107,074
Urgent	676	-	-	-	-	676	£ 1,689,422
Sub Total	**5,060**	**2,192**	**5,480,157**	**877**	**1,096,031**	**1,991**	**4,977,516**

Table 56 Potential Behavioural Changes

Potential Behavioural Changes	Assumptions / Anticipated Behavioural Changes	Assumption Source
Anticipated additional days due to reduced efficiency (shorter days etc)	10%	West Sussex
Percentage of Immediate works being completed before charge periods apply	85%	West Sussex
Works being undertaken outside the Lane Rental Charge periods, such as out of hours (not charged)	50%	West Sussex
Works being undertaken in a way that triggers a waiver, such as the use of new technology	50%	Estimate
Works being undertaken in a way that triggers a discount, such as collaborative working	20%	Estimate

Table 57 Lane Rental Implementation Outputs

Lane Rental Scheme Implementation Outputs	
Total Works Days on Lane Rental Streets	**14,150**
Total Works Days Charged After Behavioural Change	**1,991**
Percentage of Works on Lane Rental Streets Charged	**15%**
Potential Volume of Works on Lane Rental Streets (A)	**2,372**
Percentage of Network Lane Rental (B)	**7.27%**
Pre Behavioural Change Immediate Days Worked (C)	**4,505**
Post Behavioural Change Days Worked on Lane Rental Streets (D)	**14,150**
Increase in Days Worked (reduced efficiency)	**877**
Total Number of Days Worked at Lane Rental Times (F)	**5,060**
Potential Pre waiver / discount work days (G)	**4,384**

Potential Cost of Waivers issued (H)	**£5,480,157**
Potential Cost of Discounts issued (I)	**£1,096,031**
Anticipated Total Revenue (J)	**£4,977,516**
Anticipated Net Revenue after Operational Costs (K)	**£4,509,342**
Operational Costs as a % of Revenue (L)	**9.41%**
Total Operational Costs (M)	**£468,174**
Total Additional Staff Required (N)	**4**
Total Staff Costs (Inc internal operating factors) (O)	**£318,174**
Total Operating Factors (External Cost (Evaluation)) (P)	**£150,000**
Set-up Costs including Consultancy, Analysis and internal time	**£150,000**
Optimism Bias. Estimate from Management	**30%**

Authority Volume and Costs	
Works done by Utilities	**2,206**
Works done by Authority	**166**
Potential Revenue from Utilities	**£4,629,090**
Potential Revenue (cost) from the Authority	**£348,426**

Optimism Bias	**30%**
Reduction	**£1,493,254.92**
Management Figure	**£3,484,261.49**

Table 58 Financial Calculations Annual Cost

North Yorkshire Financial Calculations											
	Opening	Closing Values									
Annual Cost of Lane Rental Scheme - Closing Values	**Year-0**	**Year-1**	**Year-2**	**Year-3**	**Year-4**	**Year-5**	**Year-6**	**Year-7**	**Year-8**	**Year-9**	**Year-10**
Lane Rental Costs	468,174	608,627	588,045	568,159	548,946	530,383	512,447	495,118	478,375	462,198	446,568
Set-up Costs	150,000	150,000	-	-	-	-	-	-	-	-	-
Lane Rental Fee Charges for Highway Authorities	348,426	452,954	437,637	422,837	408,539	394,723	381,375	368,478	356,018	343,978	332,346
Annual Cost For Recovery		1,211,581	1,025,682	990,997	957,485	925,106	893,822	863,597	834,393	806,177	778,915
Cost Recovery Price Lane Rental charge		5,008,429	694,795	588,045	568,159	548,946	530,383	512,447	495,118	478,375	462,198
Cost Recovery Price Lane Rental charge (prior year data)		212	-135	40	42	41	39	38	37	36	34
(Over) / under-recovery £		-3,796,849	330,887	402,952	389,325	376,160	363,439	351,149	339,275	327,802	316,716
(Over) / under-recovery £ (prior year)	-	-3,796,849	330,887	402,952	389,325	376,160	363,439	351,149	339,275	327,802	316,716
Annual Income Max Charges	4,629,090	4,629,090	4,472,551	4,321,305	4,175,174	4,033,985	3,897,570	3,765,768	3,638,423	3,515,385	3,396,507
Overall Scheme Cost	468,174	-3,188,222	918,932	971,111	938,272	906,543	875,887	846,267	817,650	790,000	763,285
Profit/Loss	4,160,916	7,817,312	3,553,619	3,350,194	3,236,902	3,127,442	3,021,683	2,919,501	2,820,773	2,725,385	2,633,222

Table 59 Financial Calculations First Year Cost

Financial Calculations	Year	Year-1											
Annual Cost of Lane Rental Scheme - Closing Values	Month	Month-1	Month-2	Month-3	Month-4	Month-5	Month-6	Month-7	Month-8	Month-9	Month-10	Month-11	Month-12
Lane Rental Costs	50,719	50,719	50,719	50,719	50,719	50,719	50,719	50,719	50,719	50,719	50,719	50,719	50,719
Lane Rental Volumes	-	2,551	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913
Cost Recovery Price Lane Rental income	-	212.23	212.23	212.23	212.23	212.23	212.23	212.23	212.23	212.23	212.23	212.23	212.23
Multiplied by number of Works	-	541,452	406,089	406,089	406,089	406,089	406,089	406,089	406,089	406,089	406,089	406,089	406,089
Income derived on Cost recovery basis	-	541,452	406,089	406,089	406,089	406,089	406,089	406,089	406,089	406,089	406,089	406,089	406,089
Income derived from Max Charges	385,758	385,758	385,758	385,758	385,758	385,758	385,758	385,758	385,758	385,758	385,758	385,758	385,758
Lane Rental Scheme - Operational Costs		-50,719	-50,719	-50,719	-50,719	-50,719	-50,719	-50,719	-50,719	-50,719	-50,719	-50,719	-50,719

Table 60 Financial Calculations Second Year Cost (Year 2)

Financial Calculations	Year	Year-2											
Annual Cost of Lane Rental Scheme - Closing Values	Month	Month-1	Month-2	Month-3	Month-4	Month-5	Month-6	Month-7	Month-8	Month-9	Month-10	Month-11	Month-12
Lane Rental Costs	49,004	49,004	49,004	49,004	49,004	49,004	49,004	49,004	49,004	49,004	49,004	49,004	49,004
Lane Rental Volumes	-	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913
Cost Recovery Price Lane Rental income	-	(135.10)	(135.10)	(135.10)	(135.10)	(135.10)	(135.10)	(135.10)	(135.10)	(135.10)	(135.10)	(135.10)	(135.10)
Multiplied by number of Works	-	258,504	258,504	-258,504	-258,504	-258,504	-258,504	-258,504	-258,504	-258,504	-258,504	-258,504	258,504
Income derived on Cost recovery basis	-	258,504	258,504	258,504	258,504	258,504	258,504	258,504	258,504	258,504	258,504	258,504	258,504
Income derived from Max Charges	372,713	372,713	372,713	372,713	372,713	372,713	372,713	372,713	372,713	372,713	372,713	372,713	372,713
Lane Rental Scheme - Operational Costs	-	-49,004	-49,004	-49,004	-49,004	-49,004	-49,004	-49,004	-49,004	-49,004	-49,004	-49,004	-49,004

Table 61 Financial Calculations Third Year Cost (Year 3)

Financial Calculations 25% Reduction in Durations	Year	Year-3											
Annual Cost of Lane Rental Scheme - Closing Values	**Month**	**Month-1**	**Month-2**	**Month-3**	**Month-4**	**Month-5**	**Month-6**	**Month-7**	**Month-8**	**Month-9**	**Month-10**	**Month-11**	**Month-12**
Lane Rental Costs	36,420	36,420	36,420	36,420	36,420	36,420	36,420	36,420	36,420	36,420	36,420	36,420	36,420
Lane Rental Volumes	-	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913
Cost Recovery Price Lane Rental income	-	14.63	14.63	14.63	14.63	14.63	14.63	14.63	14.63	14.63	14.63	14.63	14.63
Multiplied by number of Works	-	27,994	27,994	27,994	27,994	27,994	27,994	27,994	27,994	27,994	27,994	27,994	27,994
Income derived on Cost recovery basis	-	27,994	27,994	27,994	27,994	27,994	27,994	27,994	27,994	27,994	27,994	27,994	27,994
Income derived from Max Charges	387,214	387,214	387,214	387,214	387,214	387,214	387,214	387,214	387,214	387,214	387,214	387,214	387,214
Lane Rental Scheme - Operational Costs	-	-36,420	-36,420	-36,420	-36,420	-36,420	-36,420	-36,420	-36,420	-36,420	-36,420	-36,420	-36,420

Financial Calculations	Year	Year-3											
Annual Cost of Lane Rental Scheme - Closing Values	**Month**	**Month-1**	**Month-2**	**Month-3**	**Month-4**	**Month-5**	**Month-6**	**Month-7**	**Month-8**	**Month-9**	**Month-10**	**Month-11**	**Month-12**
Lane Rental Costs	47,347	47,347	47,347	47,347	47,347	47,347	47,347	47,347	47,347	47,347	47,347	47,347	47,347
Lane Rental Volumes	-	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913
Cost Recovery Price Lane Rental Income	-	40.02	40.02	40.02	40.02	40.02	40.02	40.02	40.02	40.02	40.02	40.02	40.02
Multiplied by number of Works	-	76,578	76,578	76,578	76,578	76,578	76,578	76,578	76,578	76,578	76,578	76,578	76,578
Income derived on Cost recovery basis	-	76,578	76,578	76,578	76,578	76,578	76,578	76,578	76,578	76,578	76,578	76,578	76,578
Income derived from Max Charges	360,109	360,109	360,109	360,109	360,109	360,109	360,109	360,109	360,109	360,109	360,109	360,109	360,109
Lane Rental Scheme - Operational Costs	-	-47,347	-47,347	-47,347	-47,347	-47,347	-47,347	-47,347	-47,347	-47,347	-47,347	-47,347	-47,347

Table 62 Financial Calculations 4-14 Year Cost

Financial Calculations	Year	Year-4	Year-5	Year-6	Year-7	Year-8	Year-9	Year-10	Year-11	Year-12	Year-13	Year-14
Annual Cost of Lane Rental Scheme - Closing Values												
Lane Rental Costs	-	548,946	530,383	512,447	495,118	478,375	462,198	446,568	431,467	416,876	402,779	389,158
Lane Rental Volumes	-	22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961
Cost Recovery Price Lane Rental income	-	42.29	40.86	39.48	38.15	36.86	35.61	34.41	34.41	34.41	34.41	34.41
Multiplied by number of Works	-	971,111	938,272	906,543	875,887	846,267	817,650	790,000	790,000	790,000	790,000	790,000
Income derived on Cost recovery basis	-	971,111	938,272	906,543	875,887	846,267	817,650	790,000	790,000	790,000	790,000	790,000
Income derived from Max Charges	-	4,175,174	4,033,985	3,897,570	3,765,768	3,638,423	3,515,385	3,396,507	3,396,507	3,396,507	3,396,507	3,396,507
Lane Rental Scheme - Operational Costs		-548,946	-530,383	-512,447	-495,118	-478,375	-462,198	-446,568	-431,467	-416,876	-402,779	-389,158

Table 63 Financial Calculations 15-25 Year Cost

Financial Calculations	Year	Year-15	Year-16	Year-17	Year-18	Year-19	Year-20	Year-21	Year-22	Year-23	Year-24	Year-25
Annual Cost of Lane Rental Scheme - Closing Values												
Lane Rental Costs	-	289,230	279,449	269,999	260,869	252,047	243,524	235,288	227,332	219,644	212,217	205,040
Lane Rental Volumes		22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961
Cost Recovery Price Lane Rental income		14.94	14.94	14.94	14.94	14.94	14.94	14.94	14.94	14.94	14.94	14.94
Multiplied by number of Works		343,093	343,093	343,093	343,093	343,093	343,093	343,093	343,093	343,093	343,093	343,093
Income derived on Cost recovery basis		343,093	343,093	343,093	343,093	343,093	343,093	343,093	343,093	343,093	343,093	343,093
Income derived from Max Charges		3,075,019	2,971,033	2,870,563	2,773,491	2,679,701	2,589,083	2,501,530	2,416,937	2,335,205	2,256,237	2,179,939
Lane Rental Scheme - Operational Costs		-289,230	-279,449	-269,999	-260,869	-252,047	-243,524	-235,288	-227,332	-219,644	-212,217	-205,040

Financial Calculations	Year	Year-15	Year-16	Year-17	Year-18	Year-19	Year-20	Year-21	Year-22	Year-23	Year-24	Year-25
Annual Cost of Lane Rental Scheme - Closing Values												
Lane Rental Costs	-	375,998	363,284	350,999	339,129	327,661	316,581	305,875	295,531	285,538	275,882	266,552
Lane Rental Volumes		22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961	22,961
Cost Recovery Price Lane Rental Income		34.41	34.41	34.41	34.41	34.41	34.41	34.41	34.41	34.41	34.41	34.41
Multiplied by number of Works		790,000	790,000	790,000	790,000	790,000	790,000	790,000	790,000	790,000	790,000	790,000
Income derived on Cost recovery basis		790,000	790,000	790,000	790,000	790,000	790,000	790,000	790,000	790,000	790,000	790,000
Income derived from Max Charges		2,859,768	2,763,061	2,669,624	2,579,347	2,492,122	2,407,848	2,326,423	2,247,752	2,171,741	2,098,300	2,027,343
Lane Rental Scheme - Operational Costs		-375,998	-363,284	-350,999	-339,129	-327,661	-316,581	-305,875	-295,531	-285,538	-275,882	-266,552

Investment costs

There are no investment costs incurred.

Developer and other contributions

There are no developer or other contributions in the Local Government Public accounts reporting.

Grant / subsidy payments

There are no grant or subsidy payments in the Local Government Public accounts reporting.

Public Accounts - Central Government Funding

The Central Government public account reporting has the following categories:

- Revenue
- Operating costs
- Investment costs
- Developer and other contributions
- Grant / subsidy payments
- Indirect tax revenues

Revenue

There is no revenue in the Central Government Public accounts reporting.

Operating costs

There are no operating costs in the Central Government Public accounts reporting.

Investment costs

There are no investment costs in the Central Government Public accounts reporting.

Developer and other contributions

There are no developer or other contributions in the Central Government Public accounts reporting.

Grant / subsidy payments

There are no developer or other contributions in the Central Government Public accounts reporting.

Indirect tax revenues

The indirect tax revenue calculation is based upon the loss of fuel taxation revenues to Central Government from the more efficient functioning of the highway network from the reduction in road works.

Transport Economic Efficiency

The Transport Economic Efficiency (TEE) table reports on user benefits by consumer and business sections for time, fuel and non-fuel vehicle operating impacts.

Consumer User Benefits

The consumer user benefit consists of private car and bus travel time, and vehicle operating costs.

Business User Benefits

The business user benefits are for commercial car travel and private sector providers for Travel time and vehicle operating costs.

Statutory Outputs

Introduction

This section presents the statutory outputs required for the North Yorkshire Lane Rental Scheme Cost Benefit analysis.
The results are presented in the opening year and over the 25-year horizon in 2010 prices as advised in WebTAG.
The discounted totals are presented at the bottom of each table. The calculation basis of each category has been presented in Sections 5, 6 and 0.
The statutory outputs consist of three categories:

- Transport Economic Efficiency (TEE)

- Public Accounts
- Cost Benefit Analysis

Transport Economic Efficiency (TEE)

The TEE table presents the net user benefits of travel time, fuel and non-fuel vehicle operating costs disaggregated by trip purpose between non-business consumers and business users, including transport operators and are below on Tables 64 and 65.

Public Accounts

The Public Accounts tables show the net impact to Local and Central Government and are below on Tables 66 and 67.

Cost Benefit Analysis

The items for inclusion in the central case Cost Benefit Analysis BCR and NPV are based upon the guidance specified in Annex C of TMA 2004 Decision-making and development (2nd edition) for permit schemes which specifies:

- Permit Fees are excluded from the Public Accounts table;
- Indirect Taxation is excluded from the Public Accounts table; and
- Permit Fees are not treated as a dis-benefit to business.

Revenue received from Lane Rental has been assumed to be reinvested in the authority and therefore offset in the economic appraisal as a capital cost. Tables 68 and 69 are below.

Statutory Cost Benefit Analysis

This study has addressed all aspects of the implementation of the North Yorkshire Lane Rental Scheme through both the direct financial and socio-economic criteria to quantify the overall economic merit of the Scheme.
The Scheme has a Benefit Cost Ratio of 3.16 and Net Present Value of £18,087,730 in current prices which are 2010 prices.
The appraisal results demonstrate that the introduction of the Lane Rental Scheme will have a net positive economic benefit.

Table 64 TEE Table Year 1

Transport Economic Efficiency (TEE) Table Year 1

Consumers	**ALL MODES**		**ROAD**	**Bus & Coach**	**RAIL**	**Other**
User benefits	**TOTAL**		**Private Cars and LGVs**	**Passengers**	**Passengers**	
Travel time	746,824		718,431	28,393	-	-
Vehicle operating costs	79,678		79,678			-
User charges	-		-	-	-	-
During Construction & Maintenance	-		-	-	-	-
NET CONSUMER BENEFITS	826,502	*-1*	798,110	28,393	-	-
Business						
User benefits			**Goods Vehicles**	**Business Cars & LGVs**	**Passengers**	**Freight**	**Passengers**	
Travel time	520,408		285,147	234,758	502	-	-	-
Vehicle operating costs	62,237		54,408	7,829				-
User charges	-		-	-	-	-	-	-
During Construction & Maintenance	-		-	-	-	-	-	-
Subtotal	582,644	*-2*	339,555	242,587	502	-	-	-

Private sector provider impacts					Freight	Passengers	
Revenue	-			-	-	-	-
Operating costs	51,103			51,103	-	-	-
Investment costs	-			-	-	-	-
Grant/subsidy	-			-	-	-	-
Subtotal	51,103	-3		51,103	-		-
Other business impacts							
Developer contributions	-	-4	-	-	-	-	-

NET BUSINESS IMPACT	633,748	*(5) = (2) + (3) + (4)*

TOTAL

Present Value of Transport Economic Efficiency Benefits	1,460,250	*(6) = (1) + (5)*

Notes: Benefits appear as positive numbers, while costs appear as negative numbers. All entries are discounted present values, in 2010 prices and values. All values £s.

Table 65 TEE Table 25 Years

Transport Economic Efficiency (TEE) Table 25 Years

Consumers	**ALL MODES**		**ROAD**	**Bus & Coach**	**RAIL**	**Other**
User benefits	**TOTAL**		**Private Cars and LGVs**	**Passengers**	**Passengers**	
Travel time	12,739,601		12,255,268	484,333	-	-
Vehicle operating costs	1,359,180		1,359,180			-
User charges	-		-	-	-	-
During Construction & Maintenance	-		-	-	-	-
NET CONSUMER BENEFITS	14,098,781	-1	13,614,449	484,333	-	-

Business								
User benefits			**Goods Vehicles**	**Business Cars & LGVs**	**Passengers**	**Freight**	**Passengers**	
Travel time	8,877,305		4,864,149	4,004,585	8,572	-	-	-
Vehicle operating costs	1,061,657		928,108	133,549				-
User charges	-		-	-	-	-	-	-
During Construction & Maintenance	-		-	-	-	-	-	-
Subtotal	9,938,963	-2	5,792,257	4,138,134	8,572	-	-	-

					Freight	**Passengers**	
Revenue	-			-	-	-	-

Operating costs	871,737		871,737	-	-	-
Investment costs			-	-	-	-
Grant/subsidy			-	-	-	-
Subtotal	871,737	*-3*	871,737	-	-	-

Developer contributions	-	*-4*	-	-	-	-	-

NET BUSINESS IMPACT	10,810,699	*(5) = (2) + (3) + (4)*

TOTAL

Present Value of Transport Economic Efficiency Benefits	24,909,480	*(6) = (1) + (5)*

Notes: Benefits appear as positive numbers, while costs appear as negative numbers. All entries are discounted present values, in 2010 prices and values. All values in £s.

Table 66 PA Table Year 1

Public Accounts (PA) Table Year 1

	ALL MODES		ROAD	BUS and COACH	RAIL	OTHER
Local Government Funding	**TOTAL**		**INFRASTRUCTURE**			
Revenue	-3,675,655		-			-3,675,655
Operating Costs	483,270		-			483,270
Investment Costs	3,794,761		-			3,794,761
Developer and Other Contributions	-		-	-	-	-
Grant/Subsidy Payments	-		-	-	-	-
NET IMPACT	602,375	*-7*	-	-	-	602,375
Central Government Funding: Transport						
Revenue	-		-			-
Operating costs	-		-			-
Investment Costs	-		-			-
Developer and Other Contributions	-		-	-	-	-
Grant/Subsidy Payments	-		-	-	-	-
NET IMPACT	-	*-8*	-	-	-	-
Central Government Funding: Non-Transport						
Indirect Tax Revenues	0	*-9*	0	-	-	-
TOTALS						
Broad Transport Budget	602,375	*(10) = (7) + (8)*				
Wider Public Finances	0	*(11) = (9)*				

Notes: Costs appear as positive numbers, while revenues and 'Developer and Other Contributions' appear as negative numbers.
All entries are discounted present values in 2010 prices and values. All values in £s.

Table 67 PA Table 25 Years

Public Accounts (PA) Table 25 Year

	ALL MODES		ROAD	BUS and COACH	RAIL	OTHER
Local Government Funding	**TOTAL**		**INFRASTRUCTURE**			
Revenue	-63,582,369		-			-63,582,369
Operating Costs	8,243,803		-			8,243,803
Investment Costs	63,701,474		-			63,701,474
Developer and Other Contributions	-		-	-	-	-
Grant/Subsidy Payments	-		-	-	-	-
NET IMPACT	8,362,908	*-7*	-	-	-	8,362,908
Central Government Funding: Transport						
Revenue	-		-			-
Operating costs	-		-			-
Investment Costs	-		-			-
Developer and Other Contributions	-		-	-	-	-
Grant/Subsidy Payments	-		-	-	-	-
NET IMPACT	-	*-8*	-	-	-	-
Central Government Funding: Non-Transport						
Indirect Tax Revenues	0	*-9*	0	-	-	-
TOTALS						
Broad Transport Budget	8,362,908	*(10) = (7) + (8)*				
Wider Public Finances	0	*(11) = (9)*				

Notes: Costs appear as positive numbers, while revenues and 'Developer and Other Contributions' appear as negative numbers.
All entries are discounted present values in 2010 prices and values. All values in £s.

Table 68 AMCB Year 1

Analysis of Monetised Costs and Benefits Year 1

Noise	-		*-12*
Local Air Quality	-		*-13*
Greenhouse Gases	115,224		*-14*
Journey Quality	-		*-15*
Physical Activity	-		*-16*
Accidents	-205		*-17*
Economic Efficiency: Consumer Users (Commuting)	826,502	*(1a)*	
Economic Efficiency: Consumer Users (Other)	-	*(1b)*	
Economic Efficiency: Business Users and Providers	633,748		*-5*
Wider Public Finances (Indirect Taxation Revenues)	21,504	*- (11) - sign changed from PA table, as PA table represents costs, not benefits*	
Present Value of Benefits (see notes) (PVB)	1,553,765	*(PVB) = (12) + (13) + (14) + (15) + (16) + (17) + (1a) + (1b) + (5) - (11)*	
Broad Transport Budget	602,375		
Present Value of Costs (see notes) (PVC)	602,375		
OVERALL IMPACTS			
Net Present Value (NPV)	951,390		
Benefit to Cost Ratio (BCR)	2.58		

Note : This table includes costs and benefits which are regularly or occasionally presented in monetised form in transport appraisals, together with some where monetisation is in prospect. There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented above does NOT provide a good measure of value for money and should not be used as the sole basis for decisions. All values in £s.

Table 69 AMCB 25 Years

Analysis of Monetised Costs and Benefits 25 Years

Noise	-	*-12*
Local Air Quality	-	*-13*
Greenhouse Gases	1,911,479	*-14*
Journey Quality	-	*-15*
Physical Activity	-	*-16*
Accidents	-3,500	*-17*
Economic Efficiency: Consumer Users (Commuting)	14,098,781	*(1a)*
Economic Efficiency: Consumer Users (Other)	-	*(1b)*
Economic Efficiency: Business Users and Providers	10,810,699	*-5*
Wider Public Finances (Indirect Taxation Revenues)	366,821	*- (11) - sign changed from PA table, as PA table represents costs, not benefits*
Present Value of Benefits (see notes) (PVB)	26,450,638	*(PVB) = (12) + (13) + (14) + (15) + (16) + (17) + (1a) + (1b) + (5) - (11)*
Broad Transport Budget	8,362,908	*-10*
Present Value of Costs (see notes) (PVC)	8,362,908	*(PVC) = (10)*
OVERALL IMPACTS		
Net Present Value (NPV)	18,087,730	NPV=PVB-PVC
Benefit to Cost Ratio (BCR)	3.16	BCR=PVB/PVC

Note : This table includes costs and benefits which are regularly or occasionally presented in monetised form in transport appraisals, together with some where monetisation is in prospect. There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented above does NOT provide a good measure of value for money and should not be used as the sole basis for decisions. All values in £s.

North Yorkshire Lane Rental Scheme CBA Results

Introduction

This section summarises the findings of the North Yorkshire Lane Rental Scheme Cost Benefit Analysis and consider the impact on the Highway Authority.

North Yorkshire Highway Authority Cost Benefit Analysis

In addition to the statutory results presentation, an additional BCR and NPV is presented from the perspective of the Highways Authority (Table 70), which includes the cost recovery from Lane Rental charges and includes the effect of indirect taxation. The summary of benefits is presented in Table 71

Table 70 Highway Authority North Yorkshire Cost Benefit results

Highway Authority Assessment	Opening Year	25 Year
Net Present Value of Benefits	£1,553,765	£26,450,638
Net Present Value of Costs	£602,375	£8,362,908
Net Present Value of Permit Scheme	£951,390	£18,087,730
Benefit to Cost Ratio	**2.58**	**3.16**

Table 71 Benefits Summary Values and Percentage impact 25 Years

Benefits	Value	Percentage of Total Benefit
Consumer Travel Time	£12,739,601	48%
Consumer Vehicle Operating Costs	£1,359,180	5%
Business Travel Time	£8,877,305	34%
Business Vehicle Operating Costs	£1,061,657	4%
Private Sector Provider Operating Costs	£871,737	3%
Reduction in Fuel Revenue	£366,821	1%
Greenhouse Gases	£1,911,479	7%
Accidents	-£3,500	0%
Net Present Value of Benefits	**£26,450,638**	

The Scheme has a Benefit Cost Ratio of 3.16 and Net Present Value of £18.0m 2010 prices which suggest the North Yorkshire Lane Rental Scheme would be both viable and beneficial for the Highway Authority and the population of North Yorkshire.

The higher BCR and NPV are attributable to the net benefit of adding Lane Rental charges and indirect taxation to the assessment and the difference in opening year.

The projected discounted benefits in the opening year of £1.55m includes a reliability adjustment of 20% for urban roads and has been assessed at a local level. This is an increase in the estimated suggested benefit in the DfT report in Section 3.7 however this is using local not national data.

Sensitivity Analysis

A series of sensitivity tests have been performed on the 25-year appraisal to further understand the economic performance of the Scheme and its effects at different policy levels.

Table 72 Works Moving Off-Peak Sensitivity

Works Off-peak Sensitivity	
Works Off-peak	**BCR**
5% Off-peak	-0.31
10% Off-peak	0.07
15% Off-peak	0.46
20% Off-peak	0.85

25% Off-peak	1.23
30% Off-peak	1.62
35% Off-peak	2
40% Off-peak	2.39
45% Off-peak	2.78
50% Off-peak	3.16

Table 73 below presents the Present Value of Benefits (PVB) and Present Value of Costs (PVC) achieved based the % of Lane Rental to the network.

Table 73 % Lane Rental Sensitivity

% Lane Rental Sensitivity		
%	**PVB**	**PVC**
1	3,642,445	3,531,517
2	7,284,889	4,302,669
3	10,927,334	5,073,821
4	14,569,778	5,844,973
5	18,212,223	6,616,124
6	21,854,667	7,387,276
7	25,497,112	8,158,428
8	29,139,557	8,929,580
9	32,782,001	9,700,732
10	36,424,446	10,471,883

APPENDIX A

Traffic Sensitive Network. See attached.

APPENDIX B

Lane Rental 7.27% Congested Streets. See attached.

APPENDIX C

QUADRO outputs. See attached.

APPENDIX D

Sample Sites QUADRO Results Summary. See attached.

North Yorkshire Lane Rental Scheme
Cost Benefit Analysis Summary – March 2024

Costs

The costs associated with the scheme include the following capital, operating and revenue expenditure in 2010 prices in accordance with the Department for Transport's WebTAG.

- Total Capital Expenditure **None additional to Permit Scheme**
- Year 1 Operating Expenditure **£468,174**
- Annual Operating Expenditure (After Year 1) **£468,174**
- Year 1 Revenue Expenditure **£4,977,516**
- Annual Revenue Expenditure (After Year 1) **£4,977,516**

North Yorkshire County Council will incur the capital and operating expenditure with the capital cost for the first year only. Revenue is derived from the Lane Rental charges to Utility companies, Developers, and the Highway Authority.

Business Case

The development of a detailed Cost Benefit Analysis (Cost Benefit Analysis) is a requirement for making a Lane Rental Scheme application.
The analysis assesses the impact of Lane Rental charges over the full range of required social and economic variables that have been specifically agreed in consultation with the UK Department for Transport (DfT).
An effective Cost Benefit Analysis is a mechanism to assess the benefits and costs of an investment both in terms of its overall viability and in relation to other options.
The legislative guidance used for the study is contained within:

- Guidance. Lane rental schemes: guidance for English highway authorities, Updated 17 March 2024
- Lane Rental Schemes Guidance for English Local Highway Authorities DfT July 2021
- WebTAG user and provider impacts (TAG Unit A1-3 May 2022).
- Department of Transport's (DfT) Halcrow study "Assessing the Extent of Streetworks and Monitoring Effectiveness of Section 74 in Reducing Disruption Volume 3 – Estimation of Cost of the Delay from Utilities' Street Works, June 2004"
- Chapter 8 of the Traffic Signs Manual DfT 2009
- Quadro User Manual July 2021
- Street Works (Charges for Occupation of the Highway) (England) Regulations 2012 ("the Regulations") made under Section 74A of NRSWA

QUADRO software is able to appraise individual works that are planned in the future on different types of road by modelling the delay experienced by road users, quantify the delay and estimate the cost of the delay.
The software is able to calculate and convert delays in to monetary figures as detailed in WebTAG Unit 3.5.6. with assumptions in regard to valuation of time, operating costs and accidents.
Users are required to input base link specific details including network classification, traffic flows, road type characteristics and any diversion routes. Street work details including site length, works type such as lane closures and shuttle working. The latest version QUADRO 2021 version 4 release July 2021 has been be used for this Cost Benefit Analysis.
The key general economic assumptions included with the Cost Benefit Analysis are as follows:

- The scheme is anticipated to open in **Spring 2025**
- A **25** year appraisal length is assumed in accordance with DfT guidance
- A Discount Rate of **3.5%**, Combined Risk and Optimism Bias Factor **38%** in accordance with DfT guidance

Summary of Appraisal

The Cost Benefit Analysis determined the following key impacts of the East Sussex Lane Rental Scheme:

- The total number of works impacted by the scheme amounted to **2,372** of various length and duration.

- The annual delay cost for Road works impacted by the scheme undertaken in North Yorkshire was **£6,188,555** including a **20%** uplift in time reliability costs for urban roads.
- The number of Major, Standard and Immediate works moving to off peak times is assumed as **50%**.
- The Lane Rental scheme benefit is **£26,450,638** with costs of **£8,362,908** and a Net Present Value (NPV) of **£18,087,730** giving a Benefit:Cost Ratio of **3.16:1**. A breakdown of benefits is shown on Table 1 below.
- A summary of the Cost Benefit Analysis consistent with WebTAG is shown on Table 2 below.

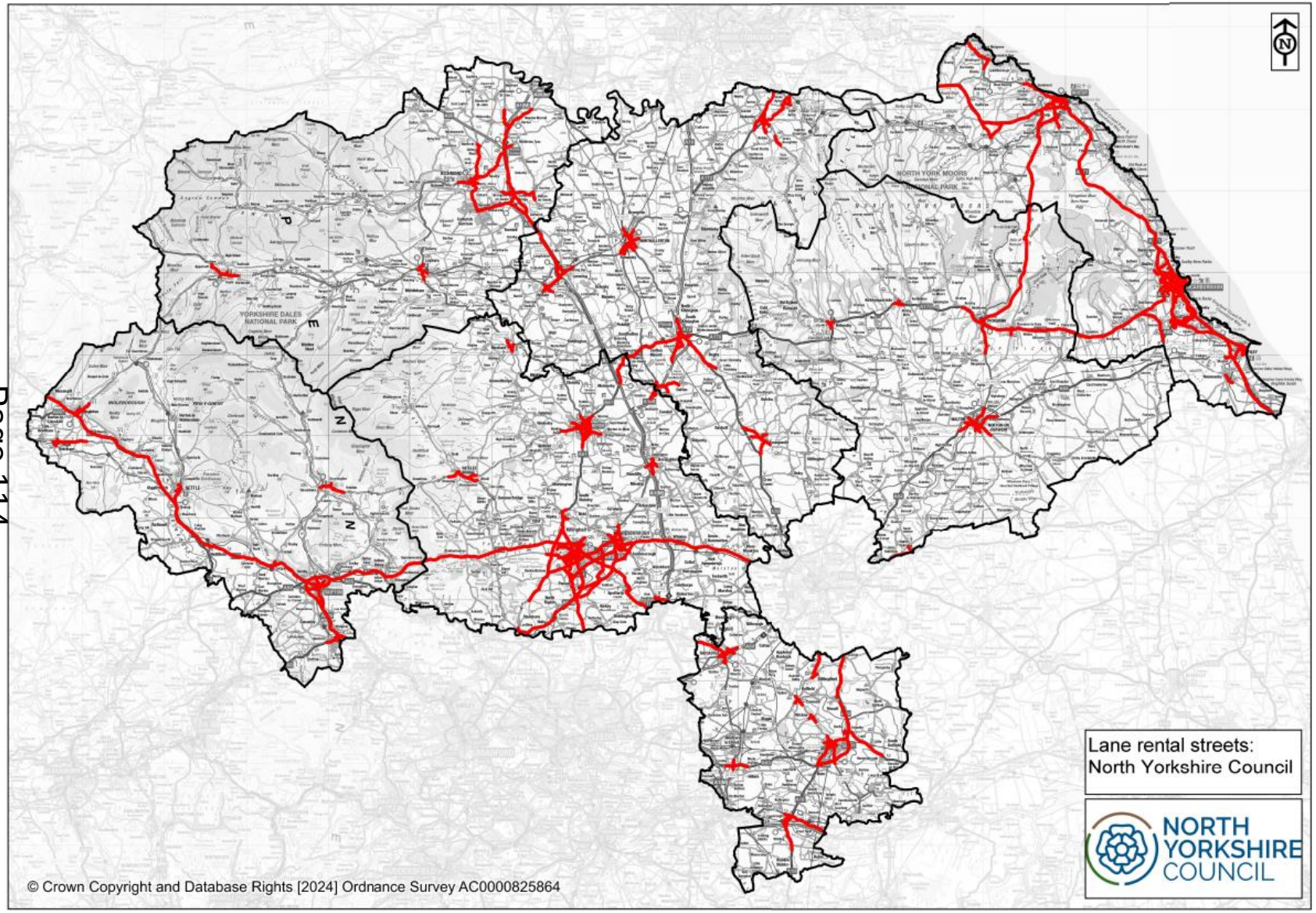
Table 1 Benefits Summary Values over 25 Years

Benefits	**Value**	**Percentage of Total Benefit**
Consumer Travel Time	£12,739,601	48%
Consumer Vehicle Operating Costs	£1,359,180	5%
Business Travel Time	£8,877,305	34%
Business Vehicle Operating Costs	£1,061,657	4%
Private Sector Provider Operating Costs	£871,737	3%
Reduction in Fuel Revenue	£366,821	1%
Greenhouse Gases	£1,911,479	7%
Accidents	-£3,500	0%
Net Present Value of Benefits	**£26,450,638**	

Table 2: Summary of Cost Benefit Analysis
Analysis of Monetised Costs and Benefits 25 Years

Noise	-	*-12*
Local Air Quality	-	*-13*
Greenhouse Gases	1,911,479	*-14*
Journey Quality	-	*-15*
Physical Activity	-	*-16*
Accidents	-3,500	*-17*
Economic Efficiency: Consumer Users (Commuting)	14,098,781	*(1a)*
Economic Efficiency: Consumer Users (Other)	-	*(1b)*
Economic Efficiency: Business Users and Providers	10,810,699	*-5*
Wider Public Finances (Indirect Taxation Revenues)	366,821	*- (11) - sign changed from PA table, as PA table represents costs, not benefits*
Present Value of Benefits (see notes) (PVB)	26,450,638	*(PVB) = (12) + (13) + (14) + (15) + (16) + (17) + (1a) + (1b) + (5) - (11)*
Broad Transport Budget	8,362,908	*-10*
Present Value of Costs (see notes) (PVC)	8,362,908	*(PVC) = (10)*
OVERALL IMPACTS		
Net Present Value (NPV)	18,087,730	NPV=PVB-PVC
Benefit to Cost Ratio (BCR)	3.16	BCR=PVB/PVC

Note : This table includes costs and benefits which are regularly or occasionally presented in monetised form in transport appraisals, together with some where monetisation is in prospect. There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented above does NOT provide a good measure of value for money and should not be used as the sole basis for decisions. All values in £s.


Lane rental streets:
North Yorkshire Council
NORTH YORKSHIRE COUNCIL
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List of Lane Rental Streets

Unique Street Reference Number	Street Name	Town
31900925	HANG BANK	ALDBROUGH ST JOHN
31900936	SILVER STREET	BARTON
31902926	BARTON TO BARTON INTERCHANGE ROUNDABOUT	BARTON
31902929	BARTON INTERCHANGE ROUNDABOUT	BARTON
31902933	BOLTON ON SWALE VILLAGE ROADS	BOLTON ON SWALE
31901120	BRIDGE ROAD	BROMPTON ON SWALE
31901143	GATHERLEY ROAD	BROMPTON ON SWALE
31901178	RICHMOND ROAD	BROMPTON ON SWALE
31901191	STATION ROAD	BROMPTON ON SWALE
31902939	SCORTON ROAD	BROMPTON ON SWALE
31980606	ROAD FROM GATHERLEY ROAD TO SCURRAGH LANE	BROMPTON ON SWALE
31902871	BAINBRIDGE TO HAWES ROAD	BURTERSETT
31980620	ROAD FROM CATTERICK INTERCHANGE TO CATTERICK ROAD	CATTERICK
31900305	RICHMOND ROAD	CATTERICK GARRISON
31901124	CATTERICK ROAD	CATTERICK GARRISON
31901152	HIGH STREET	CATTERICK VILLAGE
31901232	LEEMING LANE SOUTH	CATTERICK VILLAGE
31901233	LEEMING LANE NORTH	CATTERICK VILLAGE
31980605	ROAD FROM KILLERBY HALL TRACK TO CATTERICK ROAD	CATTERICK VILLAGE
31900719	HARTFORTH LANE	GILLING WEST
31900721	HIGH STREET	GILLING WEST
31902115	HARDRAW ROAD	HAWES
31902131	PENN LANE	HAWES
31902135	TOWN HEAD	HAWES
31902566	BURTERSETT ROAD	HAWES
31903190	MAIN STREET	HAWES
31903191	HAWES TO GARSDALE HEAD	HAWES
31904585	MARKET PLACE	HAWES
31904616	TURFY HILL TO MOSSY LANE	HAWES
31904686	THE HOLME	HAWES
31901970	BELLERBY ROAD	LEYBURN
31901980	HARMBY ROAD	LEYBURN
31901983	HIGH STREET	LEYBURN
31901987	MIDDLEHAM ROAD	LEYBURN
31901994	RAILWAY STREET	LEYBURN

31901995	RICHMOND ROAD	LEYBURN
31902005	WENSLEY ROAD	LEYBURN
31900928	KNEETON LANE	MIDDLETON TYAS
31900930	MIDDLETON TYAS LANE	MIDDLETON TYAS
31900958	SCURRAGH LANE	MOULTON
31900032	DARLINGTON ROAD	RICHMOND
31900036	DUNDAS STREET	RICHMOND
31900046	FRENCHGATE	RICHMOND
31900049	GALLOWGATE	RICHMOND
31900050	GILLING ROAD	RICHMOND
31900071	MAISON DIEU	RICHMOND
31900094	POTTERGATE	RICHMOND
31900099	QUEENS ROAD	RICHMOND
31900103	RIMINGTON AVENUE	RICHMOND
31900121	STATION ROAD	RICHMOND
31900135	VICTORIA ROAD	RICHMOND
31900178	WESTFIELDS	RICHMOND
31900274	LONGWOOD BANK	RICHMOND
31900433	REETH ROAD	RICHMOND
31903222	GILLING ROAD TO HIGH STREET GILLING WEST	RICHMOND
31903119	BOLTON ROAD	SCORTON
31900951	BARRACKS BANK	SCOTCH CORNER
31980610	ROAD FROM VIOLET GRANGE ROUNDABOUT TO KNEETON LANE	SCOTCH CORNER
31900956	RICHMOND ROAD	SKEEBY
31903122	RICHMOND ROAD TO SCURRAGH LANE	SKEEBY
31980607	ROAD FROM SCURRAGH LANE TO ROUNDABOUT AT BLUE ANCHOR CORNER	SKEEBY
31902730	STAPLETON TO BARTON ROAD	STAPLETON
31902356	MIGHTENS BANK	WENSLEY
16203193	AISKEW BANK	AISKEW
16205906	BEDALE ROAD	AISKEW
16200834	BRIDGE STREET	BEDALE
16200870	MARKET PLACE	BEDALE
16200871	MASHAM ROAD	BEDALE
16200879	NORTH END	BEDALE
16200892	SOUTH END	BEDALE
16200900	SUSSEX STREET	BEDALE
16200911	WYCAR	BEDALE
16281357	SOUTH END TO BRIDGE GRANGE	BEDALE
16204108	CARLTON ROAD	CARLTON MINIOTT
16204251	DALTON LANE	DALTON
16204253	ELDMIRE LANE	DALTON
16281449	ROAD FROM TOPCLIFFE TO ELDMIRE LANE	DALTON

16281475	DALTON LANE TO SANDHOLMES FARM TRACK	DALTON
16201234	CHAPEL STREET	EASINGWOLD
16201261	LONG STREET	EASINGWOLD
16201267	MARKET PLACE	EASINGWOLD
16201274	RASKELF ROAD	EASINGWOLD
16201283	STILLINGTON ROAD	EASINGWOLD
16201288	TANPIT LANE	EASINGWOLD
16201297	WINDROSS SQUARE	EASINGWOLD
16201298	YORK ROAD	EASINGWOLD
16201321	SPRING STREET	EASINGWOLD
16201322	THIRSK ROAD	EASINGWOLD
16201328	UPPLEBY	EASINGWOLD
16205880	CRAYKE ROAD	EASINGWOLD
16202300	PANNIERMAN LANE	GREAT AYTON
16202448	BRIDGE STREET	GREAT AYTON
16202463	GUISBOROUGH ROAD	GREAT AYTON
16202465	HIGH STREET	GREAT AYTON
16202472	LEVENSIDE	GREAT AYTON
16202484	NEWTON ROAD	GREAT AYTON
16202502	STATION ROAD	GREAT AYTON
16281174	ROAD FROM STRIKES ROUNDABOUT TO YARM LANE	GREAT AYTON
16281280	PANNIERMAN LANE TO COUNTY BOUNDARY	GREAT AYTON
16281287	LEVENSIDE TO SEWAGE WORKS	GREAT AYTON
16202041	HIGH STREET	GREAT BROUGHTON
16281812	ROAD FROM LORDS LANE TO KILLERBY HALL TRACK	KIRKBY FLEETHAM
16200829	BEDALE ROAD	LEEMING BAR
16200930	LEASES ROAD	LEEMING BAR
16200937	NORTHALLERTON ROAD	LEEMING BAR
16281657	LEASES LINK ROAD	LEEMING BAR
16281811	ROAD FROM LEEMING BAR TO LORDS LANE	LEEMING BAR
16205868	THEAKSTON GRANGE TO LEASES BRIDGE	LONDONDERRY
16200466	FRONT STREET	NORBY
16200075	BROMPTON ROAD	NORTHALLERTON
16200079	BULLAMOOR ROAD	NORTHALLERTON
16200096	CROSBY ROAD	NORTHALLERTON
16200098	DARLINGTON ROAD	NORTHALLERTON
16200101	EAST ROAD	NORTHALLERTON
16200114	FRIARAGE STREET	NORTHALLERTON
16200130	HIGH STREET	NORTHALLERTON
16200180	ROMANBY ROAD	NORTHALLERTON
16200188	SOUTH PARADE	NORTHALLERTON
16200217	THE LINK	NORTHALLERTON

16200221	THIRSK ROAD	NORTHALLERTON
16200281	YAFFORTH ROAD	NORTHALLERTON
16201648	STOKESLEY ROAD	NORTHALLERTON
16200049	AINDERBY ROAD	ROMANBY
16200070	BOROUGHBRIDGE ROAD	ROMANBY
16200140	LEES LANE	ROMANBY
16200177	RACECOURSE LANE	ROMANBY
16200298	MILL LANE	ROMANBY
16281360	BUSBY STOOP TO SKIPTON BRIDGE	SKIPTON-ON-SWALE
16205590	STOCKTON ROAD	SOUTH KILVINGTON
16200404	BLAKEY LANE	SOWERBY
16200429	FRONT STREET	SOWERBY
16200431	GRAVEL HOLE LANE	SOWERBY
16200487	SOWERBY ROAD	SOWERBY
16200508	TOPCLIFFE ROAD	SOWERBY
16200581	MEADOWFIELD	STOKESLEY
16200598	SPRINGFIELD	STOKESLEY
16200600	STATION ROAD	STOKESLEY
16200608	THIRSK ROAD	STOKESLEY
16200612	WEST END	STOKESLEY
16200821	HIGH STREET	STOKESLEY
16200822	WEST GREEN	STOKESLEY
16202900	SPRINGFIELD ROUNDABOUT	STOKESLEY
16202901	STRIKES ROUNDABOUT	STOKESLEY
16202902	CRICKET FIELD TRAFFIC CIRCUS	STOKESLEY
16281172	THIRSK ROAD TO CRICKET FIELD TRAFFIC CIRCUS	STOKESLEY
16281173	CRICKET FIELD TRAFFIC CIRCUS TO STRIKES ROUNDABOUT	STOKESLEY
16281175	STRIKES ROUNDABOUT TO TANTON BRIDGE	STOKESLEY
16281177	CRICKET FIELD TRAFFIC CIRCUS TO SPRINGFIELD ROUNDABOUT	STOKESLEY
16281178	CRICKET FIELD TRAFFIC CIRCUS TO GREAT BROUGHTON	STOKESLEY
16281285	CRICKET FIELD TRAFFIC CIRCUS TO LEVENSDALE	STOKESLEY
16281286	LEVENSDALE TO SEWAGE WORKS	STOKESLEY
16201395	LOW LANE	THIRKLEBY
16204793	YORK ROAD	THIRKLEBY
16200399	BARBECK	THIRSK
16200407	BRIDGE STREET	THIRSK
16200412	CASTLEGATE	THIRSK
16200428	FINKLE STREET	THIRSK

16200443	INGRAMGATE	THIRSK
16200449	KIRKGATE	THIRSK
16200450	LONG STREET	THIRSK
16200454	MARKET PLACE	THIRSK
16200460	MILLGATE	THIRSK
16200496	STAMMERGATE	THIRSK
16200497	STATION ROAD	THIRSK
16200498	STOCKTON ROAD	THIRSK
16200501	SUTTON ROAD	THIRSK
16200513	WESTGATE	THIRSK
16200530	ST JAMES GREEN	THIRSK
16201409	YORK ROAD	THIRSK
16281771	TOPCLIFFE ROAD TO HAGG HOUSE	THORPEFIELD
16204250	CHURCH STREET	TOPCLIFFE
16204254	FRONT STREET	TOPCLIFFE
16204257	LONG STREET	TOPCLIFFE
16281398	STATION ROAD	TOPCLIFFE
33700405	GUISBOROUGH ROAD	AISLABY
33700390	THE CARRS	BRIGGSWATH
33700992	HIGH STREET	BROMPTON
33780531	WOOD GATE TO RUSTON PUMPING STATION	BROMPTON BY SAWDON
33780536	ROAD FROM LOW GARTH TO WEST BROW	BROMPTON BY SAWDON
33702008	COASTAL ROAD	BURNISTON
33702388	SCALBY ROAD	BURNISTON
33702582	HIGH STREET	BURNISTON
33701811	MAIN STREET	CAYTON
33780395	ROAD FROM HIGH KILLERBY ROUNDABOUT TO CAYTON BAY ROUNDABOUT	CAYTON
33701030	RINGING KELD HILL	CLOUGHTON
33701984	HOLM HILL	CLOUGHTON
33702045	HIGH STREET	CLOUGHTON
33702060	MILL LANE	CLOUGHTON
33702123	WHITE WAY	CLOUGHTON
33702577	WEST LANE	CLOUGHTON
33780552	RINGING KELD HILL TO HOLM HILL	CLOUGHTON
33702368	STATION ROAD	CROSSGATES
33703598	SEAMER ROAD	CROSSGATES
33780542	STATION ROAD TO SEAMER BY-PASS	CROSSGATES
33700952	MAIN STREET	EAST AYTON
33702842	RACECOURSE ROAD	EAST AYTON
33702844	SEAMER ROAD	EAST AYTON
33701824	OVERDALE	EASTFIELD
33701876	CAYTON LOW ROAD	EASTFIELD

33701921	MANHAM HILL	EASTFIELD
33701928	MOOR LANE	EASTFIELD
33701929	MUSHAM BANK ROAD	EASTFIELD
33702373	WESTWAY	EASTFIELD
33702547	DUNSLOW ROAD	EASTFIELD
33702560	EASTWAY	EASTFIELD
33703719	EGTON LANE TO GUISBOROUGH ROAD	EGTON
33780515	BARTON HOWL TO SKELDER FARM	EGTON
33781232	WAR MEMORIAL TO GUISBOROUGH TO WHITBY ROAD	EGTON
33702244	BELLE VUE CRESCENT	FILEY
33702245	BELLE VUE STREET	FILEY
33702267	CRESCENT HILL	FILEY
33702276	THE BEACH	FILEY
33702287	JOHN STREET	FILEY
33702298	MURRAY STREET	FILEY
33702311	RAVINE HILL	FILEY
33702312	RAVINE ROAD	FILEY
33702319	SCARBOROUGH ROAD	FILEY
33702328	STATION AVENUE	FILEY
33702329	STATION ROAD	FILEY
33702333	THE CRESCENT	FILEY
33702342	WEST ROAD	FILEY
33702377	MILL LANE	FILEY
33702488	WEST AVENUE	FILEY
33702494	CHURCH CLIFF DRIVE	FILEY
33702498	MUSTON ROAD	FILEY
33780545	MUSTON CROSSING ROUNDABOUT TO SCARBOROUGH ROAD	FILEY
33780522	EVAN HOWE POND TO BLACKSMITH HILL	FYLINGDALES
33780523	SNEATON CORNER TO EVAN HOWE POND	FYLINGDALES
33700743	ROBIN HOODS BAY ROAD	FYLINGDALES MOOR
33780524	FERN FARM TO LATTER GATE HILLS	FYLINGDALES MOOR
33780530	BLACKSMITH HILL TO HELWATH ROAD	FYLINGDALES MOOR
33780528	BRECKON HOWE TO ELLER BECK BRIDGE	GOATHLAND
33780529	HELWATH ROAD TO GOWLAND LANE	HARWOOD DALE
33710399	STATION ROAD	HAWSKER
33780525	SUMMERFIELD LANE TO FERN FARM	HAWSKER
33700168	HIGH STREET	HINDERWELL
33700171	HINDERWELL LANE	HINDERWELL
33700181	RUNSWICK LANE	HINDERWELL

33701094	BRIDLINGTON STREET	HUNMANBY
33702177	SANDS ROAD	HUNMANBY
33702381	MOOR ROAD	HUNMANBY
33702440	STATION ROAD	HUNMANBY
33780607	BRIDLINGTON ROAD	HUNMANBY
33780533	FOTHILL LANE TO PICKERING ROAD	HUTTON BUSCEL
33701439	IRTON MOOR HILL	IRTON
33701587	RACECOURSE ROAD	IRTON
33701860	AYTON ROAD	IRTON
33780544	KILLERBY LODGE FARM TO PUBLIC HOUSE	LEBBERSTON
33780546	HIGH KILLERBY TO BOWES LANE	LEBBERSTON
33700523	LYTHE BANK	LYTHE
33701113	KING STREET	MUSTON
33701135	WEST STREET	MUSTON
33702361	KING HILL	MUSTON
33780547	BOWES LANE TO KING HILL	MUSTON
33780548	KING HILL TO MILL LANE	MUSTON
33701758	WREYFIELD DRIVE	NEWBY
33702024	FIELD LANE	NEWBY
33702071	NEWLANDS PARK DRIVE	NEWBY
33702403	BURNISTON ROAD	NEWBY
33702659	SCALBY ROAD	NEWBY
33702660	CROSS LANE	NEWBY
33702674	THROXENBY LANE	NEWBY
33781421	HACKNESS ROAD	NEWBY
33701822	OSGODBY LANE	OSGODBY
33701826	PRIORY PLACE	OSGODBY
33780396	ROAD FROM OVERDALE TO PARK AND RIDE ROUNDABOUT	OSGODBY
33780397	ROAD FROM CAYTON BAY ROUNDABOUT TO FILEY ROAD ROUNDABOUT	OSGODBY
33780398	FILEY ROAD	OSGODBY
33780018	HUNMANBY ROAD	REIGHTON
33780550	REIGHTON RESERVOIR TO HIGH HUNTOW FARM	REIGHTON
33703635	SCALING DAM FARM TO HIGH STREET	ROXBY
33700317	ELLERBY LANE	RUNSWICK BAY
33700435	HINDERWELL LANE	RUNSWICK BAY
33700359	HIGH STREET	RUSWARP
33700374	OAKLEY BANK	RUSWARP
33700378	RUSWARP BANK	RUSWARP
33700383	SNEATON LANE	RUSWARP
33710676	THE CARRS	RUSWARP
33703539	SANDSEND ROAD	SANDSEND

33780516	SANDSEND BRIDGE TO SANDSEND ROAD	SANDSEND
33701302	COLDYHILL LANE	SCALBY
33701405	HACKNESS ROAD	SCALBY
33702106	STATION ROAD	SCALBY
33702593	SCALBY ROAD	SCALBY
33701193	HOLBECK HILL	SCARBOROUGH
33701219	ABERDEEN WALK	SCARBOROUGH
33701223	ALBEMARLE CRESCENT	SCARBOROUGH
33701257	BELMONT ROAD	SCARBOROUGH
33701282	CASTLE ROAD	SCARBOROUGH
33701310	COLUMBUS RAVINE	SCARBOROUGH
33701340	EASTBOROUGH	SCARBOROUGH
33701348	ESPLANADE	SCARBOROUGH
33701356	FALCONERS ROAD	SCARBOROUGH
33701358	FALSGRAVE ROAD	SCARBOROUGH
33701361	FILEY ROAD	SCARBOROUGH
33701364	FORESHORE ROAD	SCARBOROUGH
33701380	GLADSTONE ROAD	SCARBOROUGH
33701409	HARCOURT PLACE	SCARBOROUGH
33701486	MANOR ROAD	SCARBOROUGH
33701521	NEWBOROUGH	SCARBOROUGH
33701531	NORTH LEAS AVENUE	SCARBOROUGH
33701532	NORTH MARINE ROAD	SCARBOROUGH
33701533	NORTH STREET	SCARBOROUGH
33701535	NORTHSTEAD MANOR DRIVE	SCARBOROUGH
33701559	PEASHOLM GAP	SCARBOROUGH
33701561	PEASHOLM ROAD	SCARBOROUGH
33701562	PEASHOLM BRIDGE	SCARBOROUGH
33701565	PRINCE OF WALES TERRACE	SCARBOROUGH
33701582	QUEEN MARGARETS ROAD	SCARBOROUGH
33701583	QUEEN STREET	SCARBOROUGH
33701594	RAMSHILL ROAD	SCARBOROUGH
33701604	ROSCOE STREET	SCARBOROUGH
33701609	ROYAL ALBERT DRIVE	SCARBOROUGH
33701637	SOMERSET TERRACE	SCARBOROUGH
33701646	ST JAMES ROAD	SCARBOROUGH
33701664	ST THOMAS STREET	SCARBOROUGH
33701704	TRINITY ROAD	SCARBOROUGH
33701707	VALLEY BRIDGE PARADE	SCARBOROUGH
33701708	VALLEY BRIDGE ROAD	SCARBOROUGH
33701712	VERNON ROAD	SCARBOROUGH
33701717	VICTORIA ROAD	SCARBOROUGH
33701732	WEST STREET	SCARBOROUGH
33701733	WESTBOROUGH	SCARBOROUGH
33701734	WESTBOURNE GROVE	SCARBOROUGH

33701738	WESTWOOD	SCARBOROUGH
33701743	WHEATCROFT AVENUE	SCARBOROUGH
33701759	WYKEHAM STREET	SCARBOROUGH
33701760	YORK PLACE	SCARBOROUGH
33702390	GREEN LANE	SCARBOROUGH
33702396	COLUMBUS RAVINE	SCARBOROUGH
33702404	BURNISTON ROAD	SCARBOROUGH
33702537	MARINE DRIVE	SCARBOROUGH
33702538	SANDSIDE	SCARBOROUGH
33702630	SANDYBED LANE	SCARBOROUGH
33702637	VALLEY ROAD	SCARBOROUGH
33702646	NORTHWAY	SCARBOROUGH
33702649	DEAN ROAD	SCARBOROUGH
33703602	SEAMER ROAD	SCARBOROUGH
33710368	SEAMER ROAD CORNER	SCARBOROUGH
33780553	VALLEY BRIDGE	SCARBOROUGH
33702366	SCARBOROUGH ROAD	SEAMER
33702548	MAIN STREET	SEAMER
33780540	BRIDGE FARM TO SEAMER BY-PASS	SEAMER
33700347	COACH ROAD	SLEIGHTS
33703213	BLUE BANK	SLEIGHTS
33710053	BRIGGSWATH	SLEIGHTS
33780512	BLUE BANK TO BRECKON HOWE	SLEIGHTS
33780514	GUISBOROUGH ROAD TO THE CARRS	SLEIGHTS
33702851	HIGH STREET	SNAINTON
33710306	PICKERING ROAD EAST	SNAINTON
33710307	PICKERING ROAD WEST	SNAINTON
33780534	WELLDALE SPRING TO PUBLIC HOUSE	SNAINTON
33700384	SNEATON LANE	SNEATON
33700190	WHITBY ROAD	STAITHES
33780510	STAITHES BECK TO DALEHOUSE BANK	STAITHES
33703729	HIGH STREET TO HIGH PARK FARM	UGTHORPE
33703730	GUISBOROUGH ROAD	UGTHORPE
33702893	PICKERING ROAD	WEST AYTON
33700453	BAXTERGATE	WHITBY
33700464	CASTLE ROAD	WHITBY
33700473	CRESCENT AVENUE	WHITBY
33700475	DOWNDINNER HILL	WHITBY
33700480	EAST TERRACE	WHITBY
33700484	ESPLANADE	WHITBY
33700503	HIGH STAKESBY ROAD	WHITBY
33700508	HUDSON STREET	WHITBY
33700511	KHYBER PASS	WHITBY
33700521	LOVE LANE	WHITBY

33700530	MAYFIELD ROAD	WHITBY
33700537	NEW QUAY ROAD	WHITBY
33700540	NORTH PROMENADE	WHITBY
33700542	NORTH TERRACE	WHITBY
33700552	PIER ROAD	WHITBY
33700566	RUSWARP LANE	WHITBY
33700574	SKINNER STREET	WHITBY
33700579	SPRING VALE	WHITBY
33700581	ST ANNS STAITH	WHITBY
33700607	WELLINGTON ROAD	WHITBY
33700616	WHITE BRIDGE ROAD	WHITBY
33700619	WHITE POINT ROAD	WHITBY
33700751	BRIDGE STREET	WHITBY
33700755	CHURCH STREET	WHITBY
33700766	SPITAL BRIDGE	WHITBY
33700790	GUISBOROUGH ROAD	WHITBY
33700796	BAGDALE	WHITBY
33700799	PROSPECT HILL	WHITBY
33703301	UPGANG LANE	WHITBY
33703303	STAKESBY ROAD	WHITBY
33703312	CHUBB HILL ROAD	WHITBY
33703553	HELREDALE ROAD	WHITBY
33703570	STAINSACRE LANE	WHITBY
33710092	CRESCENT PLACE	WHITBY
33780517	RUSWARP ROUNDABOUT	WHITBY
33780519	STATION ROUNDABOUT	WHITBY
33780520	PROSPECT HILL TO LARPOOL LANE	WHITBY
33780521	VICTORIA FARM TO WESTBOURNE AVENUE	WHITBY
33781367	HIGH STAKESBY	WHITBY
33701244	BARROWCLIFF ROAD	WOODLANDS
33701452	LADY EDITHS DRIVE	WOODLANDS
33701668	STEPNEY DRIVE	WOODLANDS
33701670	STEPNEY HILL	WOODLANDS
33701750	WOODLAND GROVE	WOODLANDS
33701752	WOODLAND RAVINE	WOODLANDS
33701754	WOODLANDS DRIVE	WOODLANDS
33702398	SCALBY ROAD	WOODLANDS
33702627	STEPNEY ROAD	WOODLANDS
33780532	MAIN ROAD	WYKEHAM
33370270	MAIN STREET	AISLABY
33370078	WEASDALE TO PARTINGS FARM	ALLERSTON
33304309	HIGH STREET	EBBERSTON
33380201	PARTINGS FARM TO EBBERSTON	EBBERSTON
33380202	EBBERSTON TO WELLDALE	EBBERSTON
33363832	YORK ROAD	GATE HELMSLEY

33363833	BUTTERCRAMBE ROAD	GATE HELMSLEY
33370065	YORK TO DRIFFIELD ROAD	GATE HELMSLEY
33303936	BONDGATE	HELMSLEY
33303938	BRIDGE STREET	HELMSLEY
33303939	BUCKINGHAM SQUARE	HELMSLEY
33303943	CASTLEGATE	HELMSLEY
33303945	CHURCH STREET	HELMSLEY
33303960	HIGH STREET	HELMSLEY
33303964	LINKFOOT LANE	HELMSLEY
33303967	MARKET PLACE	HELMSLEY
33370137	WHITBY ROAD	KINGTHORPE
33304587	MARKET PLACE	KIRKBYMOORSIDE
33304588	NEW ROAD	KIRKBYMOORSIDE
33304595	PIERCY END	KIRKBYMOORSIDE
33363579	NEW ROAD TO KIRKDALE LANE	KIRKBYMOORSIDE
33304421	LOCKTON LANE	LOCKTON
33304877	SALTERGATE BANK	LOCKTON
33370149	HIGH STREET TO WARREN FARM	LOCKTON
33380661	WARREN FARM TO SALTERGATE BANK	LOCKTON
33302938	BROUGHTON ROAD	MALTON
33302941	CASTLE HOWARD ROAD	MALTON
33302942	CASTLEGATE	MALTON
33302985	HORSEMARKET ROAD	MALTON
33303005	MARKET PLACE	MALTON
33303006	MARKET STREET	MALTON
33303010	MIDDLECAVE ROAD	MALTON
33303017	MOUNT CRESCENT	MALTON
33303019	NEWBIGGIN	MALTON
33303023	OLD MALTON ROAD	MALTON
33303024	OLD MALTONGATE	MALTON
33303042	RAILWAY STREET	MALTON
33303096	WHEELGATE	MALTON
33303103	YORK ROAD	MALTON
33303104	YORKERSGATE	MALTON
33304457	MAIN STREET	MIDDLETON
33302950	CHURCH STREET	NORTON
33302952	COMMERCIAL STREET	NORTON
33302993	LANGTON ROAD	NORTON
33303012	MILL STREET	NORTON
33303022	NORTON ROAD	NORTON
33303086	WELHAM ROAD	NORTON
33303100	WOLD STREET	NORTON
33303101	WOOD STREET	NORTON
33303148	BEVERLEY ROAD	NORTON
33303181	SCARBOROUGH ROAD	NORTON

33303186	TOWN STREET	OLD MALTON
33304134	HUNGATE	PICKERING
33304139	KELD HEAD	PICKERING
33304141	KIRKHAM LANE	PICKERING
33304148	MARKET PLACE	PICKERING
33304159	PARK STREET	PICKERING
33304169	SOUTHGATE	PICKERING
33304176	THE ROPERY	PICKERING
33304188	WESTGATE	PICKERING
33304220	EASTGATE	PICKERING
33304233	HIGH BACK SIDE	PICKERING
33304241	MALTON ROAD	PICKERING
33304268	THORNTON ROAD	PICKERING
33304429	WHITBY ROAD	PICKERING
33380628	EASTGATE ROUNDABOUT	PICKERING
33305021	WHITE WAY HEADS	SALTERGATE MOOR
33370399	THIRSK TO SCARBOROUGH ROAD	SPROXTON
33304211	CHESTNUT AVENUE	THORNTON DALE
33304212	CHURCH HILL	THORNTON DALE
33304235	HIGH STREET	THORNTON DALE
33304250	PICKERING ROAD	THORNTON DALE
33304277	WHITBYGATE	THORNTON DALE
33380575	THORNTON DALE TO THORNTON ROAD	THORNTON DALE
33304240	MALTONGATE	THORNTON LE DALE
33363837	WILTON ROAD	THORNTON LE DALE
33370076	WILTON ROAD TO WEASDALE	WILTON
9604575	RADCLIFFE HOUSE TO TELEPHONE EXCHANGE	AUSTWICK
9603683	A59 FROM BEAMSLEY HALL TO HOSPITAL FARM	BEAMSLEY
9603700	LONG CAUSEWAY TO RAILWAY COTTAGES	BOLTON ABBEY
9603712	BOLTON BRIDGE BYPASS	BOLTON ABBEY
9603743	LAITHBUTTS TO RADCLIFFE HOUSE	CLAPHAM
9603762	RYECROFT FARM TO LAITHBUTTS	CLAPHAM
9603903	ROBINS BARN TO CONISTON BRIDGE	CONISTON COLD
9602937	SKIPTON ROAD	FARNHILL
9601442	CHURCH STREET	GARGRAVE
9601447	ESHTON ROAD	GARGRAVE
9601452	HIGH STREET	GARGRAVE
9601472	SKIPTON ROAD	GARGRAVE
9603892	HELLIFIELD ROAD	GARGRAVE
9603895	CRICKET GROUND TO HIGHGATE COTTAGES	GARGRAVE
9601798	SKIPTON ROAD	GLUSBURN

9601807	STATION ROAD	GLUSBURN
9601914	COLNE ROAD	GLUSBURN
9602009	KEIGHLEY ROAD	GLUSBURN
9602024	MAIN STREET	GLUSBURN
9603921	CROSS HILLS ROUNDABOUT TO COUNTY BOUNDARY	GLUSBURN
9601517	STATION ROAD	GRASSINGTON
9602346	HEBDEN ROAD	GRASSINGTON
9602356	MAIN STREET	GRASSINGTON
9602262	LONG CAUSEWAY	HALTON EAST
9604468	HAW PARK HOUSE TO HOLME LANE	HALTON EAST
9603984	A59 FROM STORITHS LANE TO PACE GATE BRIDGE	HAZLEWOOD
9680259	A59 FROM HOSPITAL FARM TO STORITHS LANE	HAZLEWOOD
9603935	HARTLINGTON RAIKES TO HEBDEN ROAD	HEBDEN
9600421	KENDAL ROAD	HELLIFIELD
9600432	SKIPTON ROAD	HELLIFIELD
9603551	MAIN ROAD	HELLIFIELD
9604003	HALL FIELD TO ROBINS BARN	HELLIFIELD
9604008	THORNVIEW ROAD TO HALL FIELD	HELLIFIELD
9600032	MAIN STREET	HIGH BENTHAM
9600037	MOUNT PLEASANT	HIGH BENTHAM
9600046	SPRINGFIELD	HIGH BENTHAM
9600048	STATION ROAD	HIGH BENTHAM
9600698	ROBIN LANE	HIGH BENTHAM
9604039	CLAPHAM ROAD	HIGH BENTHAM
9600658	BACK GATE	INGLETON
9600672	CROFT ROAD	INGLETON
9600679	HIGH STREET	INGLETON
9600684	LAUNDRY LANE	INGLETON
9600689	MAIN STREET	INGLETON
9600750	NEW ROAD	INGLETON
9603549	UPPERGATE	INGLETON
9604466	GREEN LANE TO RYECROFT FARM	INGLETON
9604490	HAWES ROAD	INGLETON
9604095	SKIPTON ROAD TO CROSS HILLS ROUNDABOUT	KILDWICK
9604129	TELEPHONE EXCHANGE TO CAVE HOLE WOOD	LAWKLAND
9600457	MAIN STREET	LONG PRESTON
9604164	POST OFFICE TO KELL WELL BECK	LONG PRESTON
9680288	A65 FROM MEARBECK TO TOWN END	LONG PRESTON

9603552	KEIGHLEY ROAD	LOW BRADLEY
9600545	CHURCH STREET	SETTLE
9600552	DUKE STREET	SETTLE
9600590	STATION ROAD	SETTLE
9604144	A65 FROM SETTLE BYPASS ROUNDABOUT TO MEARBECK	SETTLE
9604447	CAMMOCK LANE TO SETTLE BYPASS	SETTLE
9604504	SETTLE BYPASS	SETTLE
9601210	BELMONT STREET	SKIPTON
9601227	BROUGHTON ROAD	SKIPTON
9601238	CAROLINE SQUARE	SKIPTON
9601241	CAVENDISH STREET	SKIPTON
9601257	CRAVEN STREET	SKIPTON
9601280	GARGRAVE ROAD	SKIPTON
9601289	GRASSINGTON ROAD	SKIPTON
9601319	MILL BRIDGE	SKIPTON
9601328	NEWMARKET STREET	SKIPTON
9601353	RAIKES ROAD	SKIPTON
9601395	SWADFORD STREET	SKIPTON
9601397	THE BAILEY	SKIPTON
9601412	WATER STREET	SKIPTON
9601582	HIGH STREET	SKIPTON
9601735	KEIGHLEY ROAD	SKIPTON
9602279	OTLEY ROAD	SKIPTON
9604455	CROSS BANK TO LOW SKIBEDEN	SKIPTON
9604463	GRASSINGTON ROAD ROUNDABOUT TO CROSS BANK	SKIPTON
9604508	ROTARY WAY	SKIPTON
9604295	HIGHGATE COTTAGES TO STIRTON ROUNDABOUT	STIRTON
9604301	STIRTON ROUNDABOUT TO GRASSINGTON ROAD ROUNDABOUT	STIRTON
9604453	COUNTY BOUNDARY TO FAR WESTHOUSE	THORNTON IN LONSDALE
9680252	STATION ROAD	THRESHFIELD
16607570	NEW ROAD	ALLERTON PARK
16681798	ALLERTON PARK INTERCHANGE	ALLERTON PARK
16681799	ALLERTON PARK INTERCHANGE TO FLAXBY COVERT	ALLERTON PARK
16680719	ASENBY FORGE TO PARK ROAD	ASENBY
16680722	ASENBY FORGE TO CROSSROADS	ASENBY
16680723	WHAITES LANE TO TRUNK ROAD	ASENBY

16680725	TRUNK ROAD TO ASENBY FORGE	ASENBY
16607636	LEEMING LANE	BALDERSBY
16680214	WARDS CORNER TO BALDERSBY	BALDERSBY
16680708	BALDERSBY TO SKIPTON BRIDGE	BALDERSBY
16680710	BALDERSBY VILLAGE	BALDERSBY
16680711	WARDS CORNER TO BALDERSBY GATE	BALDERSBY
16605768	POT BANK	BECKWITHSHAW
16607635	OTLEY ROAD	BECKWITHSHAW
16606783	STREET LANE	BEWERLEY
16607036	BLAZEFIELD BANK	BLAZEFIELD
16606694	HOPPER LANE	BLUBBERHOUSES
16606738	KEX GILL ROAD	BLUBBERHOUSES
16681876	HARDISTY HILL TO KEX GILL ROAD	BLUBBERHOUSES
16602621	FISHERGATE	BOROUGHBRIDGE
16602626	HIGH STREET	BOROUGHBRIDGE
16602629	HORSEFAIR	BOROUGHBRIDGE
16602906	LEEMING LANE	BOROUGHBRIDGE
16607551	YORK ROAD	BOROUGHBRIDGE
16607602	ROECLIFFE LANE	BOROUGHBRIDGE
16680451	BRIDGE STREET	BOROUGHBRIDGE
16680452	WETHERBY ROAD	BOROUGHBRIDGE
16603402	BOROUGHBRIDGE ROAD	BRIDGE HEWICK
16605568	BURN BRIDGE LANE	BURN BRIDGE
16605685	BURN BRIDGE ROAD	BURN BRIDGE
16604333	CALCUTT	CALCUTT
16604829	BLANDS HILL	CALCUTT
16680463	HARROGATE ROAD	CASTLEY
16605643	HARROGATE ROAD	DUNKESWICK
16680625	MOOR LANE TO FLAXBY MOOR	FLAXBY
16605426	PANNAL ROAD	FOLLIFOOT
16605455	RUDDING LANE	FOLLIFOOT
16681388	JOHN METCALF WAY	FOLLIFOOT
16606801	LUPTON BANK	GLASSHOUSES
16602450	YORK ROAD	GOLDSBOROUGH
16681836	GOLDSBOROUGH ROUNDABOUT- HARROGATE BYPASS	GOLDSBOROUGH
16680552	YORK ROAD TO PROVIDENCE GREEN	GREEN HAMMERTON
16605244	SKIPTON ROAD	HAMPSTHWAITE
16604265	ALBERT STREET	HARROGATE
16604309	BILTON LANE	HARROGATE
16604319	BOWER ROAD	HARROGATE
16604336	CAMBRIDGE ROAD	HARROGATE
16604358	CHELTENHAM CRESCENT	HARROGATE

16604359	CHELTENHAM MOUNT	HARROGATE
16604360	CHELTENHAM PARADE	HARROGATE
16604374	COMMERCIAL STREET	HARROGATE
16604378	COPPICE DRIVE	HARROGATE
16604383	CRAB LANE	HARROGATE
16604401	DRAGON PARADE	HARROGATE
16604402	DRAGON ROAD	HARROGATE
16604405	EAST PARADE	HARROGATE
16604428	FOREST LANE	HARROGATE
16604429	FOREST LANE HEAD	HARROGATE
16604439	FRANKLIN ROAD	HARROGATE
16604461	GROVE ROAD	HARROGATE
16604473	HAYWRA CRESCENT	HARROGATE
16604478	HIGH STREET	HARROGATE
16604497	HOOKSTONE CHASE	HARROGATE
16604506	JAMES STREET	HARROGATE
16604509	JOHN STREET	HARROGATE
16604530	KNARESBOROUGH ROAD	HARROGATE
16604539	LANCASTER PARK ROAD	HARROGATE
16604575	MONTPELLIER HILL	HARROGATE
16604592	NORTH PARK ROAD	HARROGATE
16604607	OXFORD STREET	HARROGATE
16604615	PARLIAMENT STREET	HARROGATE
16604636	PROSPECT PLACE	HARROGATE
16604640	QUEEN PARADE	HARROGATE
16604679	SKIPTON ROAD	HARROGATE
16604720	STATION AVENUE	HARROGATE
16604721	STATION BRIDGE	HARROGATE
16604722	STATION PARADE	HARROGATE
16604724	STATION SQUARE	HARROGATE
16604750	THE GINNEL	HARROGATE
16604764	VICTORIA AVENUE	HARROGATE
16604784	WEST PARK	HARROGATE
16604787	WETHERBY ROAD	HARROGATE
16604801	WOODFIELD ROAD	HARROGATE
16604817	YORK PLACE	HARROGATE
16604835	KING EDWARDS DRIVE	HARROGATE
16604836	KINGS ROAD	HARROGATE
16605002	CRESCENT ROAD	HARROGATE
16605004	CROWBERRY DRIVE	HARROGATE
16605009	DUCHY ROAD	HARROGATE
16605044	JENNY FIELD DRIVE	HARROGATE
16605082	MONTPELLIER GARDENS	HARROGATE
16605086	MONTPELLIER ROAD	HARROGATE
16605131	RIPON ROAD	HARROGATE
16605134	ROYAL PARADE	HARROGATE
16605204	PENNY POT LANE	HARROGATE
16605370	HOOKSTONE DRIVE	HARROGATE

16605372	HOOKSTONE ROAD	HARROGATE
16605397	LEEDS ROAD	HARROGATE
16605675	BECKWITH ROAD	HARROGATE
16605677	BEECH GROVE	HARROGATE
16605694	COLD BATH ROAD	HARROGATE
16605697	CORNWALL ROAD	HARROGATE
16605708	GREEN LANE	HARROGATE
16605714	HARLOW MOOR DRIVE	HARROGATE
16605715	HARLOW MOOR ROAD	HARROGATE
16605744	LEADHALL LANE	HARROGATE
16605761	PANNAL ASH ROAD	HARROGATE
16605780	ROSSETT GREEN LANE	HARROGATE
16605797	VALLEY DRIVE	HARROGATE
16605818	YEW TREE LANE	HARROGATE
16607059	OTLEY ROAD	HARROGATE
16681422	PANNAL ASH ROUNDABOUT	HARROGATE
16680554	HOLLY COTTAGE TO RAINSHAW FARM	HOPPERTON
16680462	HARROGATE ROAD	HUBY
16607053	SKIPTON ROAD	KETTLESING
16605107	OAKER BANK	KILLINGHALL
16605112	OTLEY ROAD	KILLINGHALL
16605205	PENNY POT LANE	KILLINGHALL
16605239	RIPON ROAD	KILLINGHALL
16605243	SKIPTON ROAD	KILLINGHALL
16601350	WETHERBY ROAD	KIRK DEIGHTON
16601542	DEIGHTON ROAD	KIRK DEIGHTON
16602179	MAIN STREET	KIRK DEIGHTON
16680114	DEIGHTON GATES ROUNDABOUT TO COUNTY BOUNDARY	KIRK DEIGHTON
16680115	WALSHFORD CORNER COTTAGES TO DEIGHTON GATES	KIRK DEIGHTON
16681965	HUDSON WAY	KIRK DEIGHTON
16601590	YORK ROAD	KIRK HAMMERTON
16680517	YORK ROAD TO SKIP BRIDGE FARM	KIRK HAMMERTON
16605722	HARROGATE ROAD	KIRKBY OVERBLOW
16681386	JOHN METCALF WAY	KIRKBY OVERBLOW
16602223	ASPIN DRIVE	KNARESBOROUGH
16602226	ASPIN LANE	KNARESBOROUGH
16602230	ASPIN PARK DRIVE	KNARESBOROUGH
16602254	BRIGGATE	KNARESBOROUGH
16602261	CHAIN LANE	KNARESBOROUGH
16602279	FARFIELD AVENUE	KNARESBOROUGH
16602294	GRACIOUS STREET	KNARESBOROUGH
16602302	HALFPENNY LANE	KNARESBOROUGH
16602312	HIGH STREET	KNARESBOROUGH

16602315	HYDE PARK ROAD	KNARESBOROUGH
16602354	PARK LANE	KNARESBOROUGH
16602357	PARK ROW	KNARESBOROUGH
16602383	STOCKDALE WALK	KNARESBOROUGH
16602389	STOCKWELL LANE	KNARESBOROUGH
16602391	STOCKWELL ROAD	KNARESBOROUGH
16602401	THISTLE HILL	KNARESBOROUGH
16602414	WINDSOR LANE	KNARESBOROUGH
16602419	YORK PLACE	KNARESBOROUGH
16602435	BOROUGHBRIDGE ROAD	KNARESBOROUGH
16602451	YORK ROAD	KNARESBOROUGH
16604317	BOND END	KNARESBOROUGH
16604431	FOREST MOOR ROAD	KNARESBOROUGH
16604469	HARROGATE ROAD	KNARESBOROUGH
16604475	HIGH BOND END	KNARESBOROUGH
16604867	RIPLEY ROAD	KNARESBOROUGH
16605604	WETHERBY ROAD	KNARESBOROUGH
16607652	GRIMBALD CRAG WAY	KNARESBOROUGH
16681824	ARNOLD KELLETT WAY	KNARESBOROUGH
16681835	ST JAMES ROUNDABOUT-HARROGATE BYPASS	KNARESBOROUGH
16602905	LEEMING LANE	LANGTHORPE
16606883	LEATHLEY LANE	LEATHLEY
16607062	HARROGATE ROAD	LEATHLEY
16607504	HARROGATE ROAD	LITTLETHORPE
16602976	THORPE ROAD	MASHAM
16602996	LEYBURN ROAD	MASHAM
16603006	PARK STREET	MASHAM
16603011	SILVER STREET	MASHAM
16603014	THE AVENUE	MASHAM
16603025	FEARBY ROAD	MASHAM
16680750	CUT BRIDGE TO CHURCH LANE	MILBY
16681794	MINSKIP ROUNDABOUT TO PONDAROSA PARK	MINSKIP
16680516	TURN BRIDGE TO SKIP BRIDGE FARM	MOOR MONKTON
16605906	HARROGATE ROAD	NORTH RIGTON
16605347	FOLLIFOOT ROAD	PANNAL
16605398	LEEDS ROAD	PANNAL
16605423	PANNAL BANK	PANNAL
16605439	PRINCESS ROYAL WAY	PANNAL
16605482	STATION ROAD	PANNAL
16605491	THE CARR	PANNAL
16681387	JOHN METCALF WAY	PANNAL
16681967	SWINDON LANE	PANNAL
16606754	HIGH STREET	PATELEY BRIDGE
16606768	RIPON ROAD	PATELEY BRIDGE
16606809	RIPLEY BANK	PATELEY BRIDGE

16681473	NIDD WALK TO BRIDGEHOUSE GATE	PATELEY BRIDGE
16602202	WETHERBY ROAD	PLOMPTON
16681389	ROUNDABOUT TO BRICK KILN WOOD	PLOMPTON
16681390	BRICK KILN PLANTATION TO WETHERBY ROAD	PLOMPTON
16681439	ROUNDABOUT TO BRAHAM HALL	PLOMPTON
16604128	RIPON ROAD	RIPLEY
16681370	FLAT FARM TO ROUNDABOUT	RIPLEY
16603124	ALLHALLOWGATE	RIPON
16603130	BALMORAL ROAD	RIPON
16603132	BEDERN BANK	RIPON
16603136	BLOSSOMGATE	RIPON
16603138	BONDGATE	RIPON
16603139	BONDGATE GREEN	RIPON
16603155	CLOTHERHOLME ROAD	RIPON
16603157	COLTSGATE HILL	RIPON
16603168	DUCK HILL	RIPON
16603174	FIRBY LANE	RIPON
16603178	FISHERGATE	RIPON
16603183	GROVE LANE	RIPON
16603190	HIGH SKELLGATE	RIPON
16603211	KIRKGATE	RIPON
16603230	LOW SKELLGATE	RIPON
16603239	MALLORIE PARK DRIVE	RIPON
16603245	MINSTER ROAD	RIPON
16603251	NORTH ROAD	RIPON
16603252	NORTH STREET	RIPON
16603253	OLD MARKET PLACE	RIPON
16603256	PALACE ROAD	RIPON
16603258	PARK STREET	RIPON
16603267	QUARRY MOOR LANE	RIPON
16603268	QUEEN STREET	RIPON
16603284	SKELLBANK	RIPON
16603288	SKELLGARTHS	RIPON
16603290	SOMERSET ROW	RIPON
16603299	ST MARYGATE	RIPON
16603307	STUDLEY ROAD	RIPON
16603320	WATER SKELLGATE	RIPON
16603325	WESTGATE	RIPON
16603343	MAGDALENS ROAD	RIPON
16603423	MARKET PLACE	RIPON
16607503	HARROGATE ROAD	RIPON
16607510	DALLAMIRES LANE	RIPON
16607513	BOROUGHBRIDGE ROAD	RIPON
16607515	STONEBRIDGEGATE	RIPON
16607911	MARSHALL WAY	RIPON

16680222	RIPON BYPASS	RIPON
16681472	SKELLGARTHS ROUNDABOUT	RIPON
16681783	QUARRY MOOR ROUNDABOUT	RIPON
16681784	DALLAMIRES LANE TO BOROUGHBRIDGE ROAD	RIPON
16681785	CITY LINK ROUNDABOUT	RIPON
16681786	BOROUGHBRIDGE ROAD TO CITY LINK	RIPON
16681787	CITY LINK TO SHAROW LANE	RIPON
16681837	ROTARY WAY	RIPON
16607554	BAR LANE	ROECLIFFE
16607520	SHAROW LANE	SHAROW
16607628	HUTTON BANK	SHAROW
16601947	HARROGATE ROAD	SPOFFORTH
16602173	HIGH STREET	SPOFFORTH
16602190	PARK ROAD	SPOFFORTH
16680223	HARROGATE ROAD	STOCKELD
16603508	STUDLEY ROAD	STUDLEY ROGER
16680553	PROVIDENCE GREEN TO RAINSHAW FARM	WHIXLEY
34205560	SELBY ROAD	BALNE
34205998	BARLBY BY-PASS	BARLBY
34206001	BARLBY ROAD	BARLBY
34206277	YORK ROAD	BARLBY
34280628	ROAD FROM MARKET WEIGHTON ROAD TO SELBY ROAD	BARLBY
34280955	BARLBY NEW BY-PASS	BARLBY
34206611	DONCASTER ROAD	BRAYTON
34280716	DONCASTER ROAD	BURN
34280702	YORK ROAD	BURTON SALMON
34203199	HIGH STREET	CAWOOD
34203210	MARKET PLACE	CAWOOD
34203223	RYTHER ROAD	CAWOOD
34203224	RYTHERGATE	CAWOOD
34203226	SHERBURN STREET	CAWOOD
34203232	THORPE LANE	CAWOOD
34203235	WISTOWGATE	CAWOOD
34210206	NEW ROAD	CLIFFE
34263561	HULL ROAD-CLIFFE BYPASS	CLIFFE
34205564	SELBY ROAD	EGGBOROUGH
34205573	WEELAND ROAD	EGGBOROUGH
34280713	EGGBOROUGH BY-PASS	EGGBOROUGH
34280519	RICCALL ROAD	ESCRICK
34206595	BROACH ROAD	GREAT HECK
34206596	GOWDALL BROACH	GREAT HECK

34280572	TOWTON BRIDGE TO COCK BRIDGE	GRIMSTON
34206627	HULL ROAD	HEMINGBROUGH
34205155	BROACH LANE	HENSALL
34205157	BROACH ROAD	HENSALL
34205126	MAIN STREET	MONK FRYSTON
34280704	SELBY ROAD	MONK FRYSTON
34280706	YORK ROAD	MONK FRYSTON
34203012	WETHERBY ROAD	NEWTON KYME
34206625	HULL ROAD	OSGODBY
34202644	OXTON LANE	OXTON
34203167	YORK ROAD	RICCALL
34280627	ROAD FROM SELBY ROAD TO MAIN STREET	RICCALL
34206000	BARLBY ROAD	SELBY
34206006	BAWTRY ROAD	SELBY
34206014	BONDGATE	SELBY
34206023	BROOK STREET	SELBY
34206069	FINKLE STREET	SELBY
34206071	FLAXLEY ROAD	SELBY
34206086	GOWTHORPE	SELBY
34206150	MASSEY STREET	SELBY
34206156	MICKLEGATE	SELBY
34206160	MILLGATE	SELBY
34206174	NEW STREET	SELBY
34206189	OUSEGATE	SELBY
34206194	PARK STREET	SELBY
34206203	PORTHOLME ROAD	SELBY
34206219	SCOTT ROAD	SELBY
34206241	THE CRESCENT	SELBY
34206254	UNION LANE	SELBY
34206256	WATER LANE	SELBY
34206610	DONCASTER ROAD	SELBY
34263647	NEW MILLGATE	SELBY
34280206	SELBY BYPASS	SELBY
34202593	CAWOOD ROAD	STILLINGFLEET
34202594	CHURCH HILL	STILLINGFLEET
34202617	YORK ROAD	STILLINGFLEET
34210201	MOREBY	STILLINGFLEET
34280585	TADCASTER TO TOULSTON GRANGE	STUTTON
34202696	BRIDGE STREET	TADCASTER
34202703	CHAPEL STREET	TADCASTER
34202706	COMMERCIAL STREET	TADCASTER
34202719	GARNET LANE	TADCASTER
34202731	HIGH STREET	TADCASTER
34202740	KELCAR HILL	TADCASTER
34202742	KIRKGATE	TADCASTER
34202743	LEEDS ROAD	TADCASTER

34202793	WETHERBY ROAD	TADCASTER
34202796	WIGHILL LANE	TADCASTER
34202802	YORK ROAD	TADCASTER
34202807	OXTON LANE	TADCASTER
34206633	STATION ROAD	TADCASTER
34206634	WESTGATE	TADCASTER
34280573	LEEDS ROAD TO COCK BRIDGE	TADCASTER
34205563	DONCASTER ROAD	WHITLEY
34203181	CAWOOD ROAD	WISTOW
34203185	CHURCH HILL	WISTOW
34203225	SELBY ROAD	WISTOW
34203228	STATION ROAD	WISTOW

Initial equality impact assessment screening form
This form records an equality screening process to determine the relevance of equality to a proposal, and a decision whether or not a full EIA would be appropriate or proportionate.

Directorate	Environment
Service area	Network strategy
Proposal being screened	Lane Rental
Officer(s) carrying out screening	Alex Hollifield
What are you proposing to do?	Go out to consultation in order to implement a Lane Rental Scheme into North Yorkshire to ensure efficient coordination of third party works in the highway and identify any issues for rectification in order to maintain the integrity of the network
Why are you proposing this? What are the desired outcomes?	Drive behaviours for third parties working in the Highway as they are financially impacted for working on key routes at busy times. Should improve the coordination of works on the Highway to ensure disruption is minimised for the travelling public. Any surplus finance outside scheme costs can be reinvested in improvement projects.
Does the proposal involve a significant commitment or removal of resources? Please give details.	Yes, a new team will be set up to manage the Lane Rental Scheme. Number of FTE's unknown as yet. Process ongoing.

Impact on people with any of the following protected characteristics as defined by the Equality Act 2010, or NYC's additional agreed characteristics

As part of this assessment, please consider the following questions:

- To what extent is this service used by particular groups of people with protected characteristics?
- Does the proposal relate to functions that previous consultation has identified as important?
- Do different groups have different needs or experiences in the area the proposal relates to?

If for any characteristic it is considered that there is likely to be an adverse impact or you have ticked 'Don't know/no info available', then a full EIA should be carried out where this is proportionate. You are advised to speak to your directorate representative for advice if you are in any doubt.

Protected characteristic	**Potential for adverse impact**		**Don't know/No info available**
	Yes	**No**	
Age		X	
Disability		X	
Sex		X	
Race		X	
Sexual orientation		X	
Gender reassignment		X	
Religion or belief		X	
Pregnancy or maternity		X	
Marriage or civil partnership		X	
People in rural areas		X	
People on a low income		X	
Carer (unpaid family or friend)		X	
Are from the Armed Forces Community		X	
Does the proposal relate to an area where there are known inequalities/probable impacts (for example, disabled people's access to public transport)? Please give details.	Should improve people's access to services as works will be encouraged outside busy times.		

Will the proposal have a significant effect on how other organisations operate? (for example, partners, funding criteria, etc.). Do any of these organisations support people with protected characteristics? Please explain why you have reached this conclusion.	No other than on Undertakers themselves. Should drive positive behaviours in terms of working on site at non- disruptive times. Money generated from the scheme can also be used to make Highway Improvements to benefit the public.			
Decision (Please tick one option)	EIA not relevant or proportionate:	✓	Continue to full EIA:	
Reason for decision	Lane Rental shouldn't really affect anyone with protected characteristics. Its purpose is to improve coordination of works and is something levied on the Undertakers rather than the general public.			
Signed (Assistant Director or equivalent)	Barrie Mason			
Date	06/06/2024			

Initial Climate Change Impact Assessment (Form created August 2021)

The intention of this document is to help the council to gain an initial understanding of the impact of a project or decision on the environment. This document should be completed in consultation with the supporting guidance. Dependent on this initial assessment you may need to go on to complete a full Climate Change Impact Assessment. The final document will be published as part of the decision-making process.

If you have any additional queries, which are not covered by the guidance please email climatechange@northyorks.gov.uk

Title of proposal	**Seeking approval to undertake a formal consultation for a Lane Rental Scheme**
Brief description of proposal	**To seek approval to commence the formal consultation process for a Lane Rental Scheme. Lane Rental Schemes charge utility companies for the time their roadworks occupies highway space, incentivising them to complete works more efficiently and outside of peak traffic hours.**
Directorate	**Environment**
Service area	**Network Strategy**
Lead officer	**Alex Hollifield**
Names and roles of other people involved in carrying out the impact assessment	

The chart below contains the main environmental factors to consider in your initial assessment – choose the appropriate option from the drop-down list for each one. Remember to think about the following;

- Travel
- Construction
- Data storage
- Use of buildings
- Change of land use
- Opportunities for recycling and reuse

Environmental factor to consider	For the council	For the county	Overall
Greenhouse gas emissions	Decreases emissions	Decreases emissions	Decreases emissions
Waste	No effect on waste	No effect on waste	No effect on waste
Water use	No effect on water usage	No effect on water usage	No effect on water usage
Pollution (air, land, water, noise, light)	No effect on pollution	No effect on pollution	No effect on pollution
Resilience to adverse weather/climate events (flooding, drought etc)	No effect on resilience	No effect on resilience	No effect on resilience
Ecological effects (biodiversity, loss of habitat etc)	No effect on ecology	No effect on ecology	No effect on ecology
Heritage and landscape	No effect on heritage and landscape	No effect on heritage and landscape	No effect on heritage and landscape

If any of these factors are likely to result in a negative or positive environmental impact then a full climate change impact assessment will be required. It is important that we capture information about both positive and negative impacts to aid the council in calculating its carbon footprint and environmental impact.

Decision (Please tick one option)	Full CCIA not relevant or proportionate:		Continue to full CCIA:	X
Reason for decision	The introduction of a Lane Rental Scheme in North Yorkshire will have both positive effects on climate change. Positive – If the scheme achieves what it sets out to, there will be a decrease in greenhouse gas emissions driven through efficiency which will reduce the carbon footprint for works promoters undertaking road works.			
Signed (Assistant Director or equivalent)	Barrie Mason			
Date	06/06/2024			

Climate change impact assessment

The purpose of this assessment is to help us understand the likely impacts of our decisions on the environment of North Yorkshire and on our aspiration to achieve net carbon neutrality by 2030, or as close to that date as possible. The intention is to mitigate negative effects and identify projects which will have positive effects.

This document should be completed in consultation with the supporting guidance. The final document will be published as part of the decision making process and should be written in Plain English.

If you have any additional queries which are not covered by the guidance please email climatechange@northyorks.gov.uk

Please note: You may not need to undertake this assessment if your proposal will be subject to any of the following:
Planning Permission
Environmental Impact Assessment
Strategic Environmental Assessment

However, you will still need to summarise your findings in the summary section of the form below.

Please contact climatechange@northyorks.gov.uk for advice.

Title of proposal	**Seeking Approval to go out to Formal Consultation for a Lane Rental Scheme**
Brief description of proposal	**To seek approval to commence the formal consultation process for a Lane Rental Scheme. Lane Rental Schemes charge utility companies for the time their roadworks occupies highway space, incentivising them to complete works more efficiently and outside of peak traffic hours.**
Directorate	**Environment**
Service area	**Network Strategy**
Lead officer	**Alex Hollifield**
Names and roles of other people involved in carrying out the impact assessment	
Date impact assessment started	**24/05/2024**

Options appraisal
Were any other options considered in trying to achieve the aim of this project? If so, please give brief details and explain why alternative options were not progressed.

N/A

What impact will this proposal have on council budgets? Will it be cost neutral, have increased cost or reduce costs?

Please explain briefly why this will be the result, detailing estimated savings or costs where this is possible.

The scheme is expected to generate a surplus through lane rental charges. This is used to cover the operational and associated costs of running the scheme.
Any additional surplus is to be reinvested into innovation for future projects which is decided on by a joint working group made up of utilities and members of the Authority.

How will this proposal impact on the environment? **N.B. There may be short term negative impact and longer term positive impact. Please include all potential impacts over the lifetime of a project and provide an explanation.**		**Positive impact** (Place a X in the box below where relevant)	**No impact** (Place a X in the box below where relevant)	**Negative impact** (Place a X in the box below where relevant)	**Explain why will it have this effect and over what timescale?** **Where possible/relevant please include:** **1. Changes over and above business as usual** **2. Evidence or measurement of effect** **3. Figures for CO_2e** **4. Links to relevant documents**	**Explain how you plan to mitigate any negative impacts.**	**Explain how you plan to improve any positive outcomes as far as possible.**
Minimise **greenhouse gas emissions** e.g. reducing emissions from travel, increasing energy efficiencies etc.	Emissions from travel	X					Through the Lane Rental scheme promoters are incentivised to work outside peak times where charges are significantly higher. This will result in less disruption on the network and therefore less emissions from the travelling public. Works require detailed planning and will result in first time quality reinstatements to avoid the need to return to site and incur further costs which should have a positive impact on the carbon footprint of promoters undertaking the work.
	Emissions from construction	X					

How will this proposal impact on the environment? **N.B. There may be short term negative impact and longer term positive impact. Please include all potential impacts over the lifetime of a project and provide an explanation.**		**Positive impact** (Place a X in the box below where relevant)	**No impact** (Place a X in the box below where relevant)	**Negative impact** (Place a X in the box below where relevant)	**Explain why will it have this effect and over what timescale?** **Where possible/relevant please include:** **1. Changes over and above business as usual** **2. Evidence or measurement of effect** **3. Figures for CO_2e** **4. Links to relevant documents**	**Explain how you plan to mitigate any negative impacts.**	**Explain how you plan to improve any positive outcomes as far as possible.**
Page 143	Emissions from running of buildings		**X**				
	Emissions from data storage		**X**				
	Other		**X**				
Minimise **waste:** Reduce, reuse, recycle and compost e.g. reducing use of single use plastic			X				
Reduce **water** consumption			X				
Minimise **pollution** (including air, land, water, light and noise)			X				

How will this proposal impact on the environment? **N.B. There may be short term negative impact and longer term positive impact. Please include all potential impacts over the lifetime of a project and provide an explanation.**	**Positive impact** (Place a X in the box below where relevant)	**No impact** (Place a X in the box below where relevant)	**Negative impact** (Place a X in the box below where relevant)	**Explain why will it have this effect and over what timescale?** **Where possible/relevant please include:** **1. Changes over and above business as usual** **2. Evidence or measurement of effect** **3. Figures for CO_2e** **4. Links to relevant documents**	**Explain how you plan to mitigate any negative impacts.**	**Explain how you plan to improve any positive outcomes as far as possible.**
Ensure **resilience** to the effects of climate change e.g. reducing flood risk, mitigating effects of drier, hotter summers		X				
Enhance **conservation** and wildlife		X				
Safeguard the distinctive characteristics, features and special qualities of **North Yorkshire's landscape**		X				
Other (please state below)		X				

Are there any recognised good practice environmental standards in relation to this proposal? If so, please detail how this proposal meets those standards.

N/A

Summary Summarise the findings of your impact assessment, including impacts, the recommendation in relation to addressing impacts, including any legal advice, and next steps. This summary should be used as part of the report to the decision maker.

Positive impacts as a result of Lane Rental will trigger behavioural changes in promoters which will require better planning and coordination of works to ensure that road works are carried out as quickly and efficiently as possible, without a need to return to site and incur further charges.
This should reduce disruption and therefore travel time for the public and for the promoters themselves.

Sign off section

This climate change impact assessment was completed by:

Name	**Alex Hollifield**
Job title	**Team Leader- Network Information and Compliance**
Service area	**Network Strategy**
Directorate	**Environment**
Signature	
Completion date	**24/05/2024**

Authorised by relevant Assistant Director (signature): Barrie Mason

Date: 06/06/2024

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